CHAPTER – V

SOLID WASTE MANAGEMENT OF KUMARGRAMDUAR BLOCK : A SOCIO-LEGAL PERSPECTIVE

5.1. INTRODUCTION :

Human beings maintain higher standards of living now-a-days all over the globe. So diverse varieties of waste are generated. Kumargramduar Block is no exception to this. In Kumargramduar Block, waste is produced in wider place as it is due to lack of awareness and proper knowledge about handling the matters. Solid waste is the waste material that is solid and not liquid. It is defined by Prof. (Dr.) Priya Ranjan Trivedi, a distinguished environmentalist as 'non-liquid waste materials arising from domestic, trade, commercial, industrial, agriculture and mining activities and from the public service.[1]

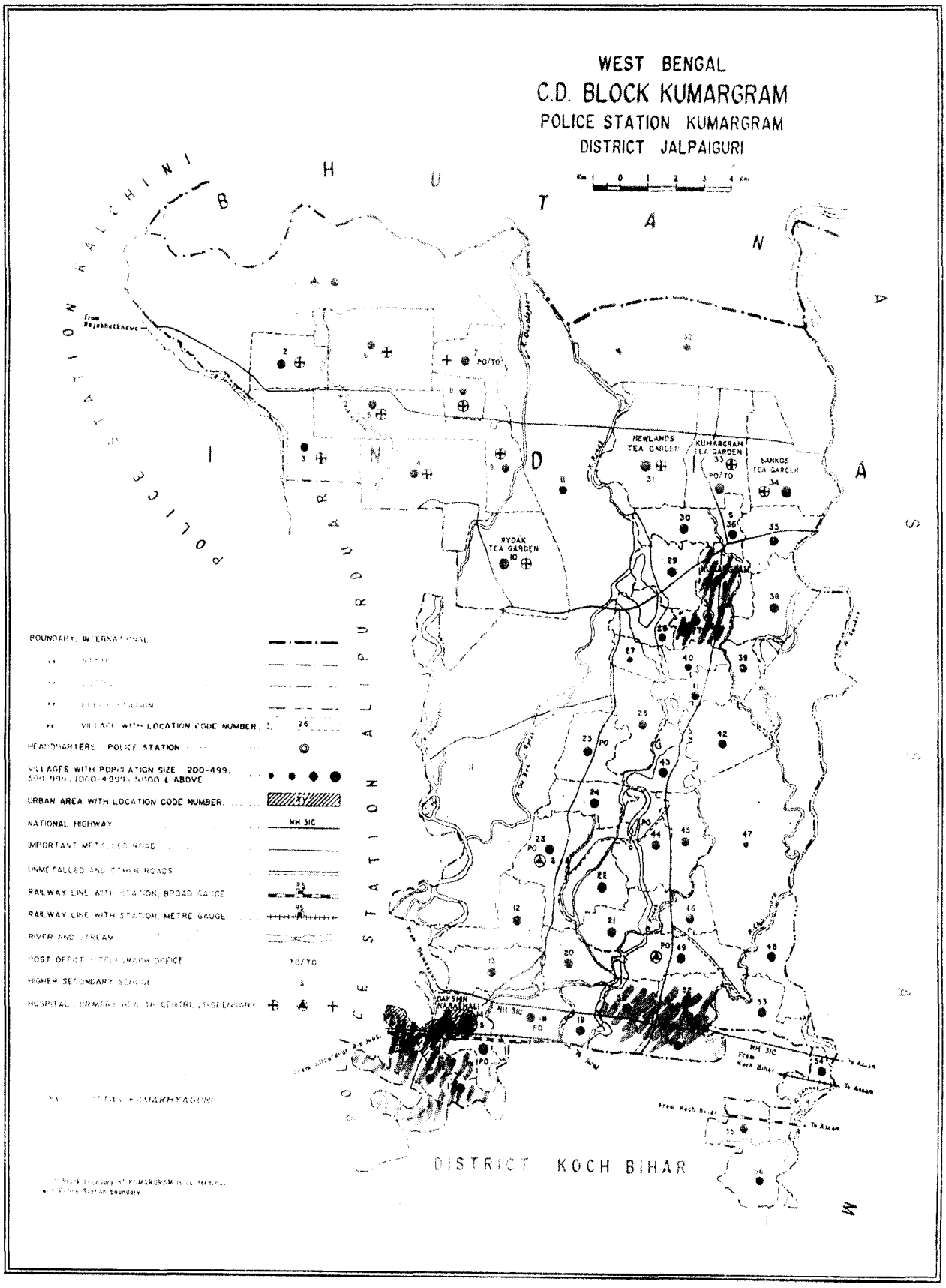
In Kumargramduar Block, solid waste are generate from the different segments of economy namely domestic, animal husbandry, agriculture, tea-industry, market places, other localities and semi-urban commercial hubs of Kumargramduar, Barobisha and Kamakhyaguri. Solid waste is mostly bio-degradable and non-bio-degradable. The management of solid waste is essential method to solve the health hazards of this block by means of generation of awareness, scientific methods and administrative-legal initiatives.

