

ENVIRONMENTAL ACCOUNTING FOR LOCAL SELF GOVERNMENT

¹Mr. Sudesh Satyavan Shetkar, ²Dr. Anthony Rodrigues,

¹Research Scholar, ²Professor

¹Department of Commerce

¹Goa University, Goa, India.

ABSTRACT: *The present research paper examines the importance of environmental accounting for local self-government towards environmental protection and management, evaluates the role of local self-government towards promotion and development of environmental accounting and also investigates the local self-government initiatives towards sustainable environmental development. For this study 5, local self-government body has selected from Goa, based on random sampling technics. The analysis highlights that environmental accounting has a multi-dimensional construct rather than a one-dimensional form. Three main aspects of environmental accounting are firstly direct monetary and physical flows in environmental protection and management. Secondly, for accounting - environmental costs and impacts are hidden in overheads and future periods in waste management, thirdly accounting for external environmental costs and effects in waste management. Similarly, critical roles of government in promoting and development of environmental accounting is vision/goal setter, leader by example, facilitator, green fiscal authority, and innovator/catalyst. The study even highlights that a moderate level of environmental accounting has found in local government towards environmental protection and management. It has seen that local self-government has used around half of the environmental accounting information items included in this research.*

Key Words: *Environmental Accounting, Local Self Government, Environmental Protection and Management, Sustainable Development.*

I. INTRODUCTION

The importance of accounting in sustainable development had proposed in the early 1990s. The role of accounting in sustainable development, building a framework for change, including the development of concepts and techniques which account for the environmental costs and benefits of transactions, is an indispensable component for sustainable development. The past two eras have seen remarkable changes in corporate accounting practices as well as extensive research into these practices and their impacts on social and environmental changes. (Bell & Grinstein, 2002)

The problem has taken an acute form in developing countries such as India. At the same time, rapid urbanization has led to the establishment of urban local government bodies. In India, it has led to the establishment of Municipal Corporation (which are administrative units at every municipality composed of elected members) and Village Panchayat Ghar (which is also administered by an elected member). Both are providing people living in their areas with local services besides also having some vital environment-related functions. (Christie, 1991)

Environmental governance is a complicated arena in India, somewhat due to a fragmented and developing legislative framework and an absence of clarity in the division of roles and responsibilities across the three spheres of government. Nonetheless, the dependency of the economy and human health and wellbeing on proper management of environmental assets, as well as the inherent value of natural resources, requires local government to support effective environmental governance. (Howlin, 1995)

The Prime Minister has urged on Red Fort recently in India's 68th Independence Day on 26th January 2014. By introducing the Swachh Bharat Abhiyan in India where he advised to all Indian to be a part of this Abhiyan by keeping their own surrounding clean and also support the government initiative through participating in cleaning drives organized by government and NGO's even through building toilets and other sanitary facilities so that India becomes Swachh by 2019.

Hence, there is no doubt that local government can play a vital part in the protection of the environment and contribute towards Swachh Bharat Abhiyan. Although this is often not acknowledged or emphasized that it should have given but hopefully now onwards, it will be considered on priority bases as it is a vision of prime minister to break down this tradition. Whereas the constitution of India provides our citizens with a far-sighted environmental right, but it fails to provide a clear role for local self-government in safeguarding this right has fulfilled. (Qian & Burrirt, 2005) Also, the national and local government are committed to wide-ranging goals for management and protection of the environment and 'sustainable development,' many of this want action and implementation at the grass-root level. Pressures to deliver essential services and to enrich opportunities for development at the grass-root level are also sometimes seen as contradictory with custodianship of the environment. As a consequence, the environment has often seen as an unclear, complicated and very-low priority area for local government and, as a result, the performance of many municipalities and village panchayats in satisfying their mandates in this area tends to be poor. (Mohamed, 2014)

