

## **ENVIRONMENTAL AWARENESS REGARDING WASTE DISPOSAL AMONG THE PEOPLE OF DUDHNOI, GOALPARA, ASSAM**

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### **ABSTRACT**

This paper deals with the environmental awareness regarding waste disposal among the people of Dudhnoi, a developing semi urban Revenue Circle of Goalpara district in Assam, India. The paper discusses the major issues of solid waste disposal and its association with public awareness and participation in waste management and their lack of responsibility towards waste in the community. This paper further discusses how vector borne disease burden in India is increasing. There is a need to cultivate community awareness and change the attitude of people towards waste, as this is fundamental to developing proper and sustainable waste management systems. Until these fundamental requirements are achieved, India will continue to suffer from problems related to poor waste management and its impacts on public health and the environment.

**Keywords:** Environmental awareness, Waste disposal, Dudhnoi, Goalpara, Assam.

### **INTRODUCTION**

Environmental awareness means to be aware of natural environment that benefit the earth we live on. In recent years, advanced nations have become more aware of harmful building materials, such as asbestos, lead-based paint, lead pipes and others. Environmental awareness is demonstrated by choosing wood, stones, bricks, copper and other materials. Conservation of energy by installing solar panels and conservation of water. In many parts of the world clean water is scarce.

Environmental awareness proves important for several reasons; it fosters a sense of connection to the natural world, promotes sustainable development and encourages conservation of irreplaceable natural resources and vulnerable plant and animal species.

### **MATERIALS AND METHODS**

This research is carried out by reviewing literatures on previously done work and presenting the findings in form of discussion and tabular representation

**Place of study:** Goalpara district, of Assam is situated between 25°33' and 26°12' North latitude and 90°07' and 91° 15' East longitude. The district occupies an area of 1,832 Sq.km. It is surrounded by West and East Garo Hill districts of Meghalaya on the South and Kamrup district on the East, Dhubri district on the West and river Brahmaputra along the North.

The district has five Revenue Circles. These are (1) Lakhipur Revenue Circle (2) Balijana Revenue Circle (3) Ronjuli Revenue Circle (4) Dudhnoi Revenue Circle and (5) Matia Revenue Circle. There are 81 (eighty one) Gaon Panchayats, 8 (eight) Anchalik Panchayats and 834 Revenue villages in the district.

Dudhnoi, a taluk in Goalpara district of Assam, India is located at 25°59'0"N 90°44'0"E at an elevation of 44 m above MSL.

### **Solid Waste**

In recent years, human induced activities have released varied trace components into our environments<sup>1</sup>, a number of such components come from of Solid waste deposit. Solid wastes constitute with non-liquid waste materials arising from domestic, commercial, industry based, agricultural, mining related activities, and other public services. They are movable solid objects that the owner decides to deposit<sup>2</sup>. The society assumes that it is the government's sole responsibility to gather and dispose solid waste. However wherever the evacuation of the trash dump is delayed or left un-evacuated, the stink become harmful<sup>3</sup>.

Solid waste can be defined as the material that no longer are use to the person who is responsible for it. It does not usually include human excreta. Solid Waste is generated by commercial, household, industrial, healthcare, agricultural and mineral extraction activities and gathers in streets and public places.<sup>4</sup>

### **Health impact of solid waste**

Solid waste is a major of environment pollutant; it is responsible for spreading many harmful and infectious diseases. Increase in population also increases the demand for food and other essentials which in turn also increases waste. Some people throw this waste into streets, roads and at other public places, which attracts flies, insects, rats etc. This spreads diseases. Unattended waste is normally filthy and has a bad stink due to decomposition. This type of waste leads to epidemics in various parts of the country.<sup>5</sup>

- Domestic waste decomposes and contributes to spread diseases.
- Agricultural and industrial waste can also cause serious health diseases because these wastes include chemicals, pesticides, metals etc.

- Solid waste also affects water bodies.
- The unhygienic use and disposal of plastic causes very toxic effects
- Due to manual collection of solid waste from door to door, people collecting these wastes are exposed to many diseases and infections.<sup>6</sup>

### **Solid Waste and vector borne diseases**

According to WHO, poorly designed irrigation and water systems, inadequate housing, poor waste disposal and water storage, deforestation and loss of biodiversity, all may be contributing factors to the most common vector-borne diseases including malaria, dengue and leishmaniasis. The most deadly vector borne disease, Malaria, kills over 1.2 million people annually, mostly African children under the age of five. Dengue fever, together with associated dengue haemorrhagic fever (DHF), is the world's fastest growing vector borne disease.

