

BEFORE THE NATIONAL GREEN TRIBUNAL  
PRINCIPAL BENCH, NEW DELHI  
ORIGINAL APPLICATION NO. 199/2014

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10/3/15

IN THE MATTER OF:

ALMITRA H. PATEL & ANOTHER ...Petitioners  
Versus  
UNION OF INDIA & ORS. Respondents

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6382

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*ALMITRA H. PATEL & ANOTHER*

... Petitioners

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*UNION OF INDIA & ORS.*

... Respondents

AND

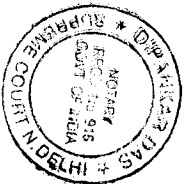
**IN THE MATTER OF:**

**Affidavit in compliance of the order dated 05-02-2015 by the  
Department of Urban Development & Housing, Government of  
Arunachal Pradesh**

**AFFIDAVIT**

I, K. N. Damo, Deputy Resident Commissioner, Government of  
Arunachal Pradesh, Arunachal Bhawan, New Delhi do hereby solemnly  
affirm on oath as under:-

1. That I have been authorized by the Department of Urban  
Development & Housing, Government of Arunachal Pradesh,  
Itanagar to affirm this affidavit on behalf of the Department on the  
basis of official documents that have been made available to me  
and which I believe to be true.
2. That this Affidavit / Status Report is being filed pursuant to the  
directions above mentioned passed by this Hon'ble Tribunal.



3. It is submitted that Arunachal Pradesh has recorded an increase in the percentage of Urban Population over the years. In 1971 the percentage of Urban Population to total population was 3.70%, 6.56% in 1981, 12.80% in 1991, 20.75% in 2001 and 22.67% in the 2011 Census. Presently there are 29 notified Urban Centers at present in the State and apart from the capital town of Itanagar and Pasighat, no other urban center has a population above 1.00 lakh population.
4. It is submitted that till recently the Municipal Solid Wastes in the 29 Urban Centers were managed by collection of mixed garbage and disposal into designated locations in a primitive manner. However, now the Department of Urban Development has taken initiatives to get adequate measures for proper collection, transportation and disposal of the Municipal Solid Wastes in a scientific manner in accordance with the provisions contained in the Municipal Solid Wastes (Management & Handling) Rules, 2000.
5. It is submitted that since there is a very small number of urban population in the State, the problem of MSW is not very acute but the department is taking all necessary steps within the financial resources and expertise available with it to ensure proper disposal of MSW. It is submitted that the department is studying the directions passed by this Hon'ble Tribunal in its judgement of Capt. Mall Singh Vs. Punjab PCB dated 25-11-2014 and assures this Hon'ble Tribunal that it will take all such steps as are



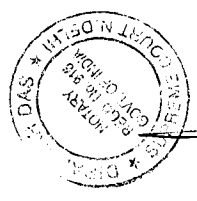
necessary in order to give effect to the directions contained in the judgement, if the same are found to be viable in the context of the situation in Arunachal Pradesh.

- 6. That in terms of the judgement of this Hon'ble Tribunal dated 25-11-2014 the State Government has prepared an action plan on Municipal Solid Waste Management in the towns of Arunachal Pradesh and the same is annexed hereto and marked as Annexure R/1.

*[Signature]*  
 DEPONENT

Verification -

Verified at New Delhi on this the 10 day of March, 2015 that the contents of the above affidavit are true to my knowledge and belief and that nothing false has been stated herein or anything material concealed therefrom.



ATTESTED

NOTARY PUBLIC, DELHI

IDENTIFIED BY

*[Signature]*  
*[Signature]*  
*[Signature]*

*[Signature]*  
 DEPONENT

STATUS REPORT AND ACTION PLAN ON MUNICIPAL SOLID WASTE  
MANAGEMENT IN THE TOWNS OF ARUNACHAL PRADESH

**Background:**

Over the years, there has been a continuous and rapid migration of people from rural and semi-rural areas to towns and city. As per Census 2011 the total population of Arunachal Pradesh is 13, 82,611, of this, the rural population is 10, 69,476 and the urban population is **3, 13,135**. The proportion of population residing in urban areas has increased from 20.75 % in 2001 to **22.67 % in 2011** in the State. The uncontrolled growth in urban areas has left many towns of the state deficient in infrastructure services such as water supply, sewerage and municipal solid waste management. The increase in urbanization and spurt in consumerism has resulted in an increase in generation of municipal solid waste (MSW) which is a major environmental issue. Concerted efforts have been made by government bodies/ local bodies/ non-government organizations to address to this issue. The Urban Local Bodies/District Urban Development Agencies are responsible for collection, segregation, storage, transportation, processing and disposal of MSW.