Although there are increasing expectations on local self-government to take custodianship of the environment, this is within a municipal and village, climate where funding, skills, and capacity are under severe pressure across all areas of municipal functions. The environment has long been a secondary priority in the face of extreme poverty and the need for development and economic growth. Consequently, the push

for local self-government to achieve superior performance in this sector has countered by several opposing pressures. Though it is important to emphasize that development, and economic growth that has attained at the cost of the environment (i.e., that results in environmental degradation) is not sustainable and impoverishes future generations by reducing their options and ability to meet their own needs. (Qian, 2007)

II. LITERATURE REVIEW

(Chowdhury & Deb, 2012) The paper speaks about the local municipal government is a vital part of the delivery of services to people. Along with other responsibilities, the urban local government in Bangladesh is also accountable for environmental management. This research aims to ascertain the role of Paurashavas (those are administrative units at each municipality composed of voted members) in guarding a healthy and clean environment. Investigation of Chunarughat Paurashava, the research discovers that Paurashavas have a significant part in environmental management such as waste disposal, garbage collection, public park protection, sewerage construction, and so on. Though, the provision of these kinds of services is hindered by many lacks, like infrastructure, logistic support, trained workforce, and funds, as well as peoples' participation.

(Kokubu, 2002) In this paper, the influence of these two governmental initiatives on Japanese corporate environmental accounting practices will be examined by an analysis of environmental accounting disclosure and a questionnaire survey. The examination indicated that the MOE guidelines very strongly influenced Japanese companies. These shows that Japanese corporate environmental accounting is oriented to external reporting because the MOE guidelines stress more strongly the external disclosure function of environmental accounting than the internal management function.

(Qian, Burritt, & Monroe, 2008) This research study was developed to explore environmental accounting practices and their motivations in the context of local government waste management. An exploratory case study method was applied to achieve the objective of this study in twelve local government organizations in NSW Australia. This paper even found that a wide range of organizational social structural factors and contextual factors have driven the implementation of environmental accounting for waste management in the local government organizations investigated. The organizational contextual factors include complex waste operations and services, proactive waste management strategies, and uncertain organizational environments. The social structural factors include regulatory pressures, community awareness and expectations, and voluntary local and regional initiatives and cooperation. The results of the case studies imply that contingency theory and institutional theory may provide theoretical support for organizational factors and social factors respectively, although this has to be confirmed by empirical assessments in future research.

III. RESEARCH PROBLEM

In past few decades, very little research has focused specifically on the issue of environmental accounting in local self-government. A few studies find that environmental decision-makers in local government have responded positively to social and environmental pressures by developing environmental management and accounting initiatives, conducting environmental auditing and disclosing environment activities and waste related information. (Savage, Ligon, & Lomsek, 2001) However, except for legislature requirements, environmental accounting for waste management is predominantly a voluntary part of waste management activity. Therefore, it is necessary to conduct research that can look into and understand current environmental accounting practices and determine the explanations for environmental accounting practices in local government waste management. (Singh & Bamniya, 2016)

IV. OBJECTIVE

1. Examine the importance of environmental accounting for local self-government towards environmental protection and management.
2. To study the role of local self-government towards promotion and development of environmental accounting.
3. To investigate the local self-government initiatives towards sustainable environmental development.

V. RESEARCH METHODOLOGY

The study made use of the primary and secondary source were based entirely on the use of local self-government website and annual report of choosing local government body in Goa. The different applicable info had also collected supported on a personal visit to government offices like IDC, Industrial development corporation, Director of Industries Trade and Commerce, Goa State Pollution Control Board and their official website. For this study, five local self-government bodies were selected, based on random sampling technics. This examination utilized the content analysis technique like percentage which is research methodology for making replicable and valid inferences from data. The primary data had collected through personal interview and questioner, where secondary data has gathered through an intense literature review of journal article, research paper, thesis, periodical, which has collected through various E-Resources like Shodhganga, N- List, ScienceDirect, University E-library, and J-Stor. This Literature has performed as the base Line in conceptual formation and development of this research article.

