

ANNUAL ENVIRONMENT SURVEY REPORT

2010 – 2011

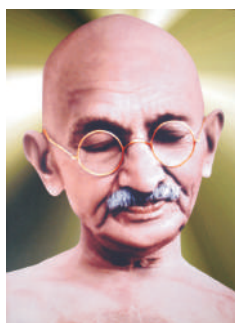


**DEPARTMENT OF SCIENCE, TECHNOLOGY & ENVIRONMENT
PUDUCHERRY POLLUTION CONTROL COMMITTEE**

**3rd Floor, Housing Board Building, Anna Nagar
Puducherry - 5**

PUDUCHERRY POLLUTION CONTROL COMMITTEE

Environment Protection is our Commitment



Be the change you want to see

- Mahatma Gandhi

Annual Environment Survey Report - 2010-2011

N. RANGASAMY
Chief Minister



MESSAGE

Environment protection is one of the biggest challenges to the modern human society. The explosive growth of population, new trend of development, changing lifestyle, wasteful consumerism, changing economic base and to general ignorance of the common mass towards environmental health have compounded the intensity of the problem.

Government of Puducherry is careful to have a faster development which is not only in elusive but also environmentally sustainable. My Government has taken a policy decision not to encourage pollution potential and water based industries in the U.T. of Puducherry. It has ensured improvement of air and water quality for the well beings of the inhabitants.

I take this opportunity to appreciate the activity of Department of Science, Technology & Environment and Puducherry Pollution Control Committee in bringing out the third Annual Environment Survey Report. ie for the year 2010-2011.

N. RANGASAMY

Puducherry

Annual Environment Survey Report - 2010-2011

R. CHANDRAMOHAN, I.A.S
Chief Secretary



FOREWORD

Relationship between nature and human being have been altered by the urbanization of the land and modernization of human lifestyle. Government is giving utmost importance to the protection of the environment. All the developmental activities have been evolved considering its long term effects on environment.

I am sure this document will help us in fostering new ideas and cross fertilization of different approaches towards attaining Clean and Green Puducherry.

R. Chandramohan

Puducherry

Annual Environment Survey Report - 2010-2011

G. THEVA NEETHI DHAS

Special Secretary (Environment)/
Chairman, PPCC



PREFACE

Human wellbeing is intrinsically linked with quality of the environment. Environment protection is the collective responsibility of government and the citizens. This has been enshrined in our country's Constitution also.

We need to understand that "development", "progress" and "quality of life" are compatible only when nature's life support systems are protected and conserved and the actions of the present do not jeopardize progress of future.

Complementing the noble service provided by the nature to the mankind, United Nation declared this year as the year of Forest and theme of World Environment Day as "Forests: Nature at your service".

Recognising India's committed performance towards environmental protection, the United Nation has given the privilege to our country of hosting the World Environment Day this year.

The Annual Environment Survey Report (2010-11) has been brought out to the public domain to meet the environmental challenges facing our small but beautiful territory and to achieve environmentally sustainable growth. The main goal of the twelfth five year plan is faster, sustainable and more inclusive growth. The present report will be a tool in shaping the development plan for the Union Territory of Puducherry.

(G. THEVA NEETHI DHAS)

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**GOVERNMENT OF PUDUCHERRY
DEPARTMENT OF SCIENCE, TECHNOLOGY & ENVIRONMENT**

VISION

1. Improving Quality of Life

- ❖ Providing better air and water quality
- ❖ Protecting ground water and surface water bodies
- ❖ Towards a Greener and Cleaner Puducherry

2. Waste Management

- ❖ Making Puducherry Zero Municipal Solid Waste city
- ❖ Scientific way of Bio Medical Waste disposal
- ❖ Ensuring environmental friendly Hazardous Waste disposal
- ❖ Safer disposal of e-waste

3. Climate Change Initiatives

- ❖ Reduction of carbon foot print
- ❖ Ensuring environment sound sustainable industrialization

4. Sustainable Energy Management

- ❖ Utilization of renewable energy in all sectors including industries
- ❖ Maximize the utilization of solar and other renewable energy

5. Protection of Coastal Zone

- ❖ Management of fragile coastal resources

1. INTRODUCTION

Puducherry Pollution Control Committee, Puducherry Coastal Zone Management Authority and Puducherry Council for Science & Technology are the three wings of the Department of Science, Technology & Environment (DSTE), Government of Puducherry. With these three wings, DSTE is marching ahead in the sphere of Science, Technology and Environment.

Puducherry Pollution Control Committee is a statutory body and acts as a custodian of environment of Puducherry. As a result of multi dimensional development perspectives, new environmental problems are emerging as challenges. Few examples are e-waste management, Biomedical waste disposal and climate change. Puducherry Pollution Control Committee with available statutory teeth curb the environmental degradation to the larger extent.

Puducherry Pollution Control Committee has realized law, technology and knowledge are the three pillars for a greener and cleaner Puducherry. It strives to enforce statutory provisions of various Acts and Rules, selecting globally best practicing technology and pursuing with the industrial sector for adoption and creating awareness among the stake holders.

Considering the overall performance of environment excellency, Planning Commission of India, ranked U.T. of Puducherry at 6th position in all India Ranking System. Organizing interaction meetings with entrepreneurs and line Departments enabled to achieve joint break through in many unsolved problems. Few examples are ban on usage of thin plastic articles, action plan on climate change, sustainable solution for bio medical waste disposal, etc.

This Annual Report is statutory compliance of Section 24 of Water (Prevention & Control of Pollution) Act, 1974. It capsules the performance of DSTE during the financial year 2010 – 2011.

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2. CONSTITUTION OF PUDUCHERRY POLLUTION CONTROL COMMITTEE AND ITS FUNCTIONS

In exercise of the powers conferred by section 4, clause (4) of the Water (Prevention and Control of Pollution) Act, 1974 and Section 6 of the Air (Prevention and Control of Pollution) Act, 1981, the Central Pollution Control Board delegated all its power and functions vested in the said Board under the Water (Prevention and Control of Pollution) Act, 1974 and the Air (Prevention and Control of Pollution) Act, 1981 in respect of the Union Territory to the Puducherry Pollution Control Committee w.e.f.1.4.1992. The composition of the Puducherry Pollution Control Committee is as given below:

| | | |
|-----|-------------------------------------------------------------------------------------------|------------------|
| 1. | Secretary to Government (Environment & Forests), Union Territory (UT) of Puducherry | Chairman |
| 2. | Senior Town Planner, Town and Country Planning Department, UT of Puducherry | Member |
| 3. | Chief Engineer, Public Works Department, UT of Puducherry | Member |
| 4. | Director of Health and Family Services, UT of Puducherry | Member |
| 5. | Director of Local Administration Dept, UT of Puducherry | Member |
| 6. | Commissioner of respective Commune Panchayats | Member |
| 7. | Director of Agriculture UT of Puducherry | Member |
| 8. | Director of Industries, UT of Puducherry | Member |
| 9. | President of the Chamber of Commerce | Member |
| 10. | Director, Department of Science, Technology and Environment | Member Secretary |

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Functions of PPCC

- a. to plan a comprehensive programme for the prevention, control or abatement of pollution of streams and wells in the state and to secure the execution thereof;
- b. to advise the State Government on any matter concerning the prevention, control or abatement of water pollution;
- c. to collect and disseminate information relating to water pollution and the prevention, control or abatement thereof;
- d. to encourage, conduct and participate in investigations and research relating to problems of water pollution and prevention, control or abatement or water pollution;
- e. to collaborate with the Central Board in organizing the training of persons engaged or to be engaged in programmes relating to prevention, control or abatement of water pollution and to organize mass education programmes relating thereto;
- f. to inspect sewage or trade effluents, works and plants for the treatment of sewage and trade effluents and to review plans, specifications or other data relating to plants set up for the treatment of water, works for the purification thereof and the system for the disposal of sewage or trade effluents or in connection with the grant of any consent as required by this Act;
- g. lay down, modify or annul effluent standards for the sewage and trade effluents and for the quality or receiving waters resulting from the discharge of effluents and to classify waters of the state;
- h. to evolve economical and reliable methods of treatment of sewage and trade effluents, having regard to the peculiar conditions of soils, climate and water resources of different regions and more especially the prevailing flow characteristics of water in streams and wells which render it impossible to attain even the minimum degree of dilution;
- i. to evolve methods of utilization of sewage and suitable trade effluents in agriculture;
- j. to evolve efficient methods of disposal of sewage and trade effluents on land, as are necessary on account of the predominant conditions of scant stream flows that do not provide for major part of the year the minimum degree of dilution;
- k. to lay down standards of treatment of sewage and trade effluents to be discharged into any particular stream taking into account the minimum fair weather dilution available in that stream and the tolerance limits of pollution permissible in the water of the stream, after the discharge of such effluents;
- l. to make, vary or revoke any order:-
 - i. for the prevention, control or abatement of discharge of waste into streams or wells;
 - ii. requiring any person concerned to construct new systems for the disposal of sewage and trade effluents or to modify, alter or extend any such existing system or to adopt such remedial measures as are necessary to prevent control or abate water pollution;

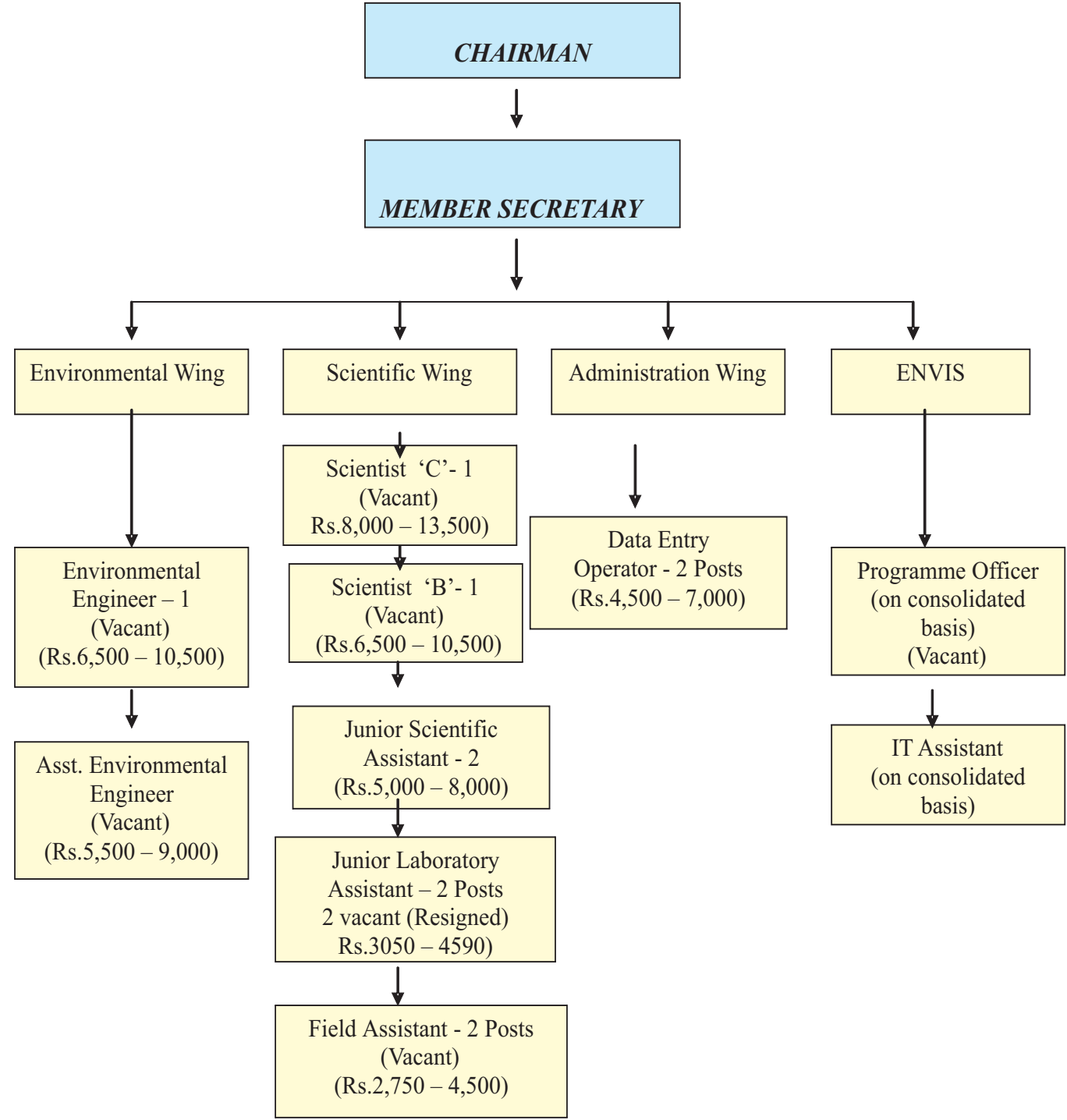
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- m. to lay down effluent standards to be complied with by persons while causing discharge of sewage or sullage or both and to lay down, modify or annul effluent standards for the sewage and trade effluents;
- n. to advice the State Government with respect to the location of any industry the carrying on of which is likely to pollute a stream or well; and

PPCC implements the following Acts and Rules:

1. The Water (Prevention and Control of Pollution) Act, 1974
2. The Water (Prevention and Control of Pollution) Rules, 1975
3. The Water (Prevention and Control of Pollution) Cess Act, 1977
4. The Water (Prevention and Control of Pollution) Cess Rules, 1978
5. The Air (Prevention and Control of Pollution) Act, 1981
6. The Air (Prevention and Control of Pollution) Rules, 1981
7. The Environment (Protection) Act, 1986
8. The Environment (Protection) Rules, 1986
9. The Manufacture, Use, Import, Export and Storage of Hazardous Micro-Organism Genetically Engineered Organism or Cells Rules, 1989
10. The Hazardous Wastes (Management & Handling) Rules, 1989
11. The Manufacture, Storage and Import of Hazardous Chemical Rules, 1989
12. Notification on Coastal Regulation Zones, 1991
13. The Public Liability Insurance Act, 1991
14. The Public Liability Insurance Rules, 1991
15. Fly Ash Notification, 1991
16. Environmental Impact Assessment Notification, 1994
17. The Bio-Medical Waste (Management & Handling) Rules, 1998
18. The Plastics Manufacture, Sale and Usage Rules, 1999
19. The Municipal Solid Wastes (Management & Handling) Rules, 2000
20. The Noise Pollution (Regulation and Control) Rules, 2000
21. The Ozone Depleting Substances (Regulation) Rules, 2000
22. The Batteries (Management & Handling) Rules, 2001

PUDUCHERRY POLLUTION CONTROL COMMITTEE
ORGANIZATIONAL CHART



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Meetings of the Puducherry Pollution Control Committee are periodically convened and important proposals are examined in details. During the financial years, 10 meetings were convened and the details are given below:

Table 1. Details of PPCC Meeting Convened

| Sl. No. | No. of the Committee Meeting | Date Convened | No. of proposals cleared |
|---------|------------------------------|---------------|--------------------------|
| 1 | 105 th Meeting | 05.05.2010 | 15 |
| 2 | 106 th Meeting | 09.06.2010 | 16 |
| 3 | 107 th Meeting | 02.07.2010 | 10 |
| 4 | 108 th Meeting | 03.08.2010 | 18 |
| 5 | 109 th Meeting | 01.09.2010 | 16 |
| 6 | 110 th Meeting | 05.10.2010 | 18 |
| 7 | 111 th Meeting | 02.11.2010 | 7 |
| 8 | 112 th Meeting | 02.12.2010 | 5 |
| 9 | 113 th Meeting | 03.01.2011 | 18 |
| 10 | 114 th Meeting | 07.02.2011 | 19 |
| Total | | | 152 |

3. GIST OF INDUSTRIALISATION

With a small industrial inheritance of 3 textile mills, Puducherry has come a long way. Now it has 8562 industries representing a cross section of industries. Seven well established industrial estates with comprehensive infrastructure facilities have been propelling the Industrial growth of Puducherry.

