The Application of Economic Instruments to Solid Waste Management in Pacific Island Countries and Territories

SECRETARIAT OF THE PACIFIC
REGIONAL ENVIRONMENT
PROGRAMME

January 2009

SPREP Library/IRC Cataloguing-in-Publication Data

The application of economic instruments to solid waste management in Pacific island countries and territories / compiled by Esther Richards - Apia, Samoa : SPREP, 2009.

ii, 16 p. ; 29 cm

ISBN: 978-982-04-0389-5

1. Waste management – Oceania. 2. Waste control—Oceania. 3. Waste minimization – Oceania. 4. Source reduction (waste management) – Oceania. 4. Refuse and refuse disposal – Oceania. I. Secretariat of the Pacific Regional Environment Programme (SPREP). II. Title.

363.728 5

This report was produced with the assistance of JICA and NZAid.

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INTRODUCTION

What are Economic Instruments?

In the solid waste management context, economic instruments (EI) refer to a set of tools that makes use of monetary incentives and deterrents in addition to market measures in order to influence waste management behaviour. In short, they provide a country with the means to control the generation and disposal of solid wastes. They can also be voluntary and based on Memoranda of Understanding (MOUs), or can be introduced through regulations.

EI can be broadly classed into three categories according to the purpose: (i) revenue-raising instruments – these instruments raise capital to cover operational costs and fund waste management programmes; (ii) revenue-providing instruments – these provide incentives to encourage desirable and responsible behaviour; and (iii) non-revenue instruments – these combine a fee, with a subsidy, which negates the fee when the desired disposal behaviour occurs.

Why are they important?

Tackling the problem of solid waste management continues to be a challenge for developing countries on many fronts, including technical, social, institutional, and financial. Despite its impact on other sectors such as tourism and health, the waste management sector is often not afforded the level of importance it deserves. This is reflected in a low position of waste management issues in national priorities, and consequently low budget allocations (the World Bank estimates that developing countries should spend at least 1.5 percent of per capita GNP on waste management [World Bank, 1999]).

As recent studies [SPREP, 2006a, SPREP 2006b] have shown, there is an economic cost to health, fisheries, and tourism that can accrue from the litter and leachate which results from poor waste management. These wider economic costs exceed the cost of dealing with the waste management problem in the first place and drive home the old adage that "an ounce of prevention is worth a pound of cure".

Sustainable financing of the waste sector is imperative; it reduces our reliance on external aid, and is a key ingredient to ensuring that waste management programmes can be initiated and sustained both now and in the future. EI is the principle means for achieving sustainable financing.

This guide consolidates information on the application of several EI to the solid waste sector. It is primarily intended as a guide for municipal solid waste and designated special wastes such as used oil and lead-acid batteries. However, the principles explained herein can be applied to other waste streams within Pacific Islands and Territories. Where possible, specific examples from the Pacific region have been used to illustrate the application of EI. Some examples can be found in the Caribbean islands, and have been cited where Pacific region examples could not be found, simply because of the many similarities (resource constraints, environment, culture, etc) between islands in the Caribbean and in the Pacific.

APPLICABLE ECONOMIC INSTRUMENTS

1. Waste Generation Fee (User Fee)

How does it work?

In many countries a fixed fee is typically applied to users of the waste management system. This fee is usually unrelated to the volume, weight or type of waste being disposed. In such a case the purpose of the EI is primarily for the recovery of collection and disposal costs. It does not necessarily encourage the reduction of waste at source.

1. For domestic customers, this fee can be applied to an existing utility bill (such as water or electricity) as a flat monthly charge or as a percentage of the actual bill. Piggy-backing on an existing billing system reduces the overhead costs and logistics of introducing a new billing system.

2. So how does one decide which utility bill may be suitable for adding a waste management user fee?

    a) Consider the coverage. Clearly a water company having a customer base of 10,000 would provide more opportunities for cost recovery than an electricity company with a customer base of only 8,000.

    b) Public goodwill has a large part to play. The public is more likely to accept a perceived increase in a utility bill if the service previously provided by that utility company has been good.

    c) Acceptance by the utility company. Due to the rapidly rising costs of electricity, electricity companies may be more resistant to adding additional fees to the bill as this may be perceived by the public as yet another increase (even though the fee is for a different service).