5.2. SOLID WASTE – A HAZARD TO ENVIRONMENT

Solid waste is a health hazard not only for the human beings but also for all kinds of flora and fauna. It affects environment severely. The impact of solid waste is for long times. Human civilization appears in front of utter disaster due to human created solid waste. It is ruining human society bitterly. It is creating so many health problems in front of human beings namely skin diseases, cancer, blood abnormalities, hemorrhagic diseases, changes in lungs, eye diseases, cataract and reproductive failure etc.

In Kumargramduar Block, there are three semi-urban commercial hubs namely Kumargramduar, Barobisha and Kamakhyaguri Census Town. These three

MAP: KUMARGRAM (SEMI-URBAN AREA)



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hubs are producing a large quantity of solid waste in every week. The following table presents data on solid wastes in the above commercial hubs.

Name of Semi-urban Commercial hubs of Kumargramduar Block	Area (in Hect.)	Population (2001)	Wastes / Person / Week (Average)			
			Vegetables or Putrescible Matter (in Kg.)	Plastics (in gm.)	Waste Water (in ltrs.)	Others (in kg.)
Kumargramduar	549.69	4872	1.5	6	14.0	7.8
Barobisha	720.43	3867	1.8	8	14.2	7.6
Uttar Kamakhyaguri Census Town known as Kamakhyaguri)	350.80	10544	2.4	14	14.8	7.0

Table-8 (prepared by author) : Waste generated per week by a person in three semi-urban commercial hubs of Kumargramduar Block.

From the above table, amongst the three semi-urban hubs of Kumargramduar Block, Kamakhyaguri Census Town is the highest solid waste generated area of the block. The waste of vegetables and putrescible matter is generated average 2.4 kg. at 'Kamakhyaguri Census Town' by each person in every week. At Barobisha, the amount is about 1.8 kg. The waste of vegetables and other purtrescible matter is generated the lowest amount at Kumargramduar (i.e. 1.5 kg / person / week). The plastic waste is produced in huge amount at 'Kamakhyaguri Census Town' (i.e. 14gm / person / week). Due to available in communication facilities by road and rail links, the largest populated semi-urban area among the entire block (population 10544, Census – 2001), only degree college of the block (i.e. Kamakhyaguri Saheed Kshudiram Mahavidyalaya), rural hospital and other modern amenities, majority of the people of the entire block and outside the neighbouring area depend 'Kamakhyaguri Census Town for their livelihood and basic services. The plastic waste is produced about 6 gm. and 8 gm. by every person in every week at Kumargramduar and Barobisha respectively.

As waste water is not included into solid waste, so majority segments of solid waste is generated along with the waste water especially by household activities, animal husbandry and shops. And for the easy understanding of the matter, the author mentions in the above table the amounts of waste water generated by every person in every week. Waste water is produced about 14.8 litre by each person in every week at 'Kamakhyaguri Census Town'. Nearly 14.0 litre and 14.2 litre are generated by every

person in every week at Kumargramduar and Barobisha respectively. Due to modern amenities and apathy of the most of the common masses, solid waste is generated hugely day-by-day in the entire block.

Solid waste is, at present, a bio-social problem in entire Kumargramduar Block along with other areas of the Sub-Himalayan belt of West Bengal. Amongst the total pollution levels of Kumargramduar Block (Table-7), domestic, agriculture and industry are responsible of pollution nearly 36%, 30% and 20% respectively. The wastes are generating from the different sources. The wastes generating from different segments of livelihood are given in table as follows :