Spectacular performance at export front. Principal export items are Leather, Chemicals, Textiles and Metallic products.

Table 2. Types of Industry

| CATEGORIES | LSI | MSI | SSI | Total |
|-----------------------------------|-----|-----|------|-------|
| Food Products | 6 | 12 | 922 | 940 |
| Cotton Products | 7 | 10 | 1087 | 1104 |
| Wood Products | Nil | Nil | 490 | 490 |
| Paper Products | 4 | 7 | 465 | 476 |
| Leather, Rubber, Plastic Products | 11 | 41 | 861 | 913 |
| Chemical & Chemical Products | 23 | 34 | 1637 | 1714 |
| Non-Metallic Mineral Products | 8 | 5 | 320 | 333 |
| Metal Products | 3 | 21 | 925 | 949 |
| Machinery Products | 11 | 40 | 665 | 716 |
| Miscellaneous Products | Nil | Nil | 384 | 384 |
| Personal Services | 3 | 14 | 265 | 282 |
| Repairing Servicing | Nil | Nil | 261 | 261 |
| Total | 76 | 184 | 8302 | 8562 |

(LSI - Large Scale Industry, MSI- Medium Scale Industry & SSI - Small Scale Industries.)

Pandit Jawaharlal Nehru had envisioned a special status for Puducherry to preserve" the Window to the French Culture in India". While Nehru was laying strong foundations for a modern industrialised nation, Puducherry joined the Union of India in 1954 with limited industrial inheritance. There were only three large textile mills and some five odd small industrial institutions. The territory has since come a long way.

Puducherry has achieved it witnessed industrial progress in all these years and is poised for spectacular growth. By January 2011, impressive establishment of 76 Large scale industries, 184 Medium and 8302 small scale units. Over the last fifty years there has been massive growth of industries in the Union Territory.

The industrial sector employed just about 8000 persons in the early fifties. Now with investment of over Rs 2468 crores, industries are the life-blood of economy providing livelihood to about 98310 people.

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Table 3. The present status of industries in Puducherry

| As on January 2011 | No. of units | Investment ₹ Crores | Employment in Numbers |
|--------------------|--------------|------------------------|--------------------------|
| Large scale | 76 | 1232.00 | 18461 |
| Medium scale | 184 | 529.10 | 11309 |
| Small scale | 8302 | 704.77 | 68540 |
| Total | 8562 | 2467.87 | 98310 |

Government of Puducherry has taken a policy decision of not to encourage pollution potential and water based industry in the U.T. of Puducherry.

4. CONSENT MECHANISM

Based on the Prevention and Control of Pollution (Uniform Consent Procedure) Rule, 1999, industries in Pondicherry have been classified into three categories viz.

- Green – Lesser Polluted
- Orange- Moderately Polluted
- Red- Highly Polluted

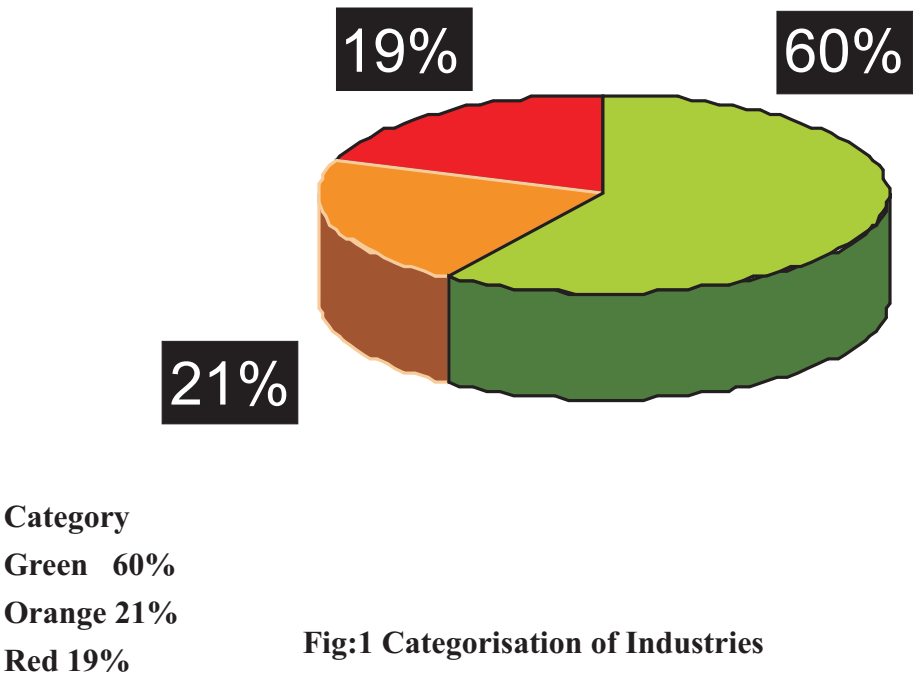


Fig:1 Categorisation of Industries

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a. Consent to Establish (No Objection Certificate)

Application will be forwarded by Industries Department (Red Category) and through Single Window Committee (Green and Orange). PPCC consider the following aspects for considering the proposal for issue of consent to establish:

- Pollution potential and its abatement measures.
- Site Clearance from Town & Country Planning Department.
- Power feasibility issued by the Electricity Department
- Ground Water Clearance from Ground Water Authority
- Land Conversion from State Land Use Board.

b. Consent to Operate

Based on the compliance of Consent to Establish conditions, Consent to operate is issued

c. Renewal of Consent

Based on inspection and / or monitoring consent is renewed. The validity period of the consent is as given below:

Table 4. Periodicity of Renewal

| Category | Period |
|----------|-------------------|
| Green | 5 years permanent |
| Orange | 4 years |
| Red | 3 years |

d. Delegation of power for issue of Consent to Establish, Consent to operate and Renewal of consent

In order to simplify and expedite the consent procedure, power has been delegated at different levels as given below:

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Table 5. Delegation of power

| Sl. No. | Category | Size | Power to issue NOC | Power to issue Consent to Operate | Consent Renewal |
|---------|----------|-----------------------|--------------------|--------------------------------------------------------------------|------------------|
| 1 | Red | Large, Medium & Small | By Committee | Chairman | Chairman |
| 2 | Orange | Large, Medium & Small | Chairman | Member Secretary | Member Secretary |
| 3 | Green | Large & Medium | Member Secretary | | |
| | | Small | Member Secretary | Exempted from obtaining Consent to operate and renewal of consent. | |

Table 6. Consent to Establish, Operate and Renewal Issued

| Sl. No. | Month | Issued Number(s) of Consent to | | | | |
|---------|----------------|--------------------------------|---------|----|---------|-----|
| | | Establish | Operate | | Renewal | |
| | | | A | W | A | W |
| 1. | April 2010 | 16 | 6 | 4 | 18 | 18 |
| 2. | May 2010 | 18 | 3 | 1 | 26 | 26 |
| 3. | June 2010 | 20 | 1 | 1 | 19 | 15 |
| 4. | July 2010 | 28 | 4 | 4 | 22 | 20 |
| 5. | August 2010 | 53 | 10 | 6 | 32 | 28 |
| 6. | September 2010 | 17 | 6 | 4 | 20 | 18 |
| 7. | October 2010 | 31 | - | - | 9 | 6 |
| 8. | November 2010 | 13 | 4 | 3 | 5 | 4 |
| 9. | December 2010 | 23 | 3 | 3 | 6 | 5 |
| 10. | January 2011 | 28 | 6 | 5 | 21 | 20 |
| 11. | February 2011 | 28 | 3 | 3 | 11 | 9 |
| 12. | March 2011 | 11 | 4 | 4 | 9 | 9 |
| Total | | 286 | 50 | 38 | 198 | 180 |

5. STATE / NATIONAL LEVEL MEETING ORGANIZED / ATTENDED

(I) 56th Conference of Chairperson / Member Secretary

56th Conference of Chairpersons & Member Secretaries of State Pollution Control Boards and Pollution Control Committee was held on 31.08.2010 at New Delhi. Shri. Jayram Ramesh, Hon'ble Minister for Environment presided over the function. Thiru G. Theva Neethi Dhas, Chairman, PPCC and Dr. N. Ramesh, Environmental Engineer, PPCC attended the Conference. Uniform categorization of industries, monitoring of interstate movement of hazardous waste and establishment of National Environment Protection Authority were flagged during the deliberation of the conference.



Fig. 2 56th Conference of Chairperson / Member Secretary

(II) Regional Workshop on Climate Change and Ozone Layer Depletion

One day Workshop on Climate Change and Ozone Layer Depletion was held on the occasion of International Ozone Day on 16th September 2010 at Mahe in collaboration with Regional administration and Mahatma Gandhi Govt. Arts College, Mahe

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Fig. 3 Inauguration of Regional Workshop

(III) National seminar on the impact of climate change on biodiversity

The seminar on “The Impact of Climate Change on Biodiversity (ICCBD -2011) was sponsored by University Grants Commission & Puducherry Council for Science and Technology at Cultural Centres of Pondicherry University on 21st and 22nd January 2011. Two hundred and sixty five participants including faculties, scientists, researchers, students, NGOs and Policy makers from 52 institutions of the states of Puducherry, TamilNadu, Kerala, Andhra Pradesh, Karnataka, Uttar Pradesh and West Bengal attended and presented papers. Fourteen special lectures and 94 papers were presented. In view of the overwhelming response and crowded programme schedule, parallel sessions were held to accommodate all oral presentation. Alongside, posters were also displayed on the corridors. The following were the outcome of the seminar.

- ❖ The Seminar provided a platform for the environmentalists from different parts of India to discuss and exchange ideas and create awareness regarding climate change and biodiversity loss, its consequences on sustenance of ecosystem and human welfare.
- ❖ It creates awareness amongst researches and students who are the future caretakers of the environment, about pollution abatement and afforestation.
- ❖ It has thrown light on the present scenario of biodiversity in different parts of India and has drawn the attention of the Government and the public on the task ahead for protecting the environment.
- ❖ It was instrumental in emphasizing the roles of every individual in reducing emission of green house gases.

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- ❖ It has reiterated the role of conservation of Traditional Knowledge System in resource utilization and biodiversity conservation.
- ❖ It publicized Civic society's participation in the protection and restoration of ecosystems.
- ❖ The seminar has emphasized that the Government should make new legislations on biodiversity conservation.



Fig. 4 Inauguration of National Seminar on Climate Change

The seminar gave an opportunity to the institution Kanchi Maamunivar Centre for Post Graduate Studies, Pondicherry to express its potential for organizing an academic event at National level very effectively thereby, it fulfilled the UGC criteria of conducting National seminar for NAAC accreditation. It gave an opportunity to the staff to plan new lines of research in environmental issues. The students having been impressed by the galaxy of experts from all over India and listening to their scholarly presentation were motivated towards a serious research career and they have now understood their role in mitigating climate change. It reinforced the role of an alert public in the conservation of biodiversity for sustainable development.

(IV) Meeting on compliance status of industries inspected under Environmental Surveillance Squad.

A meeting was organized on 03.12.2010 by Central Pollution Control Board, Regional Office, Bangalore on Compliance status of the industries inspected under Environmental Surveillance Squad (ESS) to assess and verify the compliance status of the industries. Dr. R.S. Kori, Additional Director chaired the session. Dr. N. Ramesh, Environmental Engineer attended the meeting and presented the compliance status of four 17 category industries brought out under the purview of ESS.

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Fig. 5 Meeting on compliance status of industries inspected under Environmental Surveillance Squad

(V). First meeting of the State Crisis Group

State Crisis Group and Local Crisis Groups have been constituted vide G.O. Ms. No.4/2000/ Env't. dated 23.02.2000 in exercise of powers under Rule 6 and Rule 8 of the Chemical Accident (Emergency Planning, Preparedness and Response) Rules, 1996. The first meeting of the State Crisis Group was held on 06.08.2010 under the Chairmanship of Nutan Guga Biswas, Principal Secretary (Revenue), Chairman, State Crisis Group. A decision was taken in the meeting to Reconstitute the State Crisis Group as per the provisions of the above said Rule. Accordingly the State Crisis Group has been Reconstituted vide G.O. Ms. No. 1/2011/Env't. dated 13.01.2011.



Fig. 6 First State Crisis Group meeting

(VI) One day workshop for implementing officer on ban on usage of thin plastic article

Government of Puducherry has banned the usage, sales and storage of polythene (or) plastic carry bags, disposal cups and plates of thickness below 51 microns and of size less than 8 x 12 inches. One day workshop was organized in the Chairmanship of Thiru G. Theva Neethi Dhas, Chairman, PPCC on 23.06.2010 to the Implementing Officer of the Government notification on ban on usage of thin plastic articles.



Fig. 7 Demo on measurement of thickness of plastic carry bags to the Implementing Authority

In the workshop, the legal aspects and technical procedure to enforce the notification was explained.

6. ENVIRONMENT PERFORMANCE INDEX FOR THE STATES BY THE PLANNING COMMISSION OF INDIA

Considering the influence of natural resources depletion and unabated pollution on many sectors of the economy, Planning Commission of India considered necessary to recognize environmental performance of the States as criteria for allocation of Central Assistance to state plans.

Planning Commission of India, first time have brought out Environment Performance Index for all the States and Union Territories. The scores have been awarded for the performance of the following five key environment sectors by the States and U. Ts. of the country:

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- i. Ambient air quality
- ii. Water quality
- iii. Forest cover
- iv. Waste management and
- v. Climate change

U.T. of Puducherry has bagged appreciable ranking in all the sectors except Forest cover. The details of ranking awarded by the Planning Commission in National level are given below:

Table.7 Details of Award ranking of Puducherry

| Sectors | Ranking |
|---------------------|---------|
| Ambient air quality | 1 |
| Water quality | 4 |
| Forest cover | 33 |
| Waste management | 8 |
| Climate change | 5 |

Considering the overall performance of environment Excellency, the U.T. of Puducherry has been ranked in 6th position at national level.

7. ACTIVITIES OF LABORATORY

A State of the art B grade laboratory is functioning in the Department. Besides carrying out industrial monitoring, it also monitors ambient air quality, ground and surface water body and ambient noise.