The Supreme Court on November 1, 2018 said the lack of waste management was the cause for several lives being lost across the country due to the spread of these diseases, adding that there was a rise in the number of deaths in West Bengal, Maharashtra, Kerala and Tamil Nadu. A bench comprising Justices M B Lokur and Deepak Gupta observed that solid waste management was a “crucial issue” and asked the Ministry of Environment and Forest (MoEF) to take steps regarding the implementation of the Solid Waste Management Rules, 2016.<sup>7</sup>

### **Epidemiology related to vector-borne diseases' burden in India**

Malaria	<ul style="list-style-type: none"><li>• 1.06 million cases in 2012</li><li>• 90% of malaria cases were reported by 12 states, namely Odisha, Jharkhand, Chhattisgarh, Maharashtra, Madhya Pradesh, Gujarat, West Bengal, Uttar Pradesh, Assam, Rajasthan, Andhra Pradesh, and Haryana</li></ul>
Kala-azar	<ul style="list-style-type: none"><li>• 13 869 cases in 2013 and 20 deaths</li><li>• Endemic in Bihar, West Bengal, Assam, Tamil Nadu during pre DDT era</li><li>• Re-appeared during seventies and at present &gt; 80% of all cases reported from Bihar. Nine districts in Bihar contribute 65-70% of cases</li></ul>
Dengue	<ul style="list-style-type: none"><li>• 28 292 cases and 110 deaths in 2010 (74 000 cases and 167 deaths in 2013)</li><li>• Endemic in 31 states</li></ul>
Chikungunya	<ul style="list-style-type: none"><li>• Re-emerged in 2006, 1.39 million cases in 13 states. Endemic in 19 states</li></ul>
Japanese encephalitis	<ul style="list-style-type: none"><li>• 5149 AES cases and 677 deaths in 2010</li><li>• 10709 JE positive cases with 199 deaths were reported in 2013, with more than 85% contributed by five states - Assam, Bihar, Tamil Nadu, Uttar Pradesh and West Bengal.</li></ul>

Filariasis	<ul style="list-style-type: none"><li>• Endemic in 250 districts of 15 states and five UTs</li><li>• 600 million population at risk</li><li>• 40 million infected, one-third of global cases</li></ul>
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Source: 12 Five Year plan working group on communicable diseases 2011; World Malaria report, 2011; NVBDCP updated programme data as presented in the JMM (2014).

### **Public awareness**

Environmental awareness refers to creation of mental attitude and the behaviour of man towards keeping the environment clean<sup>8,9</sup>. Attitude also refers to the way of feeling, learning, thinking and behaviour to sustain a taught than enforced cleanliness<sup>10</sup>. Management is the act by which various methods or techniques could be used to control the presence of solid waste in an environment<sup>8</sup>. Environmental education is a process of transmitting environmental awareness to ensuring sustainable use of the environmental management<sup>11</sup>.

Nwachukwu<sup>12</sup> shows that population growth with uncontrolled and unplanned urban expansion of areas compounded the problems of solid waste management.

In some five decades, issue associated with environment hasn't been of serious concern to the world. But recently due to increased urbanization, climate change, environmental pollution, global warming, ground and surface water pollution, general littering habit, poor refuse disposal in urban and rural areas and management of human waste. Perhaps the need to address this problem through environmental education is imperative. Wastes are complex in nature depending on the sources of generation<sup>13</sup>.

Their effect on human health varies. In a case where some ten nursing, midwifery and public health students were reported to have slumped by inhaling the stench from a dumpsite behind the hospital<sup>14</sup>.

The human attitudes on filthy environments influence waste generation and poor disposal in some towns and villages in Dudhnoi area. The potential risks to health, environment and improper disposal near waste generation site, refuse collection methods, street cleansing, disposal and inadequate environmental awareness strategies of solid waste in Dudhnoi area, inform the rational of this research to strike a balance between human behavior to solid waste and clean environment.