VI. ANALYSIS

A. Importance of Environmental Accounting for Local Self Government towards Environmental Protection and Management.

The primary pressure from waste generation is the need for disposal and the consequent environmental impacts of it. In India, the primary form of waste disposal is landfilling that too by collecting the waste from households, enterprise, industries, and dumping into the landfill areas notified by state or central government. As the waste generation has been increasing day by day, local

government are unable to reach out to all place or either they do not have sufficient landfill areas. Hence the illegal landfill has been done by industries, enterprise, and household.

Hence to develop, sustainable waste management and solutions need timely and reliable accounting information, especially to help justify both environmental and economic efficiency of Swachh Bharat Abhiyan programs. For that purpose cost-effective and informed decisions require an awareness of the real cost of waste management and a broader spectrum of information than that available in conventional accounting systems.

Conventional accounting systems and approaches, which focus on economic performance and implicitly exclude environmental resource values, have long been criticised as being inadequate and inappropriate to meet the requirements of environmental and sustainable development. These are mainly because conventional accounting largely ignores separate identification, classification, measurement, and reporting of environmental information, especially environmental costs and impacts. Although various waste programs for improving resource recovery and for limiting waste disposal costs have been designed and implemented in the past decade, relatively low operational costs of landfill disposal make landfilling attractive and competitive compared with other alternatives.

However, landfilling has become a serious concern in recent years for its adverse impacts on the environment and unquenchable thirst for land space. Sustainability of waste management cannot be guaranteed in the long run if the full costs associated with fuel, labor, and the impacts to the environment in landfilling practices have neglected. Even environmentally sound options, such as recycling, which has viewed as conserving resources and reducing environmental problems, have to make sense regarding economic viability and environmental achievability.

Hence, there is a prerequisite to improve the accountability of waste alternatives, the accountability of both economic and environmental costs and impacts in environmental protection and management. Environmental accounting can help to strengthen this accountability and guide local government to make long-term development decisions. Earlier research demonstrates that environmental accounting is a necessary foundation and support for quality environmental management because it overcomes the limitations of conventional accounting approaches and incorporates fuller environmental information into organizations management.

The application of environmental accounting approached, such as the full cost assessment method or the life cycle assessment method, in waste management and highlighted that accounting for total costs and impacts of waste streams will assist local self-government to achieve quality waste management performance and improve environmental protection. Environmental accounting has a multi-dimensional construct rather than a one-dimensional form. It underscores the responsibility of an organization to capture both economic and ecological footprints and looks upon the entire operation of an organization as an ecological activity with both environmental and economic impacts.

- a) Three main aspects of environmental accounting are as follows:
- b) Accounting for direct monetary and physical flows in waste streams and activities.
- c) Accounting for environmental costs and impacts hidden in overheads and future periods in waste management.
- d) Accounting for external environmental costs and impacts in waste management.

This aspect reinforces the importance and the need for, environmental accounting for local self-government towards environmental protection and management.

Table No: 1

HAZARDOUS - WASTE GENERATED IN THE STATE OF GOA.			
Categories of Waste	Years		
	2012-13	2013-14	2014- 15
Incinerated (Pharmaceutical) Waste (MT)	28566.122 MT	33618.03 MT	16705.9438 MT
Oil Filters / Empty Tins (Nos)	293 Nos	2181 Nos	9947 Nos
Landfill Waste (MT)	5513.676 MT	2529.299 MT	3345.665 MT
Recyclable Waste (MT)	2473.5493 MT	1830.791 MT	1873.83 MT
Discarded Empty cans/tins (Nos)	7883 Nos	41212 Nos	37339 Nos

Source: Annual Report of Goa State Pollution Control Board.