Table. 8 Details of monitoring conducted during 2010-2011

| S. No. | Type of monitoring | No.of monitoring carried out |
|--------|--------------------|------------------------------|
| 1 | Ambient | 113 |
| 2 | Stack | 30 |
| 3 | Noise | 7 |
| 4 | Effluent | 40 |
| 5 | AQC | 2 |



Fig. 8 Stack monitoring at M/s. Kannapan Steel, Karaikal

In collaboration with Central Pollution Control Board, a comprehensive environmental survey of Ambient Air Quality monitoring, Vehicular monitoring, Noise level, borewell and surface water study etc. has been conducted during the period April 12-16th, 2010



Fig. 9 Ambient Air Quality monitoring conducted at M/s Supreme Industries

This Department has participated in Analytical Quality Control (AQC) /Proficiency Testing (PT) exercise for the Laboratories of Central and State Pollution Control Board / Pollution Control Committees and Laboratories registered under Environment (Protection) Act, 1986 conducted by

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CPCB, Delhi during February 2011 and CPCB, Bangalore during March 2011 and analysed the following parameters viz. Conductivity, Total Hardness, Chloride, Fluoride, Sulphate, Nitrate, Calcium, Magnesium, Boron, Chromium hexavalent and TSS for two liquid and solid samples received from CPCB. All the Laboratory staff actively involved in the said exercise and the analysis report submitted to the organization of CPCB, Delhi and Bangalore.



Fig. 10 Ground water sampling based on public complaints

8. COASTAL WATER QUALITY MONITORING ON THE OCCASION OF VINAYAKA CHATHURTHI FESTIVAL

Pre and post immersion of idols of lord Vinayaga –impact on the Puducherry coastal water

In order to investigate the impact of immersion of the idols of lord Vinayaga a survey was conducted along the coastal stretch of Puducherry before and after immersion of idols. The idols of lord Vinayaga is being made with earthen clay and painted with different colours. The size of the idols are normally ranged from smaller to larger (appx; 1 feet to 100 feet). The number of idols (Big size) is increased year by year in each state and in Puducherry.

After festival, the idols are immersed into the aquatic body by employing a powerful crane so as to avoid the shore waters as well as for total dissolution of idols. This lead to the receiving coastal water to be more turbid and it is also suspected that it may interact with not only the water quality but also might change the composition both pelagic and benthic organisms. In view of the above facts a survey was made with the help of the Centre for Advanced Studies (CAS) in Marine Biology, who are already assigned the task of monitoring the coastal waters of Tamil nadu and Puducherry under Ministry of Earth Sciences – Coastal Ocean Monitoring and Prediction system programme.

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Samples were collected from the Port jetty which is located in the port of Pondicherry. Sampling position situated between 1 km away from the right side of Pondicherry beach and Thengathittu were selected. Three samples were collected around the Jetty. The water and sediments samples were collected from these stations where the immersions of Vinayaga idols are usually taken place. The depths of the sampling stations varied from 6.5 to 8 meters. The samples were collected during pre immersion period on 12.09.10 and post immersion on 17.09.10 at the following locations:

- PDY-1 – Centre of the Jetty.
- PDY-2- Left side of the Jetty (250 m from PDY-1).
- PDY-3- Right side of the Jetty (250 m from PDY-1).

All parameters were estimated following standard methods.

Water Analysis:

The results obtained during the survey of idol immersion are given in the following table:

Table.9 Result of coastal water samples

| Sl. No | Parameters | Range |
|--------|------------------------------------------------|-----------------|
| 1. | Temperature (°C) | 28.5 - 30.5 |
| 2. | Salinity (ppt) | 32 - 34 |
| 3. | pH | 8 - 8.1 |
| 4. | Turbidity (NTU) | 5 - 12 |
| 5. | TSS (mg/l) | 29.2 - 59 |
| 6. | DO (mg/l) | 4.49 - 6.46 |
| 7. | BOD (mg/l) | 0.680 - 2.440 |
| 8. | Nitrite (µmol/l) | 0.230 - 0.613 |
| 9. | Nitrate (µmol/l) | 4.246 -7.727 |
| 10. | Ammonia (µmol/l) | 0.33 - 0.191 |
| 11. | Total Nitrogen (µmol/l) | 13.018 - 29.258 |
| 12. | Inorganic Phosphate (µmol/l) | 0.038 - 1.392 |
| 13. | Total Phosphorous (µmol/l) | 0.863 - 3.435 |
| 14. | Silicate (µmol/l) | 4.536 - 37.919 |
| 15. | Primary Productivity (mgC/m ³ /hr) | 50.5 - 145.44 |
| 16. | Chlorophyll ‘a’ (mg/m ³) | 0.434 -2.777 |
| 17. | Phaeo pigments (mg/m ³) | 0.13 - 0.61 |
| 18. | Total Biomass (ml/100m ³) | 61.26 - 87.39 |
| 19. | Oil and Grease (µg/l) | 0.170 - 1.055 |

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Sediment Analysis

The Soil Texture, Total Organic Carbon and pH in sediment samples were determined and the results are presented in the following table:

Table. 10 Results of Sediment Analysis

| Sl. No. | Parameters | Concentration (Range) |
|---------|-----------------------------|-----------------------|
| 1. | Total organic carbon (mg/g) | 1.5 - 2.87 |
| 2. | Oil and Grease (µg/g) | 362 - 616 |
| 3. | Iron (µg/g) | 630 - 1126.4 |
| 4. | Copper (µg/g) | 40.6 - 73.2 |
| 5. | Zinc (µg/g) | 11.04 - 20.56 |
| 6. | Lead (µg/g) | 6.72 - 11.76 |
| 7. | Cadmium (µg/g) | 0.28 - 0.44 |

Phytoplankton and Zooplankton

The density of phytoplankton and zooplankton were found to increase during post immersion, it may be due to the increase in the required nutrients levels after dissolving the idols. At stations 1, 2 and 3, the total number of phytoplankton recorded were 22077, 24903 and 24351 Nos/l respectively during pre immersion and whereas during post immersion the numbers showed an increasing trend of 26555, 31517 and 31276 at stations 1, 2 and 3 respectively.

The total numbers of zooplankton recorded were 30650, 32694 and 33041 Nos/m³ at station 1, 2 and 3 respectively during pre immersion and whereas the numbers increased to 38475, 35741 and 36742 Nos/m³ at stations 1, 2 and 3 respectively during post immersion.

Macro and Micro benthos

In macro benthos also an increasing trend were noticed in their density. However, the meio benthos density shows decreasing trend during post immersion. The total numbers of macro benthos recorded during pre immersion were 1025, 1200 and 1350 Nos/m² at stations 1, 2 and 3 respectively and the numbers were increased to 2125, 2550 and 3350 Nos/m² during post immersion at stations 1, 2 and 3 respectively.



Fig. 11 Coastal Sampling

Status of coastal water quality regarding idol immersion

The Pondicherry coastal water monitored to study the impact of immersion of Vinayaga idol revealed that marginal variations were observed in terms of water quality such as salinity, oxygen, nutrient, oil grease and heavy metals etc. Similarly microbial population, phytoplankton and zooplankton have also exhibited an increasing trend during post immersion period. One of the noteworthy observations is the sudden proliferation of the macro benthic forms especially the Amphioxus in large quantities. However; there is drastic reduction in the number of meio benthos which might be due to the immersion of Vinayaga idol. In order to prevent pollution and health hazard due to idol immersion in water bodies on the occasion of Vinayaka Chaturthi festival wide publicity was given in leading newspapers to avoid usage of baked clay, toxic dyes, littering of solid wastes etc.,

Training programme/workshop attended by the Laboratory Staff

Dr.V.R. Sumathi, Scientist, Tmt.G. Rukmani, Scientist and Thiru.P.Vipin Babu, JSA participated in the training programme on "Marine GIS for Coastal Pollution Management" during November 22 -25, 2010 held at ICMAM Project Directorate, Chennai.

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Fig. 12 Officials participating in the training programme

Ongoing Case Study / Research Work

(1) A seasonal case study of Particulate Matter (PM_{10}) concentration in the ambient air at the surrounding / neighbouring villages of M/s. Karaikal Port Pvt. Ltd., is being carried out by the Regional Office of the Department of Science, Technology and Environment, Puducherry Pollution Control Committee, Karaikal since February 2011. Expert team visited M/s. Chennai Port Trust and M/s. Ennore Port Trust to study dust mitigation measures adopted in the coal handling area.



Fig. 13 Inspection by Expert Team at M/s. Chennai Port Trust

(2) A seasonal case study of Chlorine concentration in the ambient air in and around M/s. Karaikal chlorates of Melakasakudy area is being carried out by the Regional Office of the Department of Science, Technology and Environment, Puducherry Pollution Control Committee, Karaikal since October 2010.

9. STATUS OF AIR QUALITY

Puducherry Pollution Control Committee is monitoring ambient air quality at three Air Quality Monitoring stations namely Chamber of Commerce near Bharathi Park (Residential), DSTE, Anna Nagar (Commercial) and PIPDIC Industrial Estate, Mettupalayam (Industrial) under National Air Quality Monitoring Programme (NAMP) in Puducherry region. Each station is being monitored for 24 hours - two days in a week in a cyclic manner. The parameters assessed are Particulate Matter (size less than 10 μm ($\mu\text{g}/\text{m}^3$), Sulphur-di-oxide (SO_2) and Nitrogen di oxide(NO_2).

Table.11 The Annual Average Concentration of Ambient Air Quality Monitoring Results for the year 2010

| Parameters | Chamber of Commerce | DSTE | PIPDIC | Annual Average standard |
|-----------------------------------------------|---------------------|------|--------|-------------------------|
| PM_{10} ($\mu\text{g}/\text{m}^3$) | 27 | 40 | 43 | 60 |
| SO_2 ($\mu\text{g}/\text{m}^3$) | 5.92 | 6.6 | 7.16 | 50 |
| NO_2 ($\mu\text{g}/\text{m}^3$) | 12.1 | 15.6 | 16.21 | 40 |

The analysis of the above parameter has revealed that Annual Average Concentrations of the pollutant are well within the prescribed standard limits. The concentration of Particulate Matter less than 10 Micron in the ambient air monitored in all the three locations are in the ranges from 20 – 55 ($\mu\text{g}/\text{m}^3$) as against the annual average standard of 60 ($\mu\text{g}/\text{m}^3$). Concentration of Sulphur di oxide are in the ranges from 2 – 16.6 ($\mu\text{g}/\text{m}^3$) and Nitrogen di oxide in the ranges from 4.5 – 26.9 ($\mu\text{g}/\text{m}^3$) as against the annual average standard of 50 ($\mu\text{g}/\text{m}^3$) and 40 ($\mu\text{g}/\text{m}^3$) respectively.

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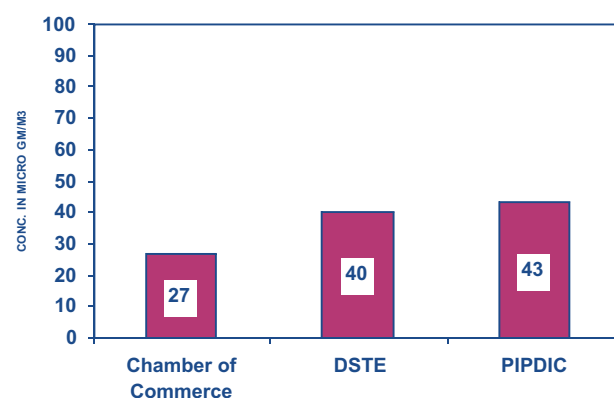


Fig. 14 Trends in annual average concentration of PM₁₀ for the year 2010 in Puducherry Region

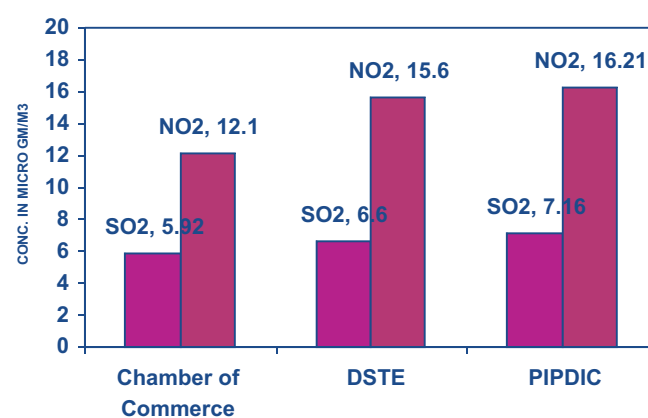


Fig. 15 Trends in annual average concentration of Sulphur dioxide and Nitrogen dioxide for the year 2010 in Puducherry Region

Strengthening of air quality monitoring

Proposal has been submitted to Central Pollution Control Board for establishment of three National Ambient Air Quality Monitoring station in Karaikal region.

PPCC also proposes to establish one station under Continuous Automatic Air Quality Monitoring (CAAQM) network in Puducherry with the financial support from Central Pollution Control Board.

Ambient Air and Noise Pollution Levels during Diwali 2010

Puducherry Pollution Control Committee has conducted Noise monitoring as per the guidelines of CPCB in Residential area from 18.00 hours to 24.00 hours totaling to a duration of 06.00 hours on the occasion of Diwali festival on 5th November, 2010 to assess the environmental impact of bursting crackers.

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It is noticed from the monitoring report that noise level has come down when compared to that of last year Diwali.

The measured noise levels were higher between 6.00 P.M and 9.00 P.M than in the other period of Diwali day both during Diwali 2009 and 2010.

Table. 12 Comparison of Ambient Noise Monitoring conducted during Diwali (2009 & 2010)

| Sl. No. | Time duration | 17.10.2009 | 05.11.2010 |
|---------|----------------------------|--------------------|------------|
| | | L equivalent dB(A) | |
| 1. | 18:00 Hr to 19:00 Hr | 93.2 | 85.4 |
| 2. | 19:00 Hr to 20:00 Hr | 91.3 | 83.5 |
| 3. | 20:00 Hr to 21:00 Hr | 87.9 | 83.2 |
| 4. | 21:00 Hr to 22:00 Hr | 76.4 | 71.4 |
| 5. | 22:00 Hr to 23:00 Hr | 69.8 | 73.6 |
| 6. | 23:00 Hr to 24:00 Hr | 65.7 | 65.6 |
| | Average L equivalent dB(A) | 80.7 | 77.1 |

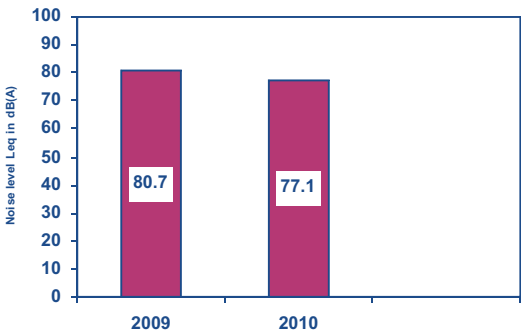


Fig. 16 Noise level during 2009 and 2010 Diwali celebration

Ambient Air Quality Monitoring was also carried out for a duration of 24 hours to assess the air pollution levels due to bursting of crackers on the occasion of Diwali festival. The comparison concentration of PM₁₀, SO₂ & NO₂ in ambient air quality monitoring conducted during Diwali (2009 & 2010) are tabulated below:

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Table 13. Details of Ambient Air Quality Monitoring during Diwali celebration

| Pollutants (µg/m ³) | 2009 | 2010 | Standard limit (µg/m ³) |
|------------------------------------------|------|------|-------------------------------------|
| Particulate Matter (< PM ₁₀) | 109 | 122 | 100 |
| Sulphur di Oxide | 2.7 | 14.3 | 80 |
| Nitrogen Oxide | 16.6 | 12.9 | 80 |

From the above table it was observed that the concentration of PM₁₀ is higher than the prescribed standard limit of 100 µg/m³ and it was slightly higher (122(µg/m³) as compared to last year Diwali, 2009 (109 µg/m³). 24 hourly concentration of SO₂ and NO₂ are within the prescribed standard limit during 2009 and 2010 Diwali day.