Name of Segments of livelihood (% of total pollution level)	Types of Waste Generated	Percentage of Waste Generation
1. DOMESTIC OR HOUSHOLD (36%)	(i) Food Waste	11.88
	(ii) Cloth / rags	3.60
	(iii) Waste Paper	5.76
	(iv) Plastics	6.12
	(v) Ash	5.40
	(vi) Glass (broken)	1.44
	(vii) Others	1.80
2. AGRICULTURE (INCLUDING ANIMAL HUSBANDRY) (30%)	(i) Plastics and other packaging materials	11.25
	(ii) Residues of plant material (post-harvesting)	8.25
	(iii) Vegetable / fodder part	2.25
	(iv) Cattle's excreta	6.75
	(v) Others	1.50
3. INDUSTRY (INCLUDING TEA INDUSTRY, SHOPS AND MARKET PLACES) (20%)	(i) Plastics and other packaging materials	7.10
	(ii) Residues of plant materials after sizing the plantation and broken small parts of the shed-trees of the garden	2.40
	(iii) Factory rubbish	2.70
	(iv) Dust and other micro-organic wastes	1.30
	(v) Waste paper	2.50
	(vi) Bottles after use	0.80
	(vii) Egg-shells	0.40
	(viii) Tea Leaves	1.00
	(ix) Food Residues	0.80
	(x) Others	1.00

Table-9 (prepared by author) : Waste generated from different segments of livelihood.

From the above table, plastic waste is generated the highest level from total sources of domestic, agriculture, agriculture and industry related activities (24.47%). Amongst domestic or household activities besides plastic wastes food waste (11.88%) is the highest type of solid waste and broken glass (1.44%) is the lowest type of solid waste. Besides these, cloth or rags, waste paper, plastics and ash are generated from the domestic source nearly 3.60%, 5.76%, 6.12% and 5.40% respectively. Agriculture is the second largest source of generation of solid waste in Kumargramduar Block of the Sub-Himalayan tracts of West Bengal. In the entire block only 7013.60 hectres area (9.95%) are used for cultivation excluding the tea gardens. The total area of tea gardens is 18507.73 hectre in this block (26.26%). Agriculture including animal husbandry generates plastics and other packaging materials, plant residues (post-harvesting), vegetable and fodder part and cattle's excreta nearly 11.25%, 8.25%, 2.25% and 6.75% respectively. Industry comprises tea-industry, pottery, beedi-manufacturing, dolomite-mining, stone-crushing, beckary, food and beverage etc. From the industry, plastics and other packaging materials are the largest solid waste materials (7.10%). Besides plant residues, factor rubbish, dust and other micro-organic wastes, waste paper, bottle (after use), egg shell, tea-leaves, food residues are comprised of nearly 2.40%, 2.70%, 1.30%, 2.50%, 0.80%, 0.40%, 1.00% and 0.80% respectively. Solid waste generated from shops and market places are included into the solid wastes produced from industries. Because shops and market places are closely interlinked with industries.

People use plastics for their day-to-day activities. They use plastic carry bags, plastic covers containers and so many substances. Plastics are non-degradable synthetic organic pollutants. These are not broken by natural purifying processes. Plastics obstruct the growth of the roots of trees in the soil. These inhibit soil-texture. Plastic substances degrade water quality of the underground water level and the rivers, lakes, ponds etc. of the area of study. So the enforcement agencies should strictly enforce the provisions of the 'Recycled Plastics Manufacture and Usage Rules, 1993' (as amended in 2003) for the benefit of the ecology of the region.

It is, at present, hopeful that the Ministry of Environment and Forests (MOEF), Government of India has issued recently a public notice regarding the

proposal for replacement of the existing rule and preparation of the proposed new rule as 'Plastics (Manufacture, Usage and Waste Management) Rules, 2009'[2] for strictly enforcement of the rule to control the plastic hazards in the natural environment. The main points of the proposed rule are as follows :

a) from the virgin plastics, carry bags and containers shall be produced in natural shade and

b) Plastic carry bags or containers shall not be used 'for storing, carrying, dispensing or packaging of foodstuffs'.[3]

c) Thickness of the plastic materials for usage.

The law enforcement authorities should discharge their functioning to control the plastic materials spread in the natural environment as solid waste substances in the entire Sub-Himalayan West Bengal for the largest interest of the human society vis-à-vis of ecology.

Most of the people habituate to open defection in the field, in small bushes, in the bank of rivers and natural springs in Kumargramduar Block along with other parts of the Sub-Himalayan West Bengal. Recently, most of the Gram Panchayats in the block have given the circulars to inform public not to defacate in open places. Those who will disobey the directives they can be prosecuted to monetary punishment as fine. People throw the plastics, paper-bits here and there. They also throw the car case of the corpses in the banks of rivers, natural springs and other places in the area.