Chart No: 1



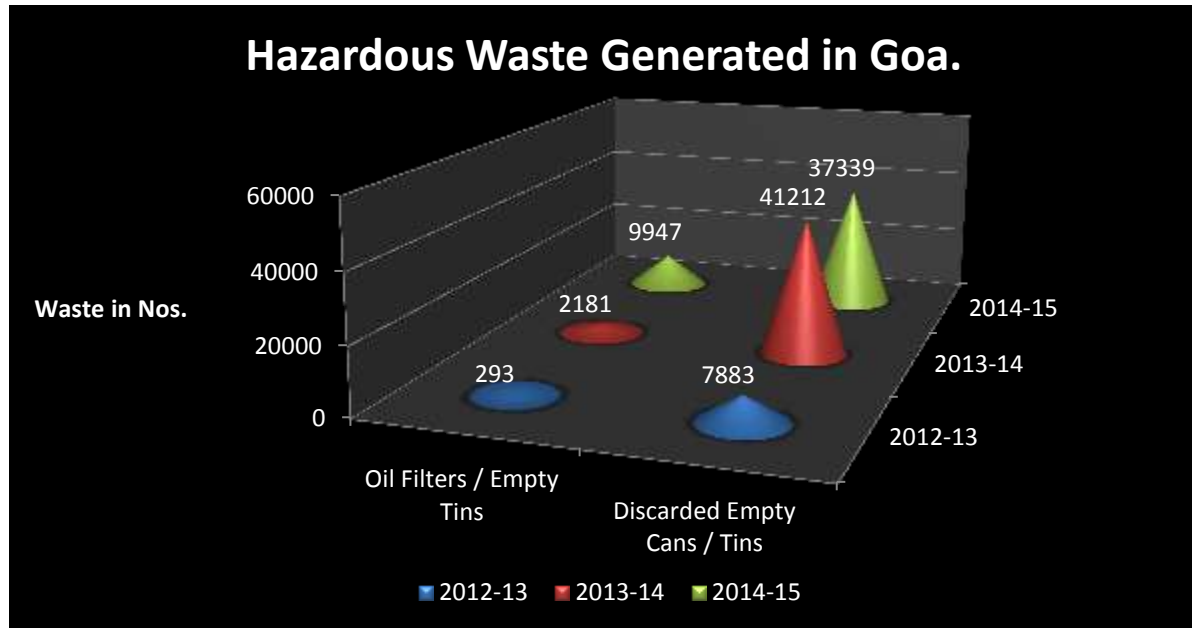
Source: Annual Report of Goa State Pollution Control Board.

Chart No: 2



Source: Annual Report of Goa State Pollution Control Board.

Chart No: 3



Source: Annual Report of Goa State Pollution Control Board.

B. Role of Local Self Government in Promotion and Development of Environmental Accounting.

Governments at every stage and in all corners of the world are starting to recognize the significance of addressing the challenge of sustainability. Progressively the language of sustainability is evolving in public policy discussions. Coming to grips with the encounters and opportunities of sustainability is an imperative that goes past domestic agendas. The not even a single country can be an island of sustainability in an ocean of unsustainability. Equally, no government, or any other organization, can effortlessly create economic, environmental and social value through policy changes or pioneering practices if global drivers and incentive systems are working in the opposite direction. The global context must need to factor into the domestic policy agenda.

The government is the biggest landowner; the principal fleet owner; the single major employer; and the chief landlord or owner/operator of buildings. It is also, therefore, the leading consumer of energy, the most significant producer of most environmental impacts; the single supreme source of support for social capital; and so on. A strong case can outline that governments should “walk the talk” by placing their internal operations on a strong sustainability foundation. Similar as most governments try to conduct public enterprise and government operations according to sound business practices; sustainability philosophies should now be seen as essential to this process.

Anticipating increasing world demand for sustainable services products, and systems is also a duty and opportunity for governments. Undeniably, there is a crucial role for governments in facilitating the changeover to an economy that is much much fairer and more efficient, much less damaging. Governments that lead will be in a stronger position to set the agenda and establish advanced positions for their industries and their citizens.

I. Critical Roles of Government in Promoting and Development of Environmental Accounting.

1. Vision/Goal Setter
2. Leader by Example
3. Facilitator
4. Green Fiscal Authority
5. Innovator/Catalyst

1) Vision / Goal Setter

The metaphors “steering” and “rowing” may help us discriminate the respective roles of government and business. Business is best armed to generate wealth by providing products and services. As rowing moves a boat, so business activity is the force that propels a healthy economy. Government’s role, by contrast, is to steer society toward goals that have articulated in public policy. Many believe governments must provide a vision and strategy to help guide policy in the direction of sustainability.