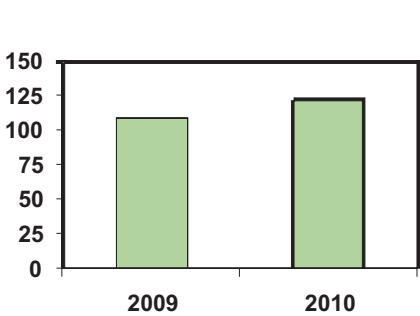


Fig. 17. Comparison concentration of PM₁₀

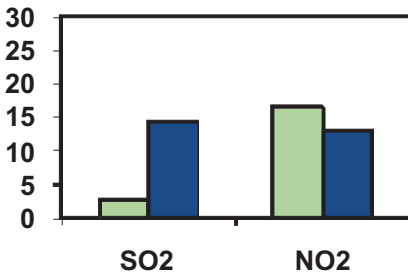


Fig. 18. Comparison concentration of SO₂ & NO₂

10. STATUS OF WATER QUALITY

Quality of water is one of the vital parameters to determine the healthy status of the people. It get influenced by discharges of industrial and domestic waste water and dumping of various wastes. PPCC is periodically monitoring the surface and ground water quality of Pondicherry under CPCB sponsored project, National Water Quality Monitoring Programme (NWMP). Totally 22 locations consists of ground and surface water are being monitored under NWMP and the locations of the sampling points are given below:

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Table.14 Water quality monitoring stations in Puducherry Region

| Station Code | Location | Type |
|--------------|---------------------------------|----------|
| 1396 | Ousteri | Lake |
| 1397 | Ramakrishna Nagar, Muthialpet | Borewell |
| 1398 | Tengaithittu | Borewell |
| 1453 | Muthirappalayam | Borewell |
| 1454 | Pondicherry University, Kalapet | Borewell |
| 1688 | Katterikuppam | Borewell |
| 1686 | Bahour | Lake |
| 1687 | Mission St.,- Chetty Koil | Borewell |
| 1689 | Chunnambar | River |
| 2009 | Kurumbapet | Borewell |
| 2010 | Mettupalayam | Borewell |
| 2011 | Uruvaiyar | Borewell |
| 2012 | Karuvadikuppam | Borewell |

Table.15 Water quality monitoring stations in Karaikal Region

| Station Code | Location | Type |
|--------------|--------------|----------|
| 1685 | Arasalar | River |
| 2013 | T.R.Pattinam | Borewell |
| 2014 | Vadamattam | Borewell |

Table. 16 Water quality monitoring stations in Yanam Region

| Station Code | Location | Type |
|--------------|------------------|-------|
| 2442 | Gautami-Godavari | River |
| 2443 | Gautami-Godavari | River |
| 2444 | Coringa | River |

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Table. 17 Water quality monitoring stations in Mahe Region

| Station Code | Location | Type |
|--------------|------------|----------|
| 2445 | Mahe river | River |
| 2446 | Pallur | Openwell |
| 2447 | Panthakkal | Openwell |

Water samplings were carried out during Pre-monsoon, Monsoon and Post monsoon seasons and analysed for the parameters pH, Temperature, Conductivity, DO, BOD, Alkalinity, Chloride, COD, Total Hardness as CaCO_3 , Calcium as CaCO_3 , Magnesium as CaCO_3 , TDS, TSS, Fluoride and Phosphate.



Fig. 19 Sampling at Mahe River (NWMP Station)



Fig. 20 Sampling at Pallur, Mahe (NWMP Station)

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Status of Surface Water Quality

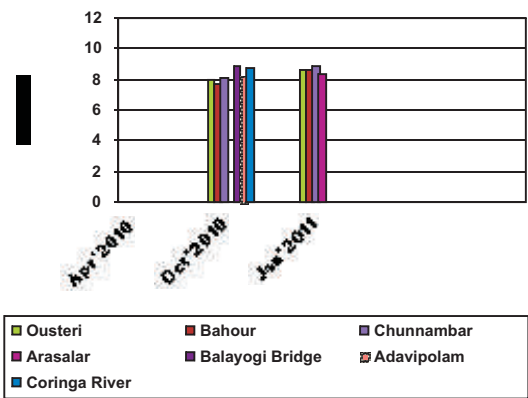


Fig. 21 pH

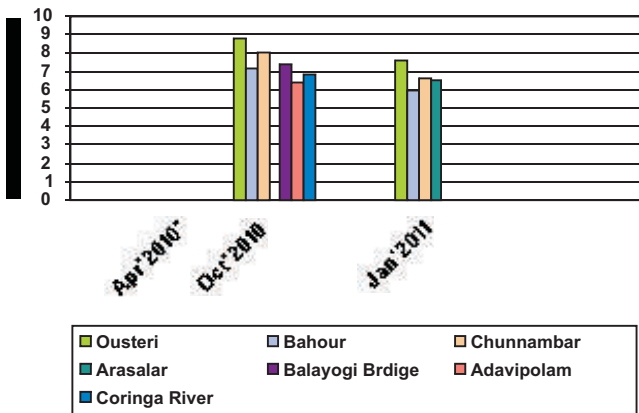


Fig. 23 Dissolved Oxygen in mg/l

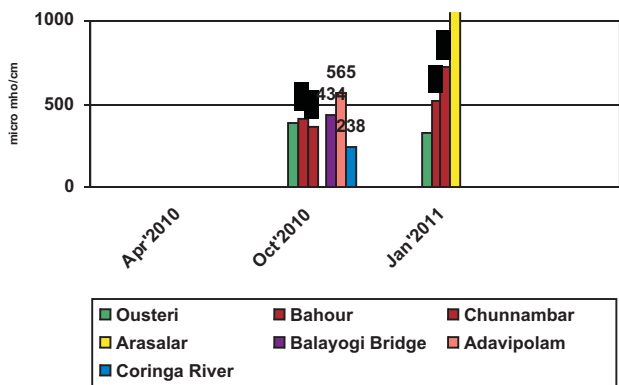


Fig. 22 Conductivity

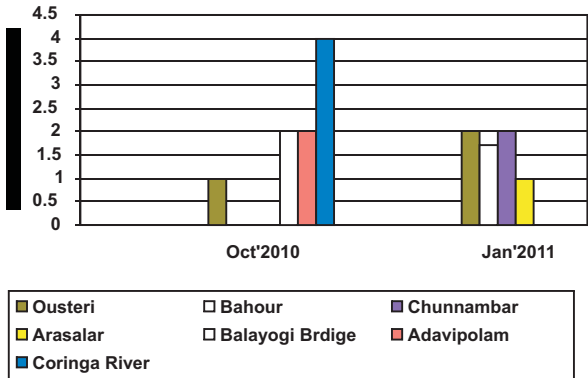


Fig. 24 Biochemical Oxygen Demand in mg/l

*April 2010 sample was not collected due to non flow of water

Status of Borewell Water Quality

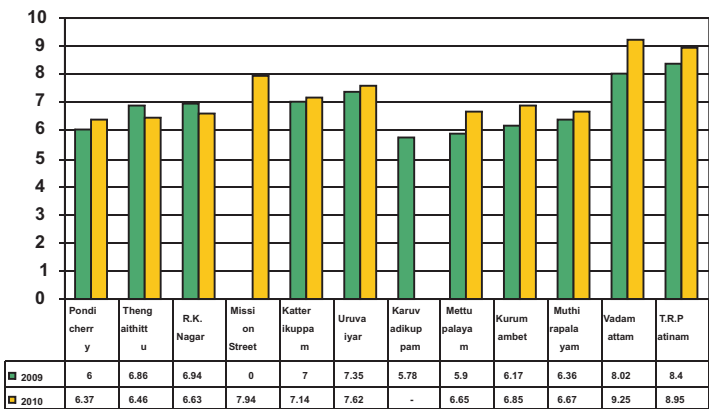


Fig.25. pH

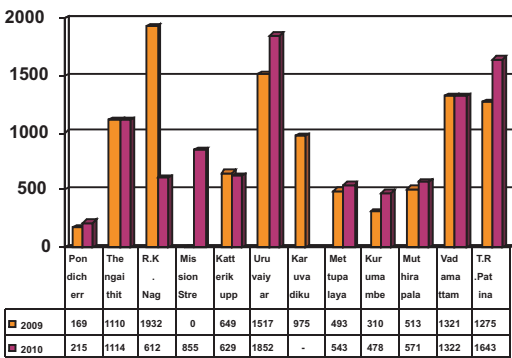


Fig.26. Conductivity in micro mho/cm

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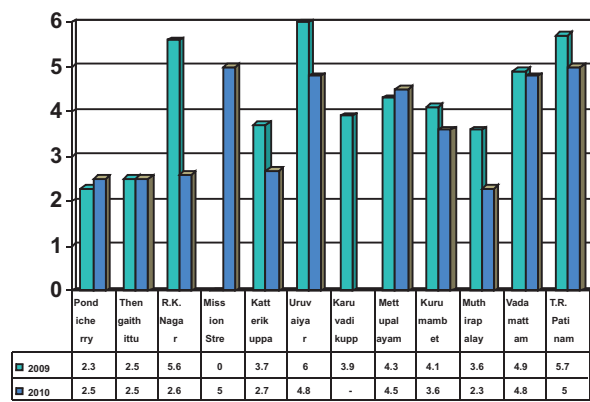


Fig. 27. Dissolved Oxygen in mg/l

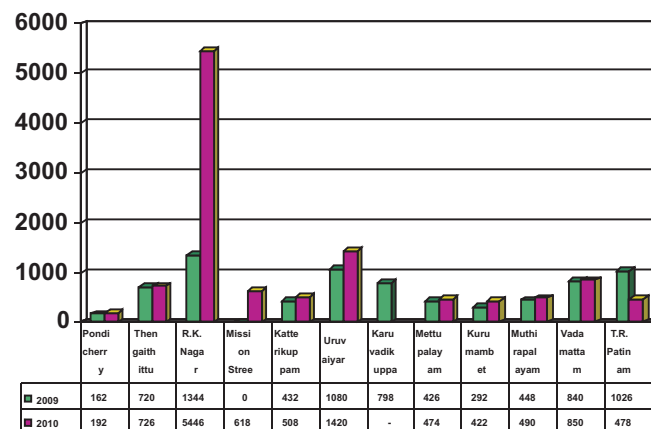


Fig. 28. Total Dissolved Solid in mg/l

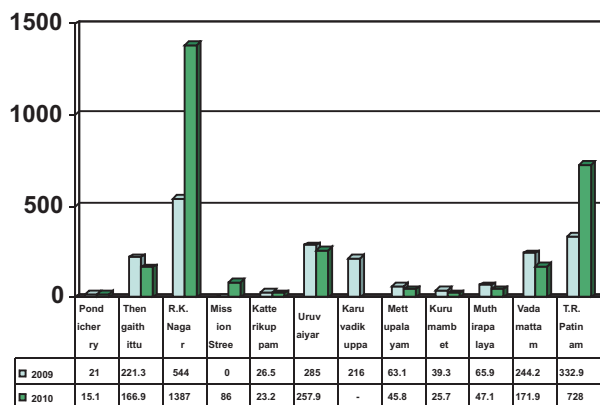


Fig.29. Chloride in mg/l

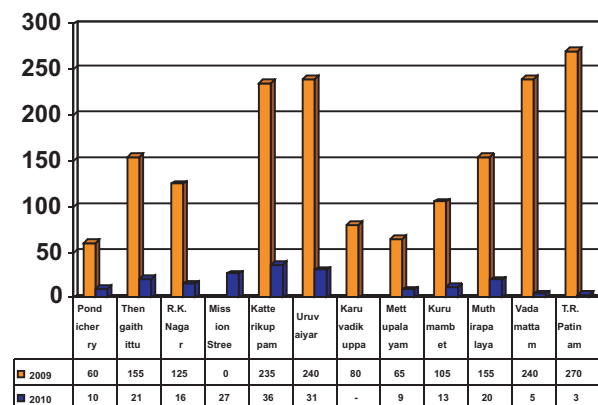


Fig.30. Alkalinity in mg/l

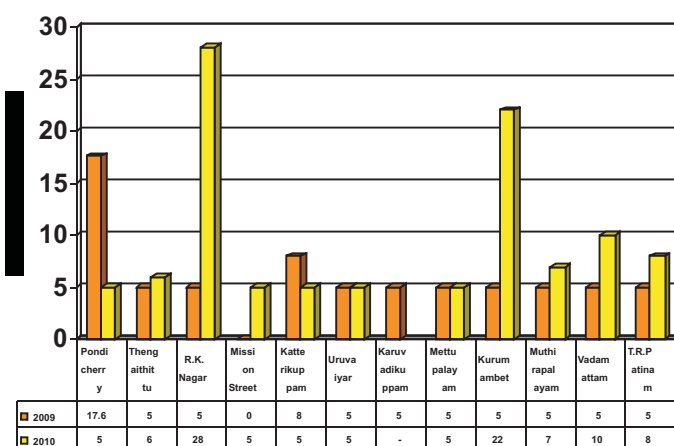


Fig.31. TSS in mg/l

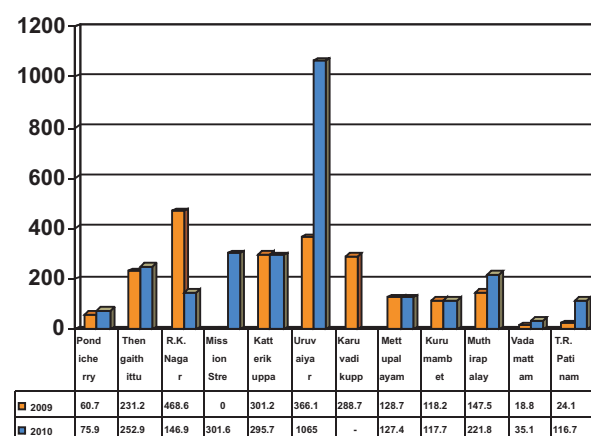


Fig.32. Total Hardness in mg/l

11. MUNICIPAL SOLID WASTE MANAGEMENT

U.T. of Puducherry generates 500 TPD of Municipal Solid Waste source. As in the case of other city of our country, collection, transportation and disposal of municipal solid waste is challenging task to this administration. Poor awareness among the people segregation, meagre financial support available to the local bodies, limited land resources and NIMBY (not in my backyard) syndrome are major attributes for the problems. PPCC is the enforcement authority of Municipal Solid Waste (Management and Handling) Rules, 2000. Series of Interaction Meetings were organized with the Local bodies to enlighten the provisions of the Rule and for ensuring strict compliance. The local body representatives made presentation before the PPCC in its 112th meeting held on 02-12-2010 for issue of authorization.