3. For commercial customers, the user fee can be determined in any number of ways, e.g.:

    a) based on floor area of the place of business

    b) as a percentage of the annual property tax

    c) based on the number of employees

    d) as a percentage of the electricity or water bill, pro-rated according to usage (the premise being that those consuming higher amounts of water or electricity are most likely generating more wastes).

4. Usually, it is neither possible nor practical to withhold the service from those who do not pay (i.e., those without electric or water meters), thus making it difficult to recover the total cost. This is due mainly to the communal collection points used in most small island developing countries, which make it impossible to differentiate one person's waste from another.

Case Studies

TONGA

Several options exist for the collection of user fees. In Tonga, for example, a system is used where Women's Community Groups that already exist in local communities are used to collect the waste collection fees in each village. This is a very interesting development, as it allows each community to devise their own particular solutions. A flat fee is changed per household by the Waste Management Authority, and in a village of say 300 households, with the flat fee at $10/month, the women's group has to provide $3,000/ month. They get a 10% commission, paid back by the Authority. However, the group can consult with the community to develop mechanisms to provide for any differences in household waste generation rates and income. More information can be found in *Rubbish is a Resource! – A Waste Resource Kit for the Pacific Islands*, available from www.sprep.org.

CHILE

Other work in Chile has found that waste generation rates correlate with electricity consumption patterns. The interesting point here is that electricity systems will already have a payment system set up, so that in places where a waste payment system is being put in place, this method of attaching waste collection payments to electricity bills possibly has great merit. Households and businesses that use a lot of electricity usually are larger consumers and will produce more waste. They may have larger numbers of people living or working in a house or place of business, or they may be wealthier and so consume more. Again, the crucial issue is to find a fair and practical way to collect money that allows for different rates of waste generation, but also allows for money to be collected to pay for a good waste collection system. More information can be found in *Rubbish is a Resource! – A Waste Resource Kit for the Pacific Islands* available from www.sprep.org.

CARIBBEAN

Several islands in the Caribbean recover a portion of their waste management costs through the application of a fee or surcharge on utility bills. The waste authorities in Grenada and St. Kitts and Nevis both apply a surcharge to the electricity bill while a fee is applied to the domestic water bill in St. Vincent and the Grenadines. In Grenada, the levy is applied to those consuming greater than 100 kilowatt-hours (kWh) of electricity in two bands (100 – 150 kWh; and greater than 150 kWh). The 100 kWh limit reduces the possible financial strains on the poorest families, with the Government providing a subvention to the waste management authority to cover these families. In these islands, the user fee accounts for between 16 – 21% of total operating costs.

2. Waste Disposal Fee (tipping fee)

How does it work?

This fee is applied at the point of entry at the landfill or final disposal point and is applied to all waste arriving at the facility. The fee is usually quantity-based; it can also be quality-based such that household waste is subjected to a different fee compared to commercial and industrial waste.

1. The waste disposal fee is based on the amount of waste, which can be quantified on a weight or volume basis. Using a weight-based charge requires a weigh-bridge or scale to be present at the facility. Since users would naturally wish to reduce the charge they pay for each trip to the landfill, the incidence of illegal dumping may increase as some people try to subvert the system.

2. Using a volume-based charge requires the operator at the landfill or disposal facility to be trained in estimating volumes. It is an easier alternative than a weight-based charge and does not require any equipment. Furthermore, the volume information recorded can prove to be more useful in determining available landfill volume.

3. Quality-based fees can be implemented to differentiate between household or domestic waste, and commercial and industrial (CI) waste. Typically a higher charge would be implemented for CI waste.

4. Quality-based fees can also apply to specific waste streams. For example a higher charge can be applied for mixed waste versus segregated wastes, or for problematic bulky wastes such as refrigerators and other white goods.

5. For a pre-determined period before the introduction of a waste disposal fee, it may be useful to provide regular users of the disposal facility with a record detailing the quantity of waste that they throw away on a monthly basis, and the potential cost to them. This information could be tempered with practical advice on reducing waste quantities and referrals to any existing recycling facilities. The aim is to gradually introduce the concept of paying for waste disposal and get users thinking about waste reduction.