Solid wastes are produced from different sectors of industry. Hospital and medical wastes may be anatomical, pathological and infectious wastes. These are the health hazards of the area. Municipal and civic wastes are responsible to degrade the environment of the locality. These are the sources of different kinds of pollution and soil contaminant. A large number of microbes and other pathogens are increased due to these. The mismanagement of solid waste material affects the entire environment and causes the ecological disturbances. A report which appeared in the Telegraph on 6th June, 2003 are given herewith. "Toxic hospital waste has already taken a toll on the trees and shrubs in the vicinity. Saplings are dying and mould lichens and fungi

taking over."[4] The report also highlights that this waste is a source of 'anthrax which is fatal and contagious disease among the animal.'[5]

Solid waste should be managed through different scientific procedure, public awareness and administrative legal measures. Public awareness should be promoted by the local PRIs, NGOs and other societal organizations of the block namely schools, angadevi centres, SHGs and so on. Public awareness can improve the public knowledge regarding the evil impacts of solid wastes. So people can reduce, reuse and recycle and the solid wastes. People can use the bio-degradable wastes (i.e. vegetable stuffs, plant residues etc.) as the good manure. That manure is applied in agriculture. Besides, administrative legal initiatives are the last resort to solid waste management in Kumargramduar Block of the Sub-Himalayan West Bengal.

5.3. ADMINISTRATIVE LEGAL INITIATIVES TO SOLID WASTE MANAGEMENT

To take legal initiative, the Environment (Protection) Act, 1986 (Act No. 29 of 1986) is strictly enforces. Section 25 of this Act has given the Government of India the power to make rules 'for carrying out the purposes of this Act'[6] (Sub-section 1).

In decentralization era, the government should give authority to the Zilla Parishad (i.e. District Council) to make by-laws for environmental protection including solid waste management. The Zilla Parishad should help the Panchayat Samity (PS) in this respect. Kumargramduar Panchayat Samiti should constitute an 'Empowered Committee on solid waste management including Hospital Waste' under the direct supervision of the Panchayat Samity's Parivesh-O-Janaswasthya Sthayee Samity' (i.e. Standing Committee on Environment and Public Health). The Karmadhakshya of this Standing Committee should chair the Empowered Committee. This 'Empowered Committee on solid waste management' may comprise environmentalist, representatives of NGO, Sub-Assistant Engineer (SAE) of the block, Block Medical Officer of Health (BMOH), Forest Officials from the Range Offices of the Block, Officer-in-Charge (OC) of the local police station, Agriculture Development Officer (ADO) and Industrial Development Officer (IDO) of the Block as members. They may seek advice from Kamakhyaguri's Saheed Kshudiram Mahavidyalaya as the nodal technical advising agency for environment related issues. They should also co-ordinate with the proposed 'Environment Cell' at District Magistrate's Office for Remote Sensing data of the respective areas. This

Empowered Committee (E.C.) should convene a meeting once in a month at the Panchayat Samiti premises. This committee (E.C.) should give assistance to the Gram Panchayats (G.P.s) for solid waste management including Hospital Waste. The constitution and duties of the Panchayat Samiti constituted Empowered Committee (E.C.) on Solid Waste Management are mentioned here in a diagram.