Table. 18 Grant of Authorisation to Local Bodies

| Sl. No. | Name of the Local bodies | Date of issue of Authorisation | Quantity of Municipal Solid waste TPD |
|---------|-------------------------------------|--------------------------------|---------------------------------------|
| 1. | M/s Puducherry Municipality | 05.01.2011 | 220 |
| 2. | M/s Oulgaret Municipality | 05.01.2011 | 120 |
| 3. | M/s Yanam Municipality | 05.01.2011 | 34 |
| 4. | M/s Villianur Commune Panchayat | 05.01.2011 | 12 |
| 5. | M/s Ariankuppam Commune Panchayat | 05.01.2011 | 5 |
| 6. | M/s Bahour Commune Panchayat | 05.01.2011 | 30 |
| 7. | M/s Nettapakkam Commune Panchayat | 05.01.2011 | 36 |
| 8. | M/s Mannadipet Commune Panchayat | 05.01.2011 | 15 |
| 9. | M/s Neravy Commune Panchayat | 05.01.2011 | 1 |
| 10. | M/s Kottucherry Commune Panchayat | 05.01.2011 | 4 |
| 11. | M/s Nedungadu Commune Panchayat | 05.01.2011 | 1.5 |
| 12. | M/s T.R. Pattinum Commune Panchayat | 05.01.2011 | 2 |
| 13. | M/s Thirunallar Commune Panchayat | 05.01.2011 | 3 |
| | Total | | 483.5 |

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Table.19 Direction(s) issued to the Local Bodies under section 5 of Environment (Protection) Act, 1986 for non compliance of the provision of the Rule

| Sl. No. | Name of the Local bodies | Date of issue of direction | Nature of Directions |
|---------|-------------------------------------------------|----------------------------|----------------------------------------------------------|
| 1. | M/s Puducherry Municipality | 18.08.2010 | For non-compliance of Direction, issued showcause notice |
| 2. | M/s Oulgaret Municipality | 18.08.2010 | -do- |
| 3. | Local Administration Department | 18.08.2010 | -do- |
| 4. | M/s Villianur Commune Panchayat | 14.07.2010 | Violation of Rules, issued with direction |
| 5. | M/s Puducherry Municipality | 19.11.2010 | -do- |
| 6. | M/s Oulgaret Municipality | 18.01.2011 | For non-compliance of Direction, issued showcause notice |
| 7. | M/s Puducherry Municipality | 18.01.2011 | -do- |
| 8. | M/s Puducherry Municipal Services Private Ltd., | 18.01.2011 | -do- |

Public compliant on burning of MSW at Kurumbapet dumping site

Serious of public complaints were received about burning of MSW at Kurumbapet temporary dumping site. The site was inspected by the Chief Secretary and Special Secretary and directed PSS to stop further dumping of MSW at the site.



Fig. 33 Chief Secretary and Special Secretary explaining the ill-effect of burning of MSW to the rag pickers

Integrated Solid waste Management Project

Under the JNNURM scheme, Government of Puducherry was granted financial assistance to establish an Integrated Solid Waste management Project through Public Private Partnership mode. Subsequent to the competitive tender processes, successful bidder, Kivar Environ Private Limited was granted the concession to establish Integrated SWM project with a 19 year concession period. Puducherry Municipal Services Private Limited is a joint venture between Government of Puducherry (Puducherry Urban Development Agency (PUDA) and Kivar Environ Private Limited. The Concession Agreement for implementation of Integrated Municipal Solid Waste Management Project for the Urban Agglomeration of Puducherry was signed by and between PMSPL, PUDA and Municipalities of Puducherry and Oulgaret and Commune Panchayats of Ariankuppam and Villianur on 18.10.2010. This project has been designed for two disposal methods viz. composting and land filling.

12. BIOMEDICAL WASTE MANAGEMENT

In the U.T of Puducherry, 7 Private Medical Colleges cum Hospitals and one Government Medical College cum Hospital besides 95 Government and Private Health Care facility are functioning. Approximately 4 TPD of bio medical wastes are being generated from around 7,000 bed. Proper disposal of bio medical waste is necessary for avoiding contamination of environment by the bio medical waste. As per the provision Rule – of Bio Medical Waste (Management & Handling) Rules, 2000, PPCC is competent authority to issue authorization to the Health Care Facility. The details of authorization issued during the year is given in the table:

Table. 20 Authorisation issued to the Health Care Facilities

| Sl. No. | Region | Issue of Authorisation | Issue of NOC |
|---------|------------|------------------------|--------------|
| 1. | Puducherry | 10 | 02 |
| 2. | Karaikal | 02 | 02 |
| 3. | Mahe | -- | -- |
| 4. | Yanam | -- | -- |
| | Total | 12 | 04 |

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Table.21 Direction(s)/ showcase issued to the Health Care Facilities

| Sl. No. | Name of the Health Care Facilities | Date of direction issued | Nature of Directions |
|---------|-------------------------------------------------------|--------------------------|-----------------------------------------------|
| 1. | General Hospital, Karaikal | 01.09.2010 | Non-compliance of the Provisions of the Rules |
| 2. | Karaikal Municipality | 30.08.2010 | -do- |
| 3. | M/s Sri Vengateswara Medical College and Hospital | 20.04.2010 | -do- |
| 4. | M/s Aarupadaivedu Medical College & Hospital | 20.04.2010 | -do- |
| 5. | M/s Pondicherry Institute of Medical Scieces | 20.04.2010 | -do- |
| 6. | M/s Manakula Vinayagar Medical College and Hospital | 20.04.2010 | -do- |
| 7. | M/s Sri Lakshmi Narayana Medical College and Hospital | 20.04.2010 | -do- |
| 8. | M/s Vinayaka Mission Medical College and Hospital | 20.04.2010 | -do- |

Common Bio-Medical Waste Treatment Facility

M/s. Puducherry Solid Waste Management Pvt. Ltd. has established a Common facility for Bio-medical waste disposal at Thuthipet. It has facility for incineration, autoclave and secured land fill. There was a lull in arriving tariff system between Operator of the facility and Health Care Facilities. In order to evolve conscious tariff system between the two, PPCC has constituted a Sub-Committee consisting of Director of Health Service, Auditor and Senior Scientific Officer of DSTE.

A meeting was held on 24.03.2011 to discuss about the modalities, procedures to be followed between the Common Bio-Medical waste Treatment Facility and the Bio-Medical waste generator i.e. Health care facilities.



Fig. 34 Dr. Dilip Kumar Baliga, Director (Health) addressing to the representatives of Health Care Facilities

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The sub-committee constituted for finalizing the tariff structure for disposal of the Bio-Medical waste has recommended the following tariff system:

| | |
|-------------------------------------------------|--------------------------|
| Government Hospitals not exceeding | : ₹ 5.0 per bed per day |
| Medical College and Hospitals not exceeding | : ₹ 5.50 per bed per day |
| Hospitals / Nursing Homes not exceeding | : ₹ 6.50 per bed per day |
| Clinics / Eye Hospitals not exceeding | : ₹ 4.50 per bed per day |
| Clinical laboratory / Drug Stores not exceeding | : ₹. 650 per month |

M/s. Pondicherry Solid waste Management Company Private Ltd., Thuthipet has been directed to commence the operation of their unit by executing necessary MOU with all interested Health Care Facilities (HCFs) with a condition to appointment full time Environmental Engineer (EE) in the Common facility to monitor proper functioning of the unit.

13. HAZARDOUS WASTE MANAMAGEMENT

93 Industries are generating hazardous waste. The details of waste, quantity and disposal methods are given below:

Table 22 Region wise Break-up of Hazardous Waste based on Disposal Method

| Sl. No. | Region | Quantity of Hazardous waste in TPA | | | Total |
|---------|------------|------------------------------------|----------|--------|----------|
| | | SLF* | RCL** | INC*** | |
| 1. | Puducherry | 128.940 | 33159.78 | 16.91 | 33305.63 |
| 2. | Karaikal | 3.36 | 65.42 | 0.84 | 69.62 |
| 3. | Yanam | -- | 3017.8 | 1.2 | 3019 |
| 4. | Mahe | -- | -- | -- | -- |
| Total | | 132.3 | 36243 | 18.95 | 36400.7 |

Note: SLF* - Secured land filling;RCL**- Recyclable;INC***-Incinerable

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Table. 23 Direction/ Show cause issued to the HW generating units

| Sl. No. | Name of the Industries | Date of direction issued | Nature of Directions |
|---------|----------------------------------------------------------------|--------------------------|-------------------------------------------------|
| 1. | M/s R.K. Industries, Lingareddipalayam | 11.03.2011 | Unauthorized activity carried out by the unit |
| 2. | M/s Suzlon Energy Ltd., Thirubuvanai | 02.02.2011 | To obtain authorization for additional items |
| 3. | M/s S.M.S. Traders, Thirubuvanai | 02.02.2011 & 04.03.2011 | Unauthorized activity |
| 4. | M/s Hindusthan National Glass Industries Ltd., Thondamanatham. | & 20.01.2011 | To setup proper storage area of hazardous waste |

Treatment Storage and Disposal Facility (TSDF)

Chairman of PPCC requested the adjoining States like Andhra Pradesh and Tamil Nadu Pollution Control Boards for Transboundary movement of Hazardous waste from Puducherry to their Common TSDF available in their State. The Andhra Pradesh Pollution Control Board, (APPCB) Hyderabad and Tamil Nadu Pollution Control Board, (TNPCB), Chennai have informed their inability to share the TSDF available in their States as well as for Transboundary Movement of Hazardous wastes. Thus, it was decided to have their own arrangements like installation of incinerator / Secured Land filling as per the CPCB guidelines. A meeting with the Hazardous waste generators was conducted to evolve a solution for disposal of hazardous waste



Fig. 35 Deliberation on evolving draft waste management policy for UT of Puducherry

14. PRESENTATION OF AWARD

Green Award



Fig:36. Receiving Green Award

Green Award has been instituted to be given on the Independence Day, 15th August once in three years to the industry which has constituted substantially to the cause of improvement of environment and adopted innovative technology on pollution control in the U.T. of Puducherry. It consists of cash prize of ` 25,000/- and a citation.

Green Award for the year 2007-2009 has been awarded to M/s. Swathi Organics & Speciality Pvt. Ltd., Mettupalayam, Puducherry on 15.08.2010.

Environment Award



Fig:37. Receiving Environment Award

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Department of Science, Technology and Environment, Puducherry has instituted "Environment Award" of to be given on the Independence Day (15th August) once in three years to anyone amongst the public /institutions/voluntary organizations who/which has contributed substantially to the cause of improvement of environment and matters connected with it in the Union Territory of Puducherry. For the years 2007-09, Thiru.Baskara Rassou, Kanuvapet, Villianur has been selected by Government of Puducherry for the Environment award (₹ 25,000/- cash and citation) and he was presented the award by the Honorable Chief Minister on 15th August 2010.

15. LIST OF INDUSTRIES FOR WHICH DIRECTION (S) / CLOSURE ORDER(S) ISSUED

PPCC as a statutory organization enforce various provisions of the Acts and Rules pertaining to environment protection. PPCC keep continuous vigil on the performance of pollution control devices. Directions as per the provisions of Section 5 of Environment (Protection) Act, 1986 Section 31(A) of Air (Prevention and Control of Pollution) Act, 1981 and Section 33(A) of Water (Prevention and Control of Pollution) Act, 1974 are being issued to the industries which violates Consent to Establish / Operate conditions.



Fig. 38 Surprise inspection at plastic articles retailers

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Table. 24 List of industries for which directions /closure orders issued

| Sl. No. | Name of the unit | Nature of violation | Date of issue of direction | Compliance status |
|---------|------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------|----------------------------|---------------------------------------------------------------------------------------------------------------------------|
| 1. | M/s. Victory Polymers No. 146, Thiyaga Mudaliar Street, Puducherry | Storing, selling and distribution of banned plastic carry bags of lesser than 51 micron thickness | 12.05.2010 | Stopped to store, sell and distribution of banned plastic carry bags of lesser than 51 micron thickness |
| 2. | M/s. Jeetendra Agencies No.284, Rangapillai Street, Puducherry. | Storing, selling and distribution of banned plastic carry bags of lesser than 51 mi cron thickness | 12.05.2010 | |
| 3. | M/s. Abirami Poly Packs, No.243, Rangapillai Street, Puducherry | Storing, selling and distribution of banned plastic carry bags of lesser than 51 micron thickness | 12.05.2010 | |
| 5. | M/s. Evershine Formulation R.S. No. 145/1, No. 17 & 19, Abishegapakkam Road, Ariankuppam, Puducherry | Unauthorized activity | 15.12.2010 | |
| 6. | M/s. Decan Extrusion (P) Ltd. Thuthipet, Puducherry | Exceeded the ambient air quality standard | 06.01.2011 | Increased chimney height |
| 7. | M/s. K.K. Nag LTd. Kariyamanikam Nettapakkam, Puducherry | Exceeded the ambient air quality standard | 06.01.2011 | Increased chimney height |
| 8. | M/s. E.I. D Parry (P) Ltd Ariyur Ariyur, Puducherry | Exceeded the ambient air quality standard | 24.08.2010 | Upgraded the ETP |
| 9 | M/s. Rane Brake Lining. RS No 48, 49 & 50 Sanyasikuppam village, Thiruvandarkoil, Puducherry. | Discharge of effluent- non compliance of standards. | 17.8.2010 | Unit provided oil and grease skimmer. |
| 10 | M/s. Rane Brake Lining. RS No 48, 49 & 50 Sanyasikuppam village, | Direction under section 33 A of the water (Prevention and Control of Pollution) | 8.4.2011 | Upgraded the treatment system. |

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| | | | | |
|-----|-------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------|------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|
| 11 | M/s V.S.B Paper products. R.S No 192/1 Pt 2,3,4, Vadhanur Village, P.S.Palayam, Mannadipet Commune, Puducherry | Show cause notice was issued to the unit to raise the stack height and change of fuel and for discharge of waste water. | 8.3.2011 | Unit complied with the conditions. |
| 12 | M/s. Metco Roof Private Ltd, RS No 123/3, Thiruvandarkoil village, Puducherry | Direction issued for carrying out Unauthorized operation of Sand Blasting | 8.2.2011 | Unit stopped its operation of sandblasting. |
| 13 | M/s. Suzlon Energy Ltd., Thiruvandarkoil, Puducherry | Show cause notice was issued after a fire incidents at the premises of the unit. | 30.04.2010 | Unit submitted in Form -13 the details of FRP waste transported to ACC Cement for co-incineration |
| 14 | M/s. Meenakshi Steels, Thethampakkam, Mannadipet Commune, Puducherry. | Issue of show cause notice- for non compliance of the direction, and directed them to provide STP | 16.7.2010 | Provided STP for the treatment of the domestic waste water and met the ambient air quality standard. |
| 15 | M/s Pondy roller flour mills ltd, Mahe | Directed the unit to remit the consent fee for non renewing of the consent. | 8.2.2011 | Unit remitted the consent fee with penalty. |
| 16 | M/s Sarispat pvt ltd, Kalitheerthalakuppam, Puducherry. | Non compliance of the air quality standards. Directed to provide APCS. | 15.11.10 | Compliance report submitted. |
| 17 | M/s Sri Santosh paper boards, Madagadipet palayam, thirubhuvanai. | Direction to the unit for operating the unit without valid consent. | 23.2.2011 | Unit yet to remit. |
| 18. | M/s. Sree Rengaraj Steels | Direction to comply with the conditions of Air Consent Order for non-compliance of Ambient Air Quality Standards – Particulate Matter | 06.05.2010 | The unit has cleaned the APCS and new energy meter was installed. Re-monitored for compliance on 28.07.2010 and subsequently, Consent Renewal issued. |