### **Health education**

To control this diseases health education is major part. Environmental awareness, i.e. impact of various environmental factors on human beings, is yet another important factor that must be addressed in this area of Assam. The health worker and doctors should educate people about the

common diseases against which care should be taken. Doctors and environmentalists should arrange awareness camps for the people of Dudhnoi.

The participation of local rural women is essential. The reason being she spends a great part of her life in engaging fuel, fodder, water for her family and actively involved in sustainable use of common resources management and development activities should constitute an essential case of building a solid framework for environmental awareness programme.

### **RECOMMENDATIONS**

1. Brick kilns, dumping of coal and other small scale industries should be established away from residential areas to avoid noise and air pollution.
2. Mass media can play a vital role in creating awareness about environment and conservation of natural resources.
3. Establishment of Eco-Clubs to provide a movement for children to spread about environmental protection. Under this programme young students not only learn about environment but participate in field activities in and around schools.
4. Every house in the village should have a soak pit and water should not be allowed to spread in front of the houses.
5. The water of wells, ponds and rivers should not be polluted by bathing animals or dumping garbage in them.
6. Environmental issues may be linked with health, explaining things like stagnant water breeds mosquitoes for malaria etc.
7. Tree plantation should be encouraged in and around villages
8. Pesticide and fertilizers should be used in appropriate quantities to avoid their lead effects on the soil
9. Bio-Gas plant should be encouraged to minimise the use of wood fuel.
10. A proper method should be used to dispose solid waste because unattended waste is responsible for spreading these infectious diseases.
11. Solid waste collection and disposal should be away from a water supply or a big water body

### **CONCLUSION**

Proper management of waste would not only lead to reduction of environmental hazards, but it may also lead to a business venture that will encourage social entrepreneurs. Proper orientation to local on the need for proper waste disposal will greatly reduce the frequent stench and air pollution leading to a much healthier life.

This study may form base-line information to researchers and environmentalist whose basic works has implication of practical environmental cleanliness and benefit the Government and the people of Dudhnoi on environmental sanitation and hygiene. They will appreciate the need to properly manage solid waste in homes and farms. And government will experience reduction in waste to the public dumpsite and around the roadside.

## REFERENCES

1. Early, Chaiken (1993) Theories of Attitude Chang Retried on the 1/5/2010 from <http://www.aett.org/edtech/edl/34134-03.html>.
2. Nwachukwu DN (2007) The Teacher Counselor for Today's School. Enhancing Millennium Teaching-Learning Processes. Calabar: University of Calabar Press.
3. Abang ON (2008) Theories of Career Choice and Motivation. Calabar: Eti-NwaAssPacyna JM, Pacyna EG (2001) An assessment of global and regional emissions of trace metals to the atmosphere from anthropogenic sources worldwide. *Environ Rev*9: 269-298.
4. Integrated Solid-waste Management. Tehobanoglous, Theisen, vigil.
5. Kreith Frank., editor. Handbook of solid-waste management. New York: McGraw-Hill; 1994.
6. Lardinois I, van de Klundert A. Vol. 1. Amsterdam and Gouda: Tool, Transfer of Technology for Development and WASTE Consultants; 1994. Organic waste, Urban solid-waste series.
7. <https://swachhindia.ndtv.com/lack-waste-management-leads-vector-borne-diseases-causes-deaths-supreme-court-14197/>
8. Rim Rukeh A (2009) Environmental Science: An Introduction. Ibadan: Kraft Books Ltd.
9. The Nation newspaper (2014) Battle for clean environment. 34.
10. Isangedighi AJ (2007) Child Psychology Development and Education. Calabar: Eti-NwaAssocaite.
11. Adegbehim JO (1991) Strategies for Optimizing Tree Conservation Practices in Rain Forest Zones of Nigeria. Proceeding ort Annual Conference of Forestry Association of Nigeria 22-24th June, Uyo.
12. Stone J (1999) In E. Harman Jonas, Mills J (Eds) What Exactly have I done? The role of Self Attribute Accessibility in Dissonance. Cognitive Dissonance Press on a Pivotal Theory in Social Psychology. Washington D.C. American Psychological Association 175-200.
13. Pacyna JM, Pacyna EG (2001) An assessment of global and regional emissions of trace metals to the atmosphere from anthropogenic sources worldwide. *Environ Rev*9: 269-298.

14. Anija-Obi FN (2001) Fundamental of Environmental Education and management. Calabar: University of Calabar press.