The rapid growth in production of MSW has not been matched by development of the organization capabilities of the ULBs leading to severe strain on them and deficiencies in the execution of this vital function. There is now a need to have an integrated approach involving all the stakeholders (government agencies, private parties, non-formal sector, waste producers, public, households, corporate and institutions etc.) to tackle this huge piles of MSW before it suffocates our cities and towns.

The **National Green Tribunal** had given the direction in its order dated **February 05, 2015** that the State should file the time bound status report specifically indicate if there is even a single district or village in the entire State where the MSW is collected in its entirety segregated and disposed off in accordance with MSW Rules, 2000 in the case of Original Application No. 199 of 2014 (**Almitra H. Patel & Anr.-Vs – Union of India & Ors.**). In pursuance of the direction of National Green

Tribunal and also in compliance of the statutory obligations under the Municipal Solid Waste Management and Handling Rules, 2000, it is required to have an Integrated Action Plan for Municipal Solid Waste Management for the State of Arunachal Pradesh.

This plan is expected to manage the MSW issue both for the short term and the long term. This will give a basic framework upon which the entire MSW treatment efforts for the State in a comprehensive and integrated manner will be built upon, developed and evolved as per requirements. This plan will indicate the present status, develop local strategies and evolve in a time bound manner to ensure that MSW issues are effectively managed in a scientific, cost effective and proactive manner in time. This plan will also formulate timetables along with targets so that the MSW growth projections are anticipated well in advance and proactively tackled.

#### **Objectives, Challenges and Guiding Principles:**

The objectives are:

1. 100% door to door collection of the MSW from households by the end of 2015;
2. 100% Scientific treatment and disposal of MSW, as per service level benchmarks by 2016;
3. Awareness and community participation in MSW management by the end of 2015;
4. Involvement of private parties and informal sector in MSW management by 2017;

#### **Challenges of Solid Waste Management:**

1. ULBs lack resources, man power, machinery and expertise for proper MSW management;
2. Lack of awareness among the urban public for a need to handle MSW issue with objectivity and understanding;
3. Lack of policy framework at the State level for dealing with MSW;
4. Zero participation of private sector in MSW Management;

5. Need to motivate and synchronize the informal sector in the MSW management;

#### Guiding Principles of MSW Management:

To ensure proper municipal waste management by adhering to Municipal Solid Waste Management Rules and other relevant Legislations through the following steps:

1. Putting in place an operational framework with clearly defined roles of various stakeholders;
2. Strengthening institutional mechanism for planning, technical, financial and implementation support;
3. Encouragement of community participation in MSW management; and
4. Promoting private sector and informal sector involvement in the effort;

#### STATUS:

##### Rapid Growth of Urban Population in the State:

Arunachal Pradesh has recorded an increase in the percentage of urban population over the years. In 1971 the percentage of urban population to total population was 3.70%, 6.56% in 1981, 12.80% in 1991, 20.75 in 2001 and 22.67% in 2011 Census. Prior to 1971 Census, no place of Arunachal was accorded the status of an urban area. There are 29 notified urban centres at present in the State which are:

- |               |               |               |               |
|---------------|---------------|---------------|---------------|
| 1. Tawang     | 2. Dirang     | 3. Bomdila    | 4. Seppa      |
| 5. Itanagar   | 6. Naharlagun | 7. Sagalee    | 8. Palin      |
| 9. Koloriang  | 10. Ziro      | 11. Daporijo  | 12. Dumporijo |
| 13. Basar     | 14. Aalo      | 15. Yingkiong | 16. Mariyang  |
| 17. Boleng    | 18. Pasighat  | 19. Anini     | 20. Roing     |
| 21. Hawai     | 22. Tezu      | 23. Namsai    | 24. Changlang |
| 25. Jairampur | 26. Miao      | 27. Khonsa    | 28. Deomali   |
| 29. Longding. |               |               |               |

Out of the above towns, Itanagar including Naharlagun and Pasighat have Municipal Councils having population of 95,648 and 24,656 respectively as per Census 2011. Besides above, one more towns are having above 20,000 populations; seven towns are having above 10,000 populations and the rest have less than 10,000 populations.