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| | | | | |
|-----|---------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------|------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 19. | M/s. Ankit Ispat (P) Ltd., (Unit I & II) | Direction to comply with the conditions of Air Consent Order for non-compliance of Ambient Air Quality Standards – Particulate Matter | 06.05.2010 | Replaced new Wet Scrubber and Water Pipe line in Unit – I and Water Pipeline cleaned in Unit – II. Re - monitored for compliance on 08.02.2011. Show Cause Notice under process for non - compliance of standards. |
| 20. | M/s. H & R Johnson (India), A Division of Prism Cement Ltd.,. | Direction to comply with the conditions of Air Consent Order for non-compliance of Ambient Air Quality Standards – Particulate Matter | 23.06.2010 | Complied by taking concrete remedial measures to reduce dust emission and to achieve required house-keeping. Re - monitored for compliance on 27.07.2010 and subsequently, Consent Renewal issued. |
| 21. | M/s. Kanyaka Fine Weld Ltd., | Direction to comply with the conditions of Air Consent Order for non-compliance of Ambient Air Quality Standards & Stack Emission – Particulate Matter | 25.08.2010 | Installed new Wet Scrubber and the entire APCS have been completely cleaned. Re - monitored for compliance on 18.01.2011 and subsequently, Consent Renewal issued. |
| 22. | M/s. Abhirami Chemicals Ltd., | Direction to comply with the conditions of Air Consent Order for non-compliance of Ambient Air Quality Standards – Particulate Matter | 28.12.2010 | Screw feeder system has been installed for mixing and feeding of input raw materials into furnace, by replacing existing manual feeding. Re-monitored for |

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| | | | | |
|-----|-----------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| | | | | compliance on 20.01.2011 and subsequently, Consent Renewal validated. |
| 23. | M/s. Praveen Chem Industry | Direction to comply with the conditions of Air Consent Order for non-compliance of Ambient Air Quality Standards – Particulate Matter | 28.12.2010 | Mechanical handling of raw materials. Re - monitored for compliance on 19.01.2011 and subsequently, Consent Renewal validated. |
| 24. | M/s. New Bama Paints & Chemicals | Direction to comply with the provisions of Air (Prevention and Control of Pollution) Act, 1981 to control noise and dust generation. | 06.05.2010 | Complied with by providing closed ball mill operation area to prevent noise and dust generation. |
| 25. | M/s. Nuvodaya Chemicals (P) Ltd., | Direction to comply with the provisions of Air (Prevention and Control of Pollution) Act, 1981 and Water (Prevention and Control of Pollution) Act, 1974 to surrender the Consents issued. | 24.05.2010 & 09.08.2010 | The unit surrendered the Air and Water Consent Orders issued and hence, closed permanently. |
| 26. | M/s. Karaikal Port Pvt. Ltd., | Direction to comply with the provisions of Air Consent Order for coal dust emission. | 23.06.2010 | (a) The heap of the coal stored is reduced from 15 to 10 -12 metres. (b) The height of the high resistant polymer mesh has been increased in level with the coal heap height. (c) New dust separation wall with high resistant polymer mesh along the North West direction and |

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|-----|----------------------------------|----------------------------------------------------------------------------------------------------------------------------------------|------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| | | | | <p>all along the loading area of the railway track has been constructed.</p> <p>(d) Installed additional fire pumps to increase the periodicity of sprinkling of water over heaps.</p> <p>(e) Casuarinas are planted all along the shoreline to act as wind barriers and around 5000 trees are planted in the port premises.</p> <p>(f) Project team has been instructed to expedite the proposed using of closed elevators for loading and unloading of coal during Phase – II.</p> |
| 27. | M/s. Annai Tea Stall | Direction to comply with the provisions of Air (Prevention and Control of Pollution) Act, 1981 to use alternate fuel. | 23.06.2010 | Changed to alternate fuel for preparation of snacks and sweets. |
| 28. | M/s. Nagammai Plastic Industries | Direction to comply with the provisions of Air (Prevention and Control of Pollution) Act, 1981 to control noise and burning of wastes. | 25.08.2010 | Complied by maintenance of machineries, entertainment instruments are used at audible volume and wastes are bundled and sent for recycling. |

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|-----|-------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 29. | M/s. Karaikal Port Pvt. Ltd., | Direction to comply with the provisions of Air Consent Order during transportation of materials handled unpacked. | 28.12.2010 | <p>(a) Bulk material movement through lorries and trucks is strictly permitted only after ensuring that the material is adequately covered and tied with thick tarpaulin, canvass or any other suitable material.</p> <p>(b) Transport operators have been advised to adopt best possible environmental friendly measures during bulk cargo transportation such as negotiating the road turns / speed breakers etc., with slow and steady speed.</p> <p>(c) Certain cargoes such as coal are sprinkled with ample amount of water.</p> <p>(d) Regular meetings with transport operators to impart training on environmental safe transportation of bulk cargo.</p> |
| 30. | M/s. Chemplast Sanmar Ltd., | Direction to comply with the conditions of Water Consent Order to explore the possibility of adopting alternate technology to overcome the obstacles of operating a solar pond. | 28.12.2010 | In order to overcome the rainwater overflow from the solar ponds, the same have been recycled in the desalination plant and the solar ponds are filled with soil. The work has been completed and hence, complied with. |

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|-----|-------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 31. | M/s. Karaikal Port Pvt. Ltd., | Show Cause Notice to comply with the provisions of Air Consent Order to ban handling of coal for n ot adopting suitable stringent measures to control the coal dust at source itself. | 28.02.2010 | (a) Completed by planting 10000 hybrid Casuarinas near southern side boundary wall (Nagore side) to create a natural wind barrier. (b) Erection of Dust Separation Nets along the southern boundary wall (Nagore side) is in progress and proposed to be completed by Mid June 2011. (c) Installation of additional sprinkling system around coal plots is in progress and proposed to be completed by Mid June 2011. (d) Installa tion of Dust Separation Nets (15 metres height) around Berth 3 & 4 back - up yard is in progress and proposed to be completed by Mid June 2011. (e) Installation of mechanized coal handling system at Berth 3 & 4 and its back-up area is in progress and scheduled to be completed by December 2011 which will reduce vehicle inter- |
|-----|-------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

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| | | | | |
|-----|---------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| | | | | carting and the pollution. (f) Intensified continuous water sprinkling of roads, railway sidings and coal plots through manual sprinkling mode. (g) Directed cargo laden trucks to use only designated roads and not to enter coal plots thus avoiding churning of dust |
| 32. | M/s. Malathi Brick Industry | Show Cause Notice to comply with the provisions of Air Consent Order for dust emission during unloading and handling of raw materials and also due to manufacturing process of fly ash bricks. | 11.03.2011 | (a) Wet sand will be used instead of blue metal powder. (b) Burnt powdered lime will be carried out only after obtaining consent to operate from PPCC. (c) Water will be sprinkled in the fly ash during storing. |
| 33. | Public Works Department, Government of Puducherry | PWD was directed to apply for Water Consent for the existing as well as proposed new Sewage Treatment Plants | 10.05.2010 | Complied; PWD has applied for Water Consent. |
| 34. | M/s. Puducherry Agro Service & Industries Corporation Limited (PASIC), Karuvadikuppam | PASIC was directed to apply for Air and Water Consent and Hazardous Waste Authorization for their Mineral Water manufacturing unit. | 30.09.2010 | Not complied; further action under process. |
| 35. | M/s. Shasun Chemicals and Drugs Limited, Kalapet | The unit was directed to prepare Quantitative Risk Analysis Report, On-site and Off-site Emergency Plan and to improve the Environmental Monitoring and Solid Waste Disposal methods | 31.03.2011 | To be complied by the unit in time bound manner. |

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| | | | | |
|-----|-----------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|----------------------------------------------|
| 36. | M/s. R.K. Industries, Kannikoil | Engineering workshop causing noise pollution; the unit has been directed to shift to alternate location away from residential area within 6 months. | 24.01.2011 | To be complied within stipulated time. |
| 37. | Brass Lamp Manufacturing Unit of Thiru. J. Kannadasan at No. 8, Pandian Sandhu, Tippu Sahib Street, | Unauthorized industry in residential area causing air pollution | 21.04.2010 | Unit has stopped functioning. |

Table. 25 Closure Direction(s) Issued

| Sl. No. | Name of the unit | Nature of violation | Date of issue of direction | Compliance status |
|---------|-----------------------------------------------------|----------------------------------------------------------------|----------------------------|-------------------------------------------------------------------------------------|
| 1 | M/s. Nithya Packaging Pvt. Ltd. Odiampet, Villianur | Discharge of effluent on land exceeded stack emission standard | 22.12.2010 | Temporarily revoked based on improvement of ETP and providing additional bag filter |
| 2 | M/s. Chemfab Alkalis Ltd., Kalapet | Release of chlorine gas | 26.01.2011 | Revoked based on safety system improvement |

16. FORMULATION OF DRAFT ACTION PLAN ON CLIMATE CHANGE

Department of Science, Technology & Environment has been designated as the Nodal Department for implementation of NAPCC. Series of interaction meetings were held with line departments to frame Draft Action Plan on Climate Change.



Fig. 39 Consultation meeting with line Departments for formulation of Draft Action Plan

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Towards the formulation of action plan several interaction meeting were chaired by the Chief Secretary on the advice of MoE&F, technical assistance of M/s. GTZ, New Delhi was sought. A presentation of pre-draft in the consultation workshop organized by MoE&F on 19.8.2010 was made by the Special Secretary (Ent.)

Draft Action Plan on climate change has been finalized and presented before Ministry of Environment & Forest, New Delhi on 03.02.2011. It consists of the following six missions:

1. Solar Mission
2. Mission for Enhanced Energy Efficiency
3. Mission for Sustainable Habitat
4. Mission Green Puducherry and Sustainable Agriculture
5. Water Mission
6. Mission on strategic knowledge

17. ENVIRONMENTAL AWARENESS PROGRAMMES

(I) Celebration of World Environment Day 2010

World Environment Day was established by the United Nations General Assembly in 1972 at Stockholm Conference on "Human Environment". Every year the United Nation Environment Programme (UNEP) has been announcing the theme for the celebration of World Environment Day. The theme selected by the UNEP for the World Environment Day 2010 is MANY SPECIES ONE PLANET ONE FUTURE. A message focusing on the central importance to humanity of the Globe's wealth, species and ecosystems. The World Environment Day 2010 theme also support this year United Nations International year of Bio-diversity.

DSTE has organized Drawing and slogan competition related to environment among students of high school and higher secondary school level at Jeevandham Government Boys Higher Secondary School, Karamanikuppam on 31.05.2010. Wide publicity was given by releasing press note.

A rally was flagged off by the Director, Department of Science, Technology and Environment. Awareness was created by distributing pamphlets depicting the appeal to public on usage of thin plastic article and its impact on Environment (and also directs that no person including a shopkeeper, vendor, wholesaler, retailer or trader shall use polythene or plastic carry bags, disposal cups and plates of thickness less than 51 micron meter). The rally was leaded by a van comprising of a musical troop of talented artists viz keyboard, tableau, singer etc., and created awareness on the occasion by way of music.

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The inaugural function for the World Environment Day celebration was held in the conference hall of PWD on 04.06.2010. In the celebration, the then Hon'ble Minister for Legislative Assembly Thiru S.P.Sivakumar presided over the function and distributed the certificates and cash prize to the winners of Drawing and Slogan Competition, Thiru R. Chandra Mohan, Chief Secretary released the Annual Environment Survey Report 2009-2010 and delivered the special address. Special Secretary (Environment) has welcomed and delivered key note address.



Fig. 40 Release of Annual Environment Survey Report 2009-2010

A debate on Environment protection was organized at Kamban Kalaingarangam on 05.06.2010 under the Chairmanship of Professor Solomon Pappaiah along with his team. Professor Soloman Pappaiah concluded that mass awareness and stringent actions are required to protect the Environment.



Fig. 41 Debate on Environment protection presided over by Soloman Pappaiah

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(II) Celebration of International Ozone Day

International Ozone Day was celebrated on 14th September in befitting manner. Resource person from Pondicherry University delivered lecture on ozone layer depletion and its impact.



Fig. 42 Special Secretary delivering special address in the International Ozone Day

(III) Celebration of National Environment Awareness Campaign

In order to create environment awareness among the students National Environment Awareness campaigns are being organized in collaboration with State Training Centre, Education Department during the month of November – December, 2010.



Fig. 43 Tree samplings are distributed during NEACP at Kalmandabam

(IV) Floating of Tableaux

DSTE has floated tableaux depicting the ill effect of usage of thin plastic articles like carry bags, plates and cups on the eve of celebration of Republic Day, 2011. It received over welcoming response from the audience and bagged first prize.



Fig. 44 Tableaux propagating the ban on thin plastics imposed by the Govt. of Puducherry



Fig. 45 Receiving First prize from H.E. the Lt. Governor in Republic day parade 2011

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V Organising Non Residential Camp to Students for Preparation of Village Bio-Diversity Register in Mangalam Village supported by Puducherry Council for Science and Technology

The main objective of this proposal is to prepare a people's Bio Diversity Register by the school students by organising a three day non-residential camp. The camp provided an effective teaching-learning approach for not only raising awareness to childrens about natural processess, but also to bring them closer to nature by enhancing their feelings and appreciation for nature. In terms of skill building among students, camps are an excellent way of building skills of higher order-observation, analysis and synthesis, as well as lower order ones such as organising, planning, etc.



Fig. 46 Preparation of Bio-Diversity Register in Mangalam Village by students

18. YELLOW DROPS FALLING INCIDENCE AT KENDRIYA VIDYALAYA, KALAPET, PUDUCHERRY – ENDURING MYTH AND STUNNING REALITY

The Puducherry Pollution Control Committee received information on 18.2.2011, that few students of Kendriya vidyalaya at Kalapet were affected by skin irritation due to some unknown yellow drops that splashed on them from air during the Prayer Session. The School Staffs and students were panicked that that the yellow drops might be due to some chemicals released from the neighboring industry. The officers of the PPCC immediately inspect the incident area and carried out detailed study on the incidence.