6. A phased approach to implementing waste disposal fees can be adopted, whereby the full cost of the disposal fee is implemented over a defined period (e.g., 2 years). This gradual approach would reduce the financial 'shock' to the users.

7. The level of the fee should be sufficient to recover operating costs for the disposal facility; however, in cases where illegal dumping is prevalent, and where monitoring and enforcement capacity are lacking, a lower fee might be advisable to discourage additional illegal dumping.

8. There may be overall increase in illegal dumping, as some people would be unwilling to pay any fees. Continuous public education, functioning waste management laws and regulations, and enforcement capacity to minimize illegal dumping activities would therefore be necessary.

Case Study

It is difficult to find examples of tipping fees being implemented in developing countries, perhaps because of the fear that to do so would increase illegal dumping activities. In developed countries that have implemented tipping fees (e.g. USA, Canada, UK), there exists established legislation with heavy penalties for illegal dumping. This, coupled with functional monitoring and enforcement divisions, discourages illegal dumping. The lesson here is that in addition to public education, the regulatory environment must be strengthened in PICTs, and the necessary institutional capacity for enforcement must be developed for waste disposal fees to function as intended.

3. Environmental Levy (product)

How does it work?

This levy can be applied to products which become difficult or bulky waste items at the end of their useful lives, e.g. vehicles, refrigerators, stoves, lead-acid batteries, etc. It can also be used for wastes such as non-returnable bottles (e.g. wine and condiment bottles), and non-recyclable plastics (e.g., PVC). This levy can be applied at the point of importation.

1. The levy is usually paid on importation and may be passed on from the importer to the final consumer. Ideally, the levy should be set at a level to recover the end-of-life management cost of the item under consideration.

2. In some cases, a differential levy may be considered, especially where the desire is to encourage certain behaviour. For example a very high levy can be placed on non-biodegradable plastic bags to discourage their use, whereas a less prohibitive levy is placed on paper bags, biodegradable plastic bags, and reusable canvas bags to encourage the use of these more environmentally sound options. As another example, consider the importation of used vehicles where the levy can increase in relation to the age of the vehicle as a means of discouraging the importation of older (shorter-life) vehicles.

3. As an alternative to paying a lump sum levy at the point of importation, it may be possible to apply an annual fee to cover the end-of-life management costs. This is mentioned specifically in relation to automobiles, where it may be possible to spread the cost of disposal over a determined period. This cost can be applied as a surcharge to the annual vehicle registration fees. This approach has the added benefit of capturing disposal costs for existing vehicles that have already been imported and are currently on the roads.

Case study CARIBBEAN

Once again, we turn to our Caribbean colleagues in the Atlantic Ocean. On the island of Grenada, an environmental levy of 1% of the CIF value of white goods is payable by the importer. This levy generates 39% of the authority's revenues and has been used successfully to manage the island's wastes. As a result of this, other islands such as Antigua and Barbuda are proposing to do the same.

4. Environmental Levy (visitors)

How does it work?

Many Pacific islands and territories often market themselves as idyllic holiday destinations. If successful this results in a large seasonal influx of tourists contributing to waste generation on these islands. More often than not, the transient tourist population is not captured in waste audits; however their contribution to the waste problem can be significant.

1. An environmental levy can be applied to every visitor (by air and sea) to account for that person's waste management. Options for applying this levy include as a component of the airport departure tax, as a fee charged to operators of leisure crafts (e.g., yacht charters, fishing charters, etc.), and a fee charged to cruise ships, based on their passenger numbers.

2. As with any proposed levy, it would be more appropriate if proceeds are lodged into a dedicated account rather than in national consolidated accounts.

Case Studies

CARIBBEAN

As part of a major regional solid waste management project in the Caribbean, six countries were able to implement appropriate legislation, develop institutional capacity, acquire waste collection and disposal equipment, construct sanitary landfills, establish public education campaigns, and implement cost recovery measures. One such cost recovery measure implemented in all six countries, was the environmental levy (