Due to rapid growth of the urban population coupled with the changing lifestyles of the people, the Municipal Solid Waste generated daily has increased. If this Solid Waste issue is ignored for long, it will have serious ramifications on the health and hygiene of the public along with associated environmental risk. Therefore, there is an urgent requirement to have a systematic and scientific plan to tackle this issue.

#### **Management Strategy:**

The State will focus on Integrated Solid Waste Management system base on the waste management hierarchy. All ULBs/District Urban Development Agencies will aim at the 3R approach (Reduce, Reuse, and Recycle) which will ensure optimum management of Municipal Solid Waste from the households, commercial institutions, construction activities, medical facilities etc. and other waste generators. The prime focus of the ULBs will be for minimization of waste production through active involvement of all the stakeholders in promoting use of reusable items in lieu of non-reusable items, recycling and composting at source where possible. This will reduce the cost involved in segregation and treatment, handling and disposal cost and also the environmental cost.

Once optimum minimization of waste generation is achieved ULBs/DUDAs will focus on segregation, collection and recycling of the waste wherever possible. The organic component of the waste will be processed to recover compost through suitable and feasible techniques like windrow composting, in-vessel composting, vermi composting etc.



The non-composted and inert component of the waste remaining will be converted to energy through appropriate technologies of incineration, RDF, etc. The final remaining inert residual waste will be safely disposal at sanitary landfills.

**Existing Scenario:**

The State Government had already constructed integrated scientific sanitary MSW 50 MT capacity treatment plant at Itanagar (completed on 31.01.2013) and scientific sanitary landfill for MSW at Changlang, Jairampur and Roing (all having 20 MT capacity) completed in 2012 with funding from the Ministry of Urban Development, Govt. of India. The integrated plants for Bomdita, Basar and Daporijo (all having 8 MT capacity) towns are under construction. However, further improvement on the existing status is considered necessary and the state Government is contemplating development under the Swachh Bharat Mission. The Arunachal Pradesh State Pollution Control Board had given clearance/ authorization for running the plants. To cater to the need of the other towns, the State Government is contemplating to develop scientific sanitary landfill for MSW by availing funding from the Govt. of India.

**Incentives:**

The Government of Arunachal Pradesh will facilitate allotment of land at suitable site for setting up of Municipal Solid Waste Treatment Plants and Sanitary landfill whenever ULB/DUDA approaches the State Government for assistance if the proposal is technically sound and financially viable.

The State Government is also considering for performance based subsidy to ULBs/DUDAs and participating private firms involved in management of Municipal Solid Waste. The State may also go for viability gap funding of those solid waste treatment plants which are economically not viable as admissible under Swachh Bharat Mission.

**Capacity Development:**

The State will undertake initiatives to ensure capacity development of the ULBs/DUDAs by providing adequate manpower and financial assistance so that they are more capable of managing their primary role of management of solid waste. These initiatives will be outcome oriented, role base and project based. These initiatives will range from

1. Community Capacity Development;
2. ULB/DUDA specific capacity development like training of available manpower, requisition of extra manpower where required, provision of adequate tools and vehicles and machinery etc;
3. Fixation of goals and targets to be achieved by each ULBs/DUDAs along with suitable incentives and penalties in a time bound manner;
4. Setting up of a model Solid Waste Treatment Plant with energy generation in Arunachal Pradesh preferably through PPP Model;
5. Provision of adequate funds at the State level to ensure all the above initiatives are achieved in time.

**APPROACH FOR MANAGEMENT OF MUNICIPAL SOLID WASTE IN ARUNACHAL PRADESH:****1. Waste Segregation, Collection and Transportation:**

- i. Collection of wet and dry waste separately from door to door by adopting 2-bin system from residential, commercial and institutional area will be the prime priority for effective solid waste management. This will prevent public health hazards and also increase the aesthetic value of towns.
- ii. The mode and frequency of collection will depend upon the size of the residential/ commercial/ institutional area. It will be fixed by the concerned ULBs/DUDAs taking the above into consideration.
- iii. Waste so collected from the door step to be transferred directly to small covered mechanized vehicles having separate compartment of wet and dry waste.