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The inspection team observed some yellow stains about 2-3mm size on the school building, on the dresses of the school children and stains of yellow drops found on the terrace of the building. Ambient air quality monitoring for the parameters SO_2 , NO_2 , Cl_2 , SPM was carried out on 18.2.2011 and 19.2.2011 on the terrace of the building, the report revealed that the assessed parameters are within the prescribed standard limits.

The PPCC team felt that apart from industrial sources of pollution, the yellow drops could be attributed to natural sources like pollens, as there were plenty of Accacia Trees laden with bright yellow flowers around the school campus. The PPCC team observed that similar incidence of yellow drops occurred on 19.2.2011 and 20.2.2011 on the early morning hours and samples of the yellow drops were collected by spreading polythene sheets on the terrace of the school building. The samples were given to the Department of Ecology and Environmental Sciences, Pondicherry University to carry out a scientific study on the cause of the incidence. After analyzing the yellow drops samples and the material of Acacia holosericea which grows around the KV School Campus in a dense patch the Department of Ecology and Environmental Sciences concluded that Pollen of Acacia holosericea with heavy due drops formed yellow paste which would have been splashed on the students' shirt. This indicates the Pollen wash of Acacia.

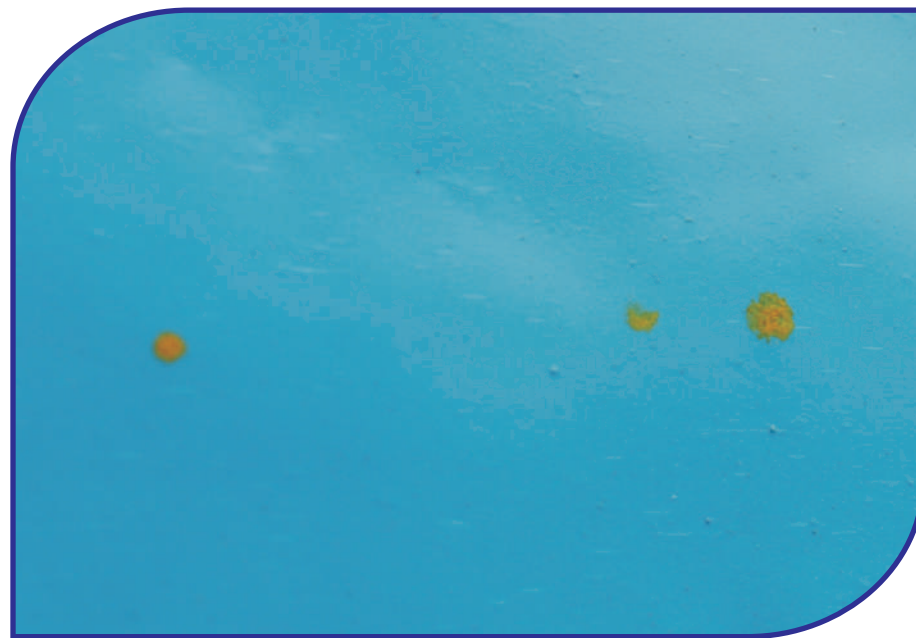


Fig. 47 Yellow Drops observed on Plastic Sheets spread on Terrace of KV School Building

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Fig. 48 Collection of yellow drop samples from the polythene sheet spread on the terrace of the KV School building by Thiru P. Vipin Babu, JSA

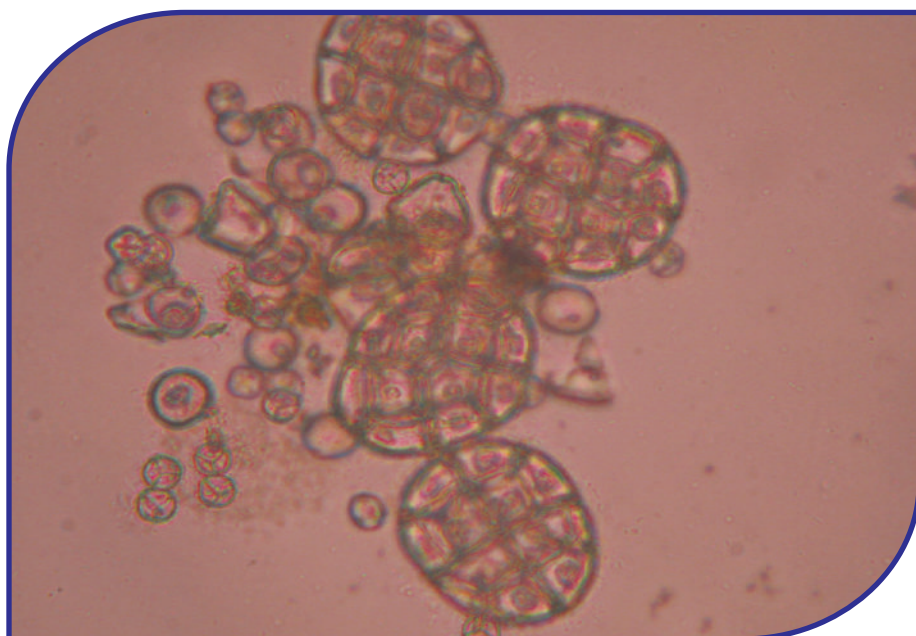


Fig. 49 Microscopical observation of the yellow drops showing presence of Pollen



Fig. 50 Acacia Species found around the KV School Campus

19. CHLORINE LEAKAGE INCIDENCE AT M/S. CHEMFAB ALKALIS LIMITED, PUDUCHERRY – CASE HISTORY

M/s. Chemfab Alkalies Limited (CAL), located at Kalapet, Puducherry is involved in the manufacture of Caustic Soda, Chlorine and other allied chemicals. A chlorine gas leakage incidence occurred at CAL on 26.01.2011 at about 08.00 A.M. and large number of people in the Pudu Nagar area of Chinnakalapet village which is located adjacent to the industry were reported to be affected.



Fig. 51 M/s. Chemfab Alkalies Limited (CAL) at Kalapet

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PPCC officials inspected the site immediately. The staff of CAL informed the PPCC officials that Chlorine leakage incidence had occurred at weigh bridge number 3 of the industry at 08.01 A.M. on 26.01.2011 while filling Chlorine in an empty Cylinder from the storage tank and the leak was arrested immediately.



Fig.52 Expert Team examined chlorine cylinder filling line where the leak occurred

Since the industry failed to identify the major accident hazards and to take adequate steps to prevent such major accidents and to limit their consequences to persons and the environment as required under Rule 4 of the Manufacture, Storage and Import of Hazardous Chemicals Rules, 1989 framed under the Environment Protection Act, 1986 and continuing the operations of the industry without proper safeguards would be a threat to the life of the neighboring people, the industry was directed under provisions of Section 5 of the Environment Protection Act, 1986 read with sub section 5 of section 4 of the Environment Protection Rules, 1986 to close all the manufacturing activities immediately and report by return of post vide proceedings No. 6074/PPCC/DIR/OM/JE/2011 dated 26.01.2011.

After the issue of closure direction PPCC constituted an Expert Committee comprising of Industrial Safety and Risk Analysis Experts from Regional Labour Institute, Chennai and National Environmental Engineering Research Institute, Nagpur, Central Leather Research Institute, Chennai and National Institute of Technology, Tiruchirapalli to conduct a Safety Assessment of CAL.

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Meanwhile, aggrieved by the closure direction of the Puducherry Pollution Control Committee, CAL filed a Writ Petition No. 6934/2011 in the High Court of Madras with request to permit re-commissioning of their Plant operations. The High Court directed PPCC to carry out the Safety Assessment of CAL by the Expert Committee inspection and furnish report.

Accordingly the Expert Committee conducted Safety Assessment at CAL on 1st and 2nd April 2011 and submitted their Report which contained 37 recommendations for implementation to strengthen the Safety systems in the industry. The Expert Committee Report was submitted to the High Court. CAL submitted that out of the 37 recommendations made by the Expert Committee the Petitioner industry has already implemented 33 recommendations.

As per the order of the High Court an Inspection Team comprising of Officials from Office of the Chief Inspector of Factories and Boilers, Puducherry Pollution Control Committee and Oulgaret Municipality and Head of the Chemical Engineering Department of Puducherry Engineering College (Technical Expert) inspected industry on 23.04.2011 to verify the compliance of the industry to the recommendations made by the Expert Committee. The inspection Team of the Government respondents suggested the following in their Report to the High Court:

- i) CAL has installed a Fixed Water Sprinklers at the Chlorine Filling Station. CAL may be directed to install Fixed Water Sprinklers in the other two critical areas also namely Storage Bullets and Liquefier Area, before commencement of the Plant operations.
- ii) The detailed design of a Fully enclosed and Negative Pressure operated Chlorine Scrubbing System shall be prepared by CAL and submitted within three months and thereafter installed within scheduled time frame under the supervision of the regulatory authorities.
- iii) Off-site Emergency Mock Drill shall be conducted by the District Administration within a period of three months to ensure safety of the community by taking all safe holders into confidence.

The High Court directed CAL to install the water sprinklers in the Storage Bullets and Liquefier Areas as a prerequisite to commence the plant operations and accordingly the industry installed the Water Sprinklers. The Officials from the Respondent Departments again inspected the industry on 28.04.2011 to verify the compliance status. They observed that CAL has provided Fixed Water Sprinklers at the three critical areas with respect to Chlorine

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Handling viz. Chlorine Filling Shed, Chlorine Bullets and Liquefier Tank as recommended by the Expert Committee, Inspector of Factories and Puducherry Pollution Control Committee. Further, after the chlorine leak accident that occurred on 26.01.2011, the industry has also provided additional safety measures like interlocking of the chlorine filling operation with the Chlorine Sensors to shut off the filling operations in the event of chlorine concentration in the work environment exceeding 1 ppm. The industry has also provided continuously operated suction hoods to cover each filling point to suck and divert the chlorine leak to Hypo Plant for Scrubbing. All these measures would reduce the risk involved in chlorine handling. In view of the above safety measures incorporated by the industry they recommended that the re-commissioning of plant operations may be considered.



Fig.53 Automatic Fixed Water Sprinklers provided at CAL to absorb chlorine leaks

After examining the recommendations of the Respondent Departments and the submissions of the Petitioner (CAL) the Hon'ble High Court passed the Final Orders on 29.04.2011, wherein the Court has observed that Condition No. 1 (i.e. Provision of Fixed Water Sprinklers to the Storage Bullets and Liquefier Area) has been satisfactorily fulfilled by CAL and has therefore directed the Respondents to allow the petitioner to commence operation. The Court has also mentioned that CAL shall satisfy the other requirements within three months as recommended by the Inspection Committee. The other requirements are:

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- i) The detailed design of Fully enclosed and Negative Pressure operated Chlorine Scrubbing System shall be prepared by the industry and submitted within three months and thereafter installed within scheduled time frame under the supervision of the regulatory authorities.
- ii) Off-site Emergency Mock Drill shall be conducted by the District Administration within a period of three months to ensure safety of the community by taking all safe holders into confidence.

Based on the order of the Hon'ble High Court CAL requested PPCC to issue necessary orders to commence their manufacturing activities. The revocation of the closure order in terms of the order of Hon'ble High Court was discussed in the 115th PPCC meeting held on 04.05.2011 and the Committee after due deliberation decided to revoke the Closure Order subject to the following conditions:

- i) The detailed design of Fully enclosed and Negative Pressure operated Chlorine Scrubbing System shall be prepared by the industry and submitted within three months and thereafter installed within scheduled time frame under the supervision of the regulatory authorities.
- ii) The industry shall get the Off-site Emergency Mock Drill conducted through the District Administration within a period of three months to ensure safety of the community by taking all safe holders into confidence.
- iii) The industry shall modify the Multihazard Risk Analysis Report prepared by them taking into consideration the suggestions given by Experts from Regional Labour Institute, Chennai, Central Leather Research Institute, Chennai and Pondicherry Engineering College within a period of three months.
- iv) The Consent to Operate under the Air Act, 1981 and Water Act, 1974 shall be issued to the industry for a period of three months and shall be extended thereafter based on satisfactory compliance of the above three conditions by the industry.

Accordingly the Closure order was revoked by PPCC with above mentioned conditions on 05.05.2011.

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20. STATE ENVIRONMENTAL IMPACT ASSESSMENT AUTHORITY (SEIAA)

In exercise of the powers conferred by sub-section (3) of section 3 of the Environment (Protection) Act, 1986 (29 of 1986) and in pursuance of the Government of India notification number S.O. 1533 (E), dated the 14th September, 2006, the Central Government constituted the State Level Environment Impact Assessment Authority (SEIAA), Puducherry comprising of three members namely, Chairman, Member and Member-Secretary nominated by the State Government of Puducherry

Table.26 Details of proposal placed before the SEAC

| Sl. No. | Name of the project | Status |
|---------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1. | Establishment of 380 MW Combined Cycle Power Project at Yanam submitted by M/s Yanam Power Generation (P) Ltd | The Committee prescribed the Terms of Reference for preparing draft EIA report for the above mentioned project as in Annexure-I in conjunction to the proposal. |
| 2. | Construction of four blocks multi -storeyed residential complex (HAC Circle) at R.S.No. 31/9A, No.12, Pondy - Cuddalore Road, Ariyankuppam Revenue Village, Ariyankuppam Commune Panchayat by M/s Sreenivas Buildtech (P) Ltd, Puducherry | The SEAC in its meeting held on 02.12.2010 recommend the proposal to SEIAA for issue of E.C |
| 3. | Establishment of 400 MW combined cycle power plant at Yanam proposed by the Puducherry Power Corporation Ltd | The project proponent (PPCL) may be requested to approach the MoEF, New Delhi for obtaining Environmental Clearance. |
| 4. | Construction of Fishing Harbour at Yanam by the Dte. of Fisheries and Fishermen Welfare, Govt. of Puducherry. | Issued Environmental Clearance on 19.12.2009 |
| 5. | Establishment of a Medical College and Hospital at Ariyur Village, Villianur Main Road, Puducherry with 300 beds and power load of 500 KVA by Ramachandra Educational Trust | Issued Environmental Clearance on 17.03.2010 |
| 6. | “Design and Construction of Work Shelters in fishing villages along the Puducherry and Karaikal Coasts” proposed by Project Implementation Agency, Emergency Tsunami Reconstruction Project, Puducherry | The proposal does not come under the provisions of the EIA notification -2006 and its subsequent amendments |
| 7. | “Construction of new Modern hygienic fish market in Puducherry and Karaikal” | The proposal does not come under the provisions of the EIA notification -2006 and its subsequent amendments |
| 8. | “Reconstruction and Modernization of Fishing Harbour at Puducherry and Karaikal” | The proposal does not come under the provisions of the EIA notification -2006 and its subsequent amendments |