2) Leader by Example

The government body themselves has to “Walking the talk” first by practicing sustainability in government operations and purchasing policies. The governments should take the necessary steps to “Improve the Environmental Performance of Public Procurement.” Government thinking of buying ‘Green’ at government level can help significantly to improve overall environmental conditions. This environmentally sound public procurement can also result in a host of indirect benefits. Which might give the ‘Kick-starting’ to markets for more innovative and environmentally-friendly goods and services, public procurement may encourage businesses to follow the governments lead.

3) Facilitator

Creating appropriate “Framework conditions” for promotion and development of environmental accounting. It is through the formation of “open, competitive and accurately framed markets,” that governments can safeguard the enlargement of the potential gains of sustainable development. Through implementing full-cost pricing of goods and services, through the dismantling of perverse subsidies, greater use of market instruments and less of command-and-control regulations, by applying more tax on things to be discouraged, like waste and pollution, more reflection of environmental resource use in standard national accounts.

4) Green Fiscal Authority

The government needs to get the prices right through “greening budgets” and introducing “ecological fiscal reform.” The tax structure is one of the most critical elements of the framework for a sustainable economy. The environmentally related taxes can significantly use for market-based instruments, and it may lead to a vital framework condition for sustainable development. These economic instruments have been playing a growing role in environmental policies framework development.

5) Innovator/Catalyst

In impending the challenge of sustainability and strategizing about ways to help bring about evocative change in governance practices. It is sensible to keep in mind that “The world we have created today, as an outcome of our thinking thus far, has problems which cannot even solve by thinking the way we thought while we created them.” Efforts to spread sustainability - in government, the private sector and civil society - will claim fundamentally new ways of thinking and do it. The desperate need arises for innovation, including technological innovation and policy innovation. The government must play a strategic role in stimulating and facilitating change within government and in all sectors of society. More specifically, the government has an essential contribution to building a substantial capacity for change that supports sustainability. This highlight that Innovation can enable our global economy to depend more on the progress of newly innovated technology than on depending on the exploitation of natural resources.

6) Staff training and Information

That is an essential element of any internal strategy, a vital to the process of disseminating ideas outside the organization; if staff are not aware and committed, no charter or plan can successfully implement. Skilled and committed staffs are one of the most important resources for an organization putting local agenda into practice.

C. Local Self Government Initiatives towards Sustainable Environmental development.**1) Supporting environmental education**

That can relate to all educational levels within their area, including adult education, and could include encouraging local business/industry to do likewise. Appropriate support could be financial or could take other forms, such as supplying groups with materials or premises or sending personnel to talk to students.

2) Linking with local schools/colleges

Local government authorities can consult with educational institutions on providing applicable lectures or courses or workshops on the environment and sustainable development for the public.

3) Supporting the initiatives of local voluntary groups

The residential voluntary groups can be well located to identify the particular needs of their communities; local government authorities can help by providing supplementary information, display services or other support for their activities.

4) Accumulating and publishing local environmental information

In addition to gathering environmental information, local authorities can follow several options to make it widely available. For example, by using their own public library facilities, citizens’ information centers, community groups, local radio stations (especially community radio), or by publishing it in their annual reports, local or community newspapers and magazines.

5) Setting up focus points

The local government authorities can develop environmental information counters for their local areas – either centrally or through their public library services and build environmental information networks and Information holdings.

6) Holding open days

The local government establishments can hold an open house (days) at designated environmental facilities, for example, water or wastewater treatment plants, to show the public how environmental issues have dealt with in this context.

7) Drawing up their own information policy statements

Drawing up such statements would establish a user-friendly guide to the different type of environmental information held by the Local authority and to arrangements for dealing with requests for this information. An information policy statement could refer to public registers as well as information covered by the admission to information on the Environment Regulations, 1993.