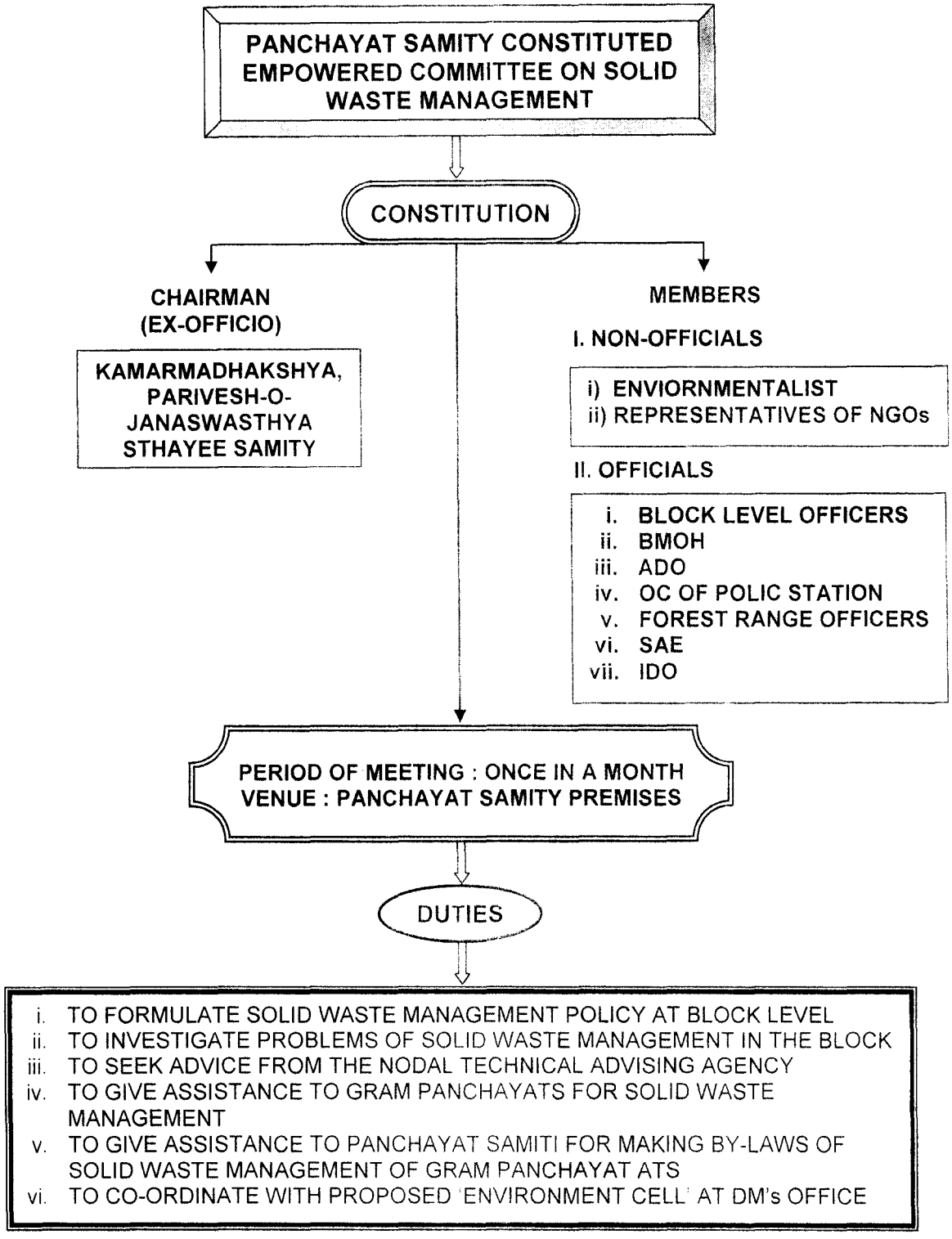

Diagram-11 (prepared by author) : Constitution and duties of Panchayat Samity constituted Empowered Committee on Solid Waste Management.

The local G.P.s should collect the garbage for proper management. The garbage should be used for making energy, fertilizers and other economic activities. The G.P.s should handle the garbage including solid waste. The G.P.s can enforce monetary punishment as a fine to the public who violate the proposed by-laws of the Panchayat Samity (P.S.) for the solid waste management in the respective jurisdiction of the GP of Kumargramduar Block of the Sub-Himalayan West Bengal.

In Alipurduar Sub-Divisional Court, a separate division for Environmental issues should be established by the Government of West Bengal in consultation with the Calcutta High Court's Green Bench to judge the local ecological disputes. Kumargramduar Block is under the Jurisdiction of Alipurduar Sub-Division. So Alipurduar Sub-Divisional court has a territorial right to deliver the judgments related to the ecological issues.

5.4. CONCLUSION

Solid waste including hospital waste is undesirable rubbish in not only Kumargramduar Block but also other parts of the Sub-Himalayan West Bengal now-a-days. It affects the environments. Human beings are also affected due to it. Administrative Legal measures along with public awareness can effectively be taken in solid waste management in Kumargramduar Block Conscious Civil society can access to information of ecology. This civil society can know their rights and the duties towards the society. Enforcement of law along with public alertness can do effectively in solid waste management (SWM).

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1 Trivedi, Prof. (Dr.) Priya Ranjan – Research Methodology and System Analysis, Vol. 9, Indian Institute of Ecology and Environment, New Delhi, 2000, pp. 47

2 Ministry of Environment and Forests, Govt. of India – Public Notice (No. davp 1310/11/0033/0910)

3 Ibid.

4 The Telegraph, 6th June, 2003

5 Ibid

6 Section 25(1) of the Environment (Protection) Act, 1986 (Act No. 29 of 1986)