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|-----|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 9. | “Construction of 17MLD Domestic Sewage Treatment Plant at Kanaganeri, Puducherry | The proposal does not come under the provisions of the EIA notification -2006 and its subsequent amendments |
| 10. | “Construction of 17MLD Domestic Sewage Treatment Plant at Lawspet, Puducherry | The proposal does not come under the provisions of the EIA notification -2006 and its subsequent amendments |
| 11. | “Construction of 17MLD Domestic Sewage Treatment Plant at Dubrayapet, Puducherry | The proposal does not come under the provisions of the EIA notification -2006 and its subsequent amendments |
| 12. | Establishment of 250 MW Gas based Combined Cycle Power Project at Adavipolam, Yanam by AVR Vidyuth (P) Ltd | The Committee prescribed Terms of References (ToR’s) in its 8 th meeting held on 21.09.2010. |
| 13. | Requesting interstate agreement for the proposal seeking Environmental Clearance for Reconstruction and Modernisation of Nagapattinam fishing Harbour proposed by Fisheries Department, Tamil Nadu | Recommend the proposal to SEIAA for submission to Govt. of Puducherry for concurrence by way of an agreement to be made between the respective state/U.T under the General Condition provision of the EIA notification 2006 and its subsequent amendments. |
| 14. | Construction of Women & Children Hospital, Teaching Block, Hostel Complex & Expansion of Regional Cancer Centre at JIPMER, Puducherry | Issue of Environmental Clearance was on the draft stage. |
| 15. | Proposed 11.45 MW standby power generation unit through installation and operation of generator sets by M/s. MRF Ltd, Puducherry | The Committee prescribed Terms of References (ToR’s) in its meeting held on 26.11.2010. |
| 16. | Proposed Integrated Municipal solid waste Scientific processing and land fill facility at Kurumbapet, Puducherry by Puducherry Municipal services private Limited | The Committee prescribed Terms of References (ToR’s) in its meeting held on 02.12.2010. |



Fig. 54 Examination of expansion proposal of JIPMER at SEAC's 9th meeting

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Table.27 Details of SEAC meetings convened

| Sl.No. | SEAC meeting | Date of meeting |
|--------|--------------|-----------------|
| 1. | I meeting | 23.10.2008 |
| 2. | II meeting | 07.11.2008 |
| 3. | III meeting | 29.07.2009 |
| 4. | IV meeting | 15.12.2009 |
| 5. | V meeting | 22.02.2010 |
| 6. | VI meeting | 16.04.2010 |
| 7. | VII meeting | 18.06.2010 |
| 8. | VIII meeting | 21.09.2010 |
| 9. | IX meeting | 26.11.2010 |
| 10. | X meeting | 02.12.2010 |

STATE LEVEL ENVIRONMENT IMPACT APPRAISAL AUTHORITY (SEIAA)

Table. 28 Details of SEIAA meetings convened

| Sl. No. | SEIAA meeting | Date of meeting |
|---------|---------------|-----------------------|
| 1. | I &II meeting | 17.12.2009,19.12.2009 |
| 2. | III meeting | 08.03.2010 |
| 3. | IV meeting | 19.11.2010 |
| 4. | V meeting | 23.02.2011 |

21. PUDUCHERRY COASTAL ZONE MANAGEMENT AUTHORITY (PCZMA)

The Central Government in the Ministry of Environment and Forests (MoEF) issued the Coastal Regulation Zone Notification (CRZ), 1991 vide S.O. 114(E) dated the 19th February 1991 imposing restrictions on industries, operations and processes in the Coastal Regulation Zone (CRZ), keeping in view the importance of the coastal environment and the need to protect the coastal ecosystems from the pressures of developmental activities. The Puducherry Coastal Zone Management Authority (PCZMA) is responsible for implementing the said Notification in the U.T. All developmental activities in CRZ require prior clearance of competent authority

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(MoEF / PCZMA) under this Notification. In order to further strengthen this Notification a new Coastal Regulation Zone Notification (CRZ), 2011 has been published by MoEF this year on 06.01.2011.

The details of various activities of PCZMA during the year April 2010 to March 2011 is given below:

Table. 29 Details of PCZMA meeting held from April 2010 to March 2011:

| Details of Meeting | Date | No. of projects recommended to MoEF for clearance | No. of Projects cleared by PCZMA | No. of Projects Rejected | No. of Projects deferred / other decisions |
|--------------------------------|------------|---------------------------------------------------|----------------------------------|--------------------------|--------------------------------------------|
| 23 rd PCZMA Meeting | 25.06.2010 | 6 | 1 | Nil | 2 |
| 24 th PCZMA Meeting | 25.10.2010 | 3 | 3 | Nil | 1 |
| 25 th PCZMA Meeting | 10.12.2010 | Nil | Nil | Nil | 1 |

Table. 30 Details of proposals received and decisions taken

| Sl. No. | Project name / Proposal | Details of Meeting | Decision |
|---------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------|-----------------------------------|
| 1 | CRZ Clearance for Construction of Work Shelters in the Fishing Villages along the Puducherry & Karaikal Coasts by PIA – in CRZ – I, II & III | 23 rd PCZMA Meeting held on 25.06.2010 | Recommended to MoEF for clearance |
| 2 | CRZ Clearance for Crude Oil Handling and Laying of Pipeline at Karaikal Port by M/s. Karaikal Port Pvt. Ltd – in CRZ-III | 23 rd PCZMA Meeting held on 25.06.2010 | Recommended to MoEF for clearance |
| 3 | CRZ Clearance for installation of Desalination Plant and laying of sea water intake / brine rejects outfall pipeline at Karaikal Port by M/s. Karaikal Port Pvt. Ltd – in CRZ-III | 23 rd PCZMA Meeting held on 25.06.2010 | Recommended to MoEF for clearance |
| 4 | Amendment requested by M/s. Karaikal Port Pvt. Ltd. in Environmental Clearance issued by MoEF to Karaikal Port for amending the constructional activity – From Berth No. 7 to Berth No. 4 – in CRZ-III | 23 rd PCZMA Meeting held on 25.06.2010 | Recommended to MoEF for clearance |

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|----|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------|----------------------------------------------------------------------------------------------|
| 5 | CRZ Clearance for construction of three storied commercial building situated at R.S. No. 239 pt., T.S. No. 37, Ward: "D", Block No.31, facing Roman Rolland Street on West Side and Lal Bahadur Sastri Street on Southern side, Puducherry Revenue Village and Municipality by Thiru. T. Annamalai & Tmt. Manjula - in CRZ – II | 23 rd PCZMA Meeting held on 25.06.2010 | Approved |
| 6 | NOC for proposed construction of two storied Resort Building for M/s. Maia Beach Resort at R.S. No. 205 / 3 & 4, Manapet Revenue Village, Bahour Commune Panchayat, Puducherry | 23 rd PCZMA Meeting held on 25.06.2010 | Deferred as Project Proponent was not present |
| 7 | CRZ Clearance for Reconstruction & Modernization of Fishing Harbour at Puducherry proposed by PIA, ETRP, GoP | 23 rd PCZMA Meeting held on 25.06.2010 | Recommended to MoEF for clearance |
| 8 | CRZ Clearance for Reconstruction & Modernization of Fishing Harbour at Karaikal proposed by PIA, ETRP, GoP | 23 rd PCZMA Meeting held on 25.06.2010 | Recommended to MoEF for clearance |
| 9 | CRZ Clearance for Design and Construction of Modern Hygienic Fish Market at Karaikal proposed by PIA, ETRP, GoP | 23 rd PCZMA Meeting held on 5.06.2010 | Deferred - Salinity Values at Arasalar River to be measured by Institute of Ocean Management |
| 10 | CRZ Clearance for Design and Construction of Modern Hygienic Fish Market at Karaikal proposed by PIA, ETRP, GoP | 24 th PCZMA Meeting held on 25.10.2010 | Recommended to MoEF for clearance |
| 11 | CRZ Clearance for CRZ Clearance for setting up of Domestic Sewage Treatment Plant at Dubrayapet by PWD, GoP | 24 th PCZMA Meeting held on 25.10.2010 | Recommended to MoEF for clearance |
| 12 | CRZ Clearance for establishing M/s. Bougainville Bay Beach Resort at Manapet, Puducherry: | 24 th PCZMA Meeting held on 25.10.2010 | Recommended to MoEF for clearance |
| 13 | CRZ Clearance for establishing M/s. MBRS Hotel Pvt. Ltd. Puducherry | 24 th PCZMA Meeting held on 25.10.2010 | Approved |

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|----|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 14 | Five Storied Marine Control Tower constructed by Karaikal Port – Views of PCZMA requested by Karaikal Planning Authority for issue of Building Permit | 24 th PCZMA Meeting held on 25.10.2010 | Karaikal Port was directed to submit the approval from the Port Department, GoP for operation of the Control Tower |
| 15 | Construction of two storied Resort Building for M/s. Maia Beach Resort - Views of PCZMA requested by Puducherry Planning Authority for issue of Building Permit: | 24 th PCZMA Meeting held on 25.10.2010 | Recommended to Puducherry Planning Authority |
| 16 | NOC for p roposed construction of Two Storied Residential Building at R.S. No. 87/10, Manavelly Revenue Village, Ariyankuppam Commune Panchayat, Puducherry | 24 th PCZMA Meeting held on 25.10.2010 | Recommended to Puducherry Planning Authority |
| 17 | Petition submitted by a consortium of NGOs under the banner of Alliance for Good Governance (AGG) to His Excellency Lt. Governor of Puducherry and Hon’ble Minister of St ate for Environment and Forests, GoI against the Minor Fish Landing Facility being constructed by the PWD at the Mullodai Back Water of Pudukuppam Village, Bahour Commune, Puducherry | 25 th PCZMA Meeting held on 10.12.2010 | The Authority recommended that PWD should obtain a specific order of the Government with the following details: a. The ownership of the facility; b. The operation and maintenance responsibilities; c. Total Funds required for Environmental safeguards; d. Source of funds for Environment Safeguards; e. Separate account for the funds required for Environmental Safe Guards. |

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| | | | and opined that PWD, GOP should be advised not to cut open the sand showl formation until the G.O. as cited above is issued and effected. |
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CRZ Violations / Directions issued

- i) The PWD, GoP has commenced a Sea Wall project along the coast of Chinnakalapet Village, Puducherry without obtaining prior clearance under the Coastal Regulation Zone Notification, 1991. Site was inspected and direction was issued on 13.10.2010 to the Chief Engineer, PWD under Section 5 of Environment Protection Act, 1986 to stop the sea wall construction immediately and submit necessary application to PCZMA for obtaining the Coastal Regulation Zone Clearance. PWD has complied and stopped the work.
- ii) A Consortium of NGOs in the banner of Alliance for Good Governance (AGG) submitted representation against the minor fish landing facility project proposed on the Mullodai Backwater at Pudukuppam Village with an appeal to scrap the said PWD project stating that the project would be a man-made disaster in the making in Pondicherry. PWD has obtained prior Environmental Clearance from MoEF, Gol and commenced the project constructions. The petition submitted by AGG was examined in the 25th PCZMA meeting held on 10.12.2010. The Authority examined the proposal and recommended that PWD should obtain a specific order of the Government of Puducherry with the following details:
 - a. The ownership of the facility
 - b. The operation and maintenance responsibilities
 - c. Total Funds required for Environmental safeguards
 - d. Source of funds for Environmental Safeguards
 - e. Separate account for the funds required for Environmental Safe Guards.

and opined that PWD, GOP should be advised not to cut open the sand showl formation until the G.O. as cited above is issued and effected. Accordingly PWD was directed vide letter dated 21.12.2010 to comply with the recommendations of the Authority.



Fig. 55 Field Visit by the Chairman and Members of PCZMA at Mullodai Fish Landing Facility

Other Activities

1. A Stakeholders meeting on Restoration and Protection of Puducherry Coastline was organized by the Puducherry Coastal Zone Management Authority on 08.05.2010, at Hotel Sea Gulls, Puducherry under the Chairmanship of the Chief Secretary, Government of Puducherry. Experts in the filed of Coastal Engineering, Senior Officials from various Line Departments, Members of Puducherry Coastal Zone Management Authority, Puducherry Pollution Control Committee and State Environmental Impact Assessment Authority and Representatives of NGOs and Civil Societies participated in the meeting. There was a consensus among the participants on the need to protect and nourish the coast of Puducherry and the adjoining areas by adopting site specific coastal protection and restoration techniques after carrying out scientific studies and in consultation with all stakeholders including fishermen community.

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2. Proposal entitled 'Management of Puducherry Coast – Evaluation of Technological Options' has been prepared jointly by Prof. Dr. Ramesh, Director, Institute of Ocean Management, Anna University and Puducherry Coastal Zone Management Authority and has been submitted to Ministry of Environment and Forests, Gol vide Ref. No. 103/DSTE/PA/2010/427 dt. 21.06.2010 to the Ministry of Environment and Forests, Gol for availing financial assistance of ` 20.28 Lakhs.
3. Comments of the Government of Puducherry on the Pre-draft Coastal Regulation Zone Notification, 2010 was submitted to Ministry of Environment and Forests. The Special Secretary (Environment), along with the Director, DST&E and Junior Engineer, DST&E attended the Consultation Meeting of the Secretary, Department of Environment of the various State / UT Government on 06th July, 2010 in the MoEF office, New Delhi, on Pre-draft Coastal Regulation Zone Notification, 2010 and submitted the comments of the Government of Puducherry.



Fig. 56. Chairman & Member Secretary of PCZMA in the consultation Meeting on pre-draft CRZ Notification, 2010 held at MoEF office, New Delhi

4. A Preliminary Proposal for preparation of Integrated Coastal Zone Management Plan for Puducherry under the Phase-II of the World Bank assisted ICZM project of Ministry of Environment and Forests has been prepared and submitted to Ministry of Environment and Forests, GoI vide Ref. No. 2329/ DSTE/ PCZMA/ ICZMP/JE / 2010 / 1009 dt 13.08.2010. The detailed project as per the preliminary proposal shall be worked out for a budget of ₹ 100 Crores.
5. The Puducherry Coastal Zone Management Authority played a vital role in the International Coastal Cleanup Day Events organized by the Government of Puducherry on 25th September 2011 along the coastal stretches of Puducherry U.T. A massive coastal clean-up event was organized by the Government along the coastal stretches of Puducherry and all line departments, Coast Guard, NSS and other volunteers were involved.



Fig. 57 International Coastal Cleanup Day Events on 25th September 2011

6. Consultation meeting was held under the Chairmanship of the Chief Secretary on 10.11.2010 to finalize the Shoreline Changes Map for Puducherry prepared by IOM, Anna University as a part of the MoEF, GoI funded National Project on “Assessment of shoreline change for India”. The comments of the GoP on finalizing the Maps were sent to MoEF vide letter dated 09.12.2010. The shoreline changes maps for Puducherry and Gujarat has been launched by the MoEF on 29.12.2010.

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7. Comments were prepared on Draft Coastal Regulation Zone Notification, 2010. The draft Notification was also circulated among the line Departments for comments. A consultation meeting was held on 10.12.2010 with all line Departments to discuss the Draft Coastal Regulation Zone Notification, 2010 published by MoEF, Gol. The necessary modifications/ additions/ deletions to be made in the draft CRZ Notification, 2010 was discussed and consolidated report was sent to the Government.
8. A consultation meeting was held on 24.02.2011 with the line Departments to discuss the issues related to implementation of Coastal Regulation Zone Notification, 2011 in Puducherry U.T. The various tasks to be implemented by the UT Government, Roles and Responsibilities of the line departments and time frame to complete the tasks were discussed.