8) Maintaining statutory registers

The local authorities must ensure that all legal requirements to preserve catalogs of information. For example, planning registers, registers or use of sewage sludge and records of licenses issued under air and water pollution legislation – are fully complied with; logs should be kept up to date, and the availability of the information they contain should expose.

VII. CONCLUSION

This research explored the practices of environmental accounting and the motivations for these practices in the context of local self-government towards environmental protection and management. It has long acknowledged that sustainable protection and management solutions require an awareness of the real cost of protection and management and a broader spectrum of information than that available in conventional accounting systems.

Based on this study, a moderate level of environmental accounting has found in local government towards environmental protection and management. It has seen that local self-government has used around half of the environmental accounting information items included in this research. This result implies that, although environmental accounting is still far from fully applied in local self-government management and protection. This research outcome shows an increased level of environmental accounting towards protection and management of the natural environment.

The organization and content of local self-government agenda should reveal the local vision of balanced development, concerning specific local concerns/problems. The involvement of all local community interests will be significant in this regard. The local self-government vision, however, should not be a narrow one: regional authorities are well placed to promote coordination and consistency between local self-government in the interests of a balanced and coherent approach at the regional level.

Some indicators of progress towards local sustainable development should devise; more information in this regard will be provided to local authorities as the subject has developed at national and international level. The local self-government needs to take these three initiatives in mind before carrying out sustainable development, which is firstly the ecological Imperative, is to remain within planetary biophysical carrying capacity. Secondly, the economic imperative is to ensure and maintain adequate material standards of living for all people. Thirdly the social imperative is to provide social structures, including systems of governance, which effectively propagate and sustain the values people wish to live. The amalgamation of economic and social policy is relatively well established (as the term "socio-economic" directs). However, assimilating social and ecological aspects of policy is less developed, and the triple integration sustainability requires, almost non-existent.

VIII. BIBLIOGRAPHY

- [1] Bell, D. V., & Grinstein, M. (2002). *The Role of The Government in Advancing Corporate Sustainability*. Canada: York University and Environmental Futures Forum.
- [2] Chowdhury, M. S., & Deb, P. (2012). *Urban Local Government and Environmental Management in Bangladesh: A Study on Chunarughat Paurashava*. Bangladesh: Bangladesh Development Research Center (BDRC).
- [3] Christie, B. (1991). *The Environmental Charter for Local Government: Practical Recommendations*. *The Town Planning Review*, Vol. 62(No. 1), 122 - 123.
- [4] Howlin, B. (1995). *Local Authorities and Sustainable Development Guidelines on Local Agenda 21*. Ireland: Minister for the Environment of Ireland.
- [5] Kokubu, K. (2002). *Two Governmental Initiatives on Environmental Management Accounting and Corporate Practices in Japan*. Japan: Kansai Research Center, Institute for Global Environmental Strategies.
- [6] Mohamed, S. B. (2014). *Sustainable Development A Agenda: The Role of Local Government in Malaysia*. Malaysia: Faculty of Technology Management and Business University Tun Hussein Onn Malaysia.
- [7] Qian, W. (2007). *Environmental Accounting For Local Government Waste Management: An Assessment of Institutional and Contingency Theory Explanations*. Australia: Australian National University.
- [8] Qian, W., & Burritt, R. L. (2005). *Contingency Perspectives on Environmental Accounting: An Exploratory Study in Local Government*. Australia: Centre for Accounting, Governance and Sustainability School of Commerce Division of the Business University of South Australia.
- [9] Qian, W., Burritt, R., & Monroe, G. (2008). *Environmental Management Accounting in Local Government: A Case of Waste Management*. Australia: Australian National University.
- [10] Savage, D. E., Ligon, P. J., & Lomsek, J. (2001). *Environmental Management Accounting: Policies and Linkages*. New York: UNITED NATIONS.
- [11] Singh, R. M., & Bamniya, B. R. (2016). *Environmental accounting for municipal solid waste management- a case study of Udaipur city (Rajasthan)*. Udaipur, Rajasthan: Mohanlal Sukhadia University.