- iv. The waste so collected shall be transferred to final disposal site for processing and final disposal.
- v. A well synchronized plan of collection i.e. from door to door to mechanized vehicle to final processing plant will be managed by the ULBs/DUDAs and NGOs jointly through road mapping. This will avoid container overflow and littering of waste on the streets.
- vi. Community participation in the form of local NGOs, elected bodies, local associations and other stakeholders shall be ensured through arrangement of events, discussions, meetings etc in the locality.
- vii. Informal sector participation will be encouraged in storage area/ disposal site for recovering recyclable material.
- viii. Waste management in the chain will be done mechanically thereby reducing manual labour as far as possible. Adequate safety precaution, periodic health checkup for workers involved in manual handling of MSW will be ensured through legislation and effective implementation and monitoring.
- ix. Private sector participation will be encouraged for service contract i.e. door to door collection and transportation of waste to the processing and disposal site. The private firm will be paid from the user charges collected from the individual household, commercial plots, institutional household. The State Govt. had already issued notification for collection of civic and service charges to be collected by ULBs/DUDAs on the principle of "Polluter pay". Different charges shall be levied by the ULBs/DUDAs for households, commercial/Institution/bulk waste generators such as hotels, restaurants, etc. The fees will be collected by the ULBs/DUDAs and paid to the private party, if engaged on the basis of their performance and output.
- x. Monitoring on daily basis will be done by the ULB/DUDA by collecting and analyzing data for any shortfall in the system so that timely correction may be done.

## 2. Waste Minimization Strategy:

Waste reduction at source, recycling and reuse is the most cost effective strategy. It results in reduction of the amount and/ or toxicity of the waste produced thereby reducing the cost associated with its handling and its environmental impact. This will be achieved through the following interventions:

- i. Policy intervention at the State level to enforce Extended Producer Responsibility (EPR), wherein the producer is held responsible for the post-consumer stage of a product for its collection, reuse, recycling, storage and/ treatment. Promotion of eco-friendly products in packaging and containers.
- ii. Encouragement of green procurement and take back programmes, buy back policy of re-usable and recyclable packing material in an organized form against the existing traditional and unorganized form by introducing suitable deposit system in each Ward in consultation with ULB.
- iii. Promotion of concept of generating compost from household vegetable wastes at the household itself.
- iv. Source segregation of organic and inorganic waste and also domestic biomedical waste and other special waste at the point of generation to optimize waste processing and treatment methods.
- v. Exploration of Legislative and Executive means to ban/ regulate certain non-recyclable products like plastic carry bags.
- vi. State Government will authorized ULBs/DUDAs to frame rules and local bye-laws barring use or sale of certain types of products and packaging that cannot be re-used, repaired, recycled or composted.
- vii. Promoting behavior change in the community through awareness campaigns involving all stakeholders and especially targeting school children, street vendors, NGOs, women groups and business communities to minimize waste generation.

### 3. Collection and Transportation.

- i. ULBs/DUDAs will conduct house to house collection of MSW at pre-informed timings (preferably early morning) and use of ghantagaris/ special music.
- ii. The biomedical waste, industrial waste, construction and demolition waste etc shall not be mixed with the municipal solid waste, and these special wastes will be separately collected and treated/processed as per State/ Central norms.
- iii. Vehicles used for transportation of waste will be covered to prevent scattering waste and polluting the environment. Such vehicles shall be so designed the multiple handling of waste prior to final disposal is avoided.
- iv. ULBs/DUDAs will prepare a well synchronized primary and secondary transportation system along with primary and secondary collection centres where required with regular and well communicated operation timings to avoid overflow of waste containers, and littering of waste on the street.
- v. Waste collected from sweeping of the streets and drains shall be separated through all stages of collection, transport and treatment from other municipal solid waste. This waste will be disposed off directly in the identified landfills.
- vi. ULBs/DUDAs will plan for an effective waste collection route to ensure maximum utilization of available resource. In hilly areas, waste collection should start at the highest point and proceed to lower levels.
- vii. The frequency of collection will be on a daily basis for at least wet waste collection. For dry waste in insolated shops and establishment, the frequency will be determined by the ULBs.
- viii. The timing of collection of domestic waste should be in the early morning. Waste for commercial areas may be collected between 10 Am to 2 PM. Vegetable and other market waste

