

PERFORMANCE AUDIT OF MUNICIPAL SOLID WASTE MANAGEMENT

Background and Audit Planning

Based on Constitution of Indonesia, The Audit Board of The Republic of Indonesia (BPK) has been mandated to audit the country financial activity implemented by Indonesian Government, Local Government, Central Bank of Indonesia, State-owned Enterprises, and any other institution that manage country's finance. It can be vary from standard financial audit, performance audit, and/or compliance audit.

BPK has been doing some audit activities related to environment, especially in the form of performance audit. In the recent years, there are some important audit in this matter, including performance audit of drainage basin system management in 2 (two) main drainage basin in West Java and East Java provinces, performance audit of hazardous waste, performance audit of solid waste management, and many other.

In this paper, we pick up one of BPK audit topic from recent years, which called Performance Audit of Municipal Solid Waste Management. This topic is very important because in the municipal solid waste management activities, besides the state finance that affected, it also related to a lot of things in the future, including local environment durability, citizen's quality of life, and in the term of global issue it can produce a lot of greenhouse gases (mostly methane) if not handled properly.

The Audit of Municipal Solid Waste Management is a performance audit with special purposes consists of:

- Ensure harmonization of regulations and solid waste development plan to ensure the achievement of national development goals related to waste management;
- Assess the effectiveness of the planning and execution of the solid waste development in achieving national development goals related to waste management;
- Assess the effectiveness of the planning and supervision of the Clean Development Mechanism (CDM) project on waste management in support of the achievement of national development goals related to waste management.

In this audit, criteria used based on 2008 Law about waste management, as well as specific internal regulations of the internal State Ministries concerned, especially the Ministry of the Environment and the Ministry of Public Work.

Methodology

The Performance Audit of Municipal Solid Waste Management methodology is divided into three phases, namely planning phase, implementation phase and reporting phase. Each phase can be described as follows:

Planning Phase

At this first phase, audit activities started with reviewing related documents and reviewing the results of the preliminary audit in order to identify problems, as well as determine key areas and object inspection. There are also some exposes about specific matters performed by related ministries/institution to ensure that the audit will be run in the right path.

After general problems identified and also both key areas and object inspection determined, then the implementation phase begin.

Implementation Phase

At this phase, audit activities started with reviewing policies about rules and regulations those problems identified at the planning phase. These reviews including policy structure review, analyzing, interviewing and discussing about the problems with related people, in order to gain an adequate understanding of the problems caused by weak policies and the quantitative impact of weak policies intended.

Next, the audit activities go further by using some audit techniques, such as interviews, inspection, confirmation, review of analytical (ratios, trends, patterns), sampling, flow charts, and analysis (regression analysis, simulation and modeling, qualitative analysis of the data) with the objectives to:

- Develop the results to assess whether the performance of the entity that has been audited in accordance with the criteria or not;
- Collect the results and compare them with the purpose of the audit;
- Identify the possibilities to improve the performance of the entity; and
- Utilize the results to support recommendations and audit conclusions.

At last but the most important thing for this phase, we check the performance of related entities by doing sampling in some city that significantly shows the performance of municipal solid waste management. This check including the visit to landfills, interview with the local government and local people, and collect some data. Results of the audit will be based a lot by this sampling.

Reporting Phase

The Reporting Phase started after The Implementation Phase once finished. Things to do in this phase including compiling the Audit Reports based on Findings and Audit Working Papers from the Implementation Phase. Recommendations are written in this Audit Reports together with its response from the entities.

Finding and Recommendations

The findings of this audit are generally divided into policy findings and implementation findings.

On the policy findings, one of the most important finding is the presence of two overlapping activities of The Ministry of the Environment and The Ministry of Public Work due to the specific job and role of each ministry regarding waste management is not yet clear. BPK recommends that the Minister of the Environment and the Minister of Public Work to coordinate and synchronize execution of jobs and roles in support of the implementation of the development goals related to waste management.

On the implementation finding, it focuses in the fact that the 3R (Reduce, Reuse, Recycle) program launched by the government is not optimal implemented by related entities, including ministries and local government of 5 (five) cities where we did a sampling. It also results the government financial extravagance. 3R concept is a new paradigm in the patterns of consumption and production at all levels by giving the highest priority on waste management oriented in prevention of waste generation, waste minimization by encouraging reusable items and items that can be decomposed biological (biodegradable), and the application of the disposal environmentally friendly waste. To ensure the 3R concept can be implemented effectively, it requires the participation of all parties, including the government, local government, private sectors, and community.

The purpose of the 3R program is to reduce the waste, increase the amount of waste processed, and finally reduce the waste dumped into a landfill. 3R program implemented in

the form of pilot projects by build infrastructure facilities of Integrated Waste Sites which includes a communal container, areal sorting and composting area and also equipped with supporting facilities such as drainage, water supply, electricity, barrier (live hedges) and a storehouse of materials recycled or compostable products.

The lack of coordination among ministries that plays a role in 3R program implementation, which is The Ministry of the Environment and The Ministry of Public Work, resulting in the waste of the country's financial and suboptimal results of the 3R program implementation nationally. BPK also found that Ministry of Environment does not have a general plan (grand design) of the 3R program implementation.

BPK recommends that the Minister of the Environment and the Minister of Public Work to:

- Preparing Standard Operating Procedure (SOP) in the planning of 3R program activity by creating steps and methods of risk identification and preparedness/resource adequacy beneficiaries
- Synchronize the planning and implementation of the 3R activities involving the Ministry of the Home Affairs which is a bridge between local government and other ministries;
- Establish a mechanism of incentives and disincentives for the implementation of these activities

Impacts and Results

Gradually, since the completion of the audit, the Indonesia Government through technical inputs from related entities, especially the Ministry of Environment and the Ministry of Public Work has issued an additional regulation which is more comprehensive and structured in terms of municipal solid waste management. Law on waste management in 2008 has been strengthened by the Government Regulation in 2012.

Although it is still far from perfect, but municipal solid waste management, especially in big cities in Indonesia has shown some improvement. Recycling industry that utilizes environmentally friendly waste that can still be reused such as paper, plastic, metal, glass, and other materials now have grown in a good acceleration. Additionally socialization to the community in the form of a 3R seen in various regions in Indonesia, whether conducted by the Central Government through public service announcements by relevant ministries, or campaign which is conducted by the local government.

Challenges and Barriers

Generally there is no major challenge in term of rejection of this audit topic. The most common problem is the fact that BPK at that time only has very few auditors from environmental science background, especially who clearly understands the waste management system. Determining waste management performance cost benefit correlate to state finance is also a minor problem.

These minor problems are able to overcome by the teams with the continuous discussion with related entities/institutions, study the literatures, and also willingness of everyone involved in this audit activity.

Lesson Learned

It is clearly understood that municipal solid waste is become one of a big problem in almost every big city, especially in developed country. It involves a lot of entities, including government, local government, private sectors, and people of the city itself. Population growth also contributes a significant result of the waste management whether it will be success or not.

Since the auditing principal of this matter is to preventing the worst case that could happen in the long-term situation, it is important for auditor to capture the problem not in a short term only. The regulations must be one of the primary audit subjects to ensure that it will overcome, or at least minimize the problems in the future.

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