- should be collected in non-peak hours i.e. either early morning and late in the afternoon or at night.
- ix. ULB/DUDA authority will make concerted efforts to integrate the informal sectors of rag pickers, Kabadiwallas etc. into regular waste collection operation through private sector, NGOs, CDOs, SHGs, etc. so that they are provided PPE (Personal protected Equipment) during their work and also to ensure that they are not exploited and discriminated. This will also ensure that they receive appropriate social benefit, medical healthcare and treatment.
  - x. Adequate bins will be provided in places where secondary collection of waste is required as per assessment of the ULBs.
  - xi. Use of Dumper Placers will be promoted for transportation of large quantities of construction and demolition debris and inert waste.
  - xii. Routing of secondary collection vehicles should be planned to ensure effective synchronization of primary collection, maximize operational efficiency and minimize environment impacts of transportation through environmentally sensitive areas should be avoided.
  - xiii. ULBs/DUDAs will develop and use Management Information System (MIS) and Geographic Information System to have live information on waste generation and composition, staff position and requirements, current utilization of vehicles, pay and recovery of user's fee, location and condition of waste storage depots etc.
  - xiv. ULBs/DUDAs will design a well planned system of street sweeping with adequate staff and proper protective equipments. The street sweeping in residential area may be carried out in two spells, 5 Hrs. in the morning and 3 to 4 Hrs. in the afternoon. The frequency of street cleaning will be designed by the ULB/DUDA

to suit the local conditions. The timing of cleaning of streets should not conflict with peak traffic conditions.

- xv. Necessary legal provisions will be introduced to provide for penal provision for Littering in public places, streets, failure of service where contracts are awarded.

#### 4. Processing, Treatment and Disposal of waste:

- i. Selection and adoption of MSW processing technologies requires due diligent study by the ULB/DUDA. This will require even external expertise to find out the most valuable solution depending upon the prevailing condition of the respecting ULBs/DUDAs.
- ii. Waste treatment and disposal may be at central or specific location. Other landfills and other waste management facilities may be located at different location depending upon the size of the waste and its products.
- iii. Processing units can also be decentralized at each municipal level considering the quantities of waste generated.
- iv. State level MSWM Committee shall be constituted to frame and co-ordinate different projects and plants in the State.
- v. Treatment of segregated waste to be done by adopting appropriate technologies based on the feasibility, characteristics and quantities of waste. The technology options may be composting, Bio-methanation, waste to energy, and any other option as endorsed by the Central Pollution Control Board (CPCB/SPCB).

## 5. Institutional Mechanism to Implement MSWM:

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- i. The ULBs/DUDAs will have a separate SWM Department headed by an Environment/ Civil/ Public Health Engineer. The exact size of this department will be proportionate to the requirement.
- ii. Regular updation and training of the capacities of the staff and personnel involved in solid waste management.
- iii. Provision of adequate and appropriate equipment to the agencies/ ULBs.
- iv. All ULBs/DUDAs will be required to prepare comprehensive SWM Plan to tackle the issue both for the long term and short term.
- v. The State will endeavour to provide market linkage for the bi-products like compost and recyclables by creating Market Avenue through active involvement of allied departments like agriculture, horticulture, industries, private sector, informal sector etc to ensure the sustainability and profitability of the Solid Waste Management Project.
- vi. The State Government will issue model operational guidelines for procurement of equipments and services based on the size of town/ cluster of towns and their population.

## 6. State Level Committee:

- i. There will be State level committee to monitor, supervise and develop the strategy for municipal solid waste management in the State.
- ii. The State will designate a "State MSW Management Agency" as the nodal agency for the purpose of identifying and enabling the development of regional MSW project. The agency will be headed by the Administrative Secretary / Commissioner of Urban Development Department of the State
- iii. The State will prepare service level benchmarks for solid waste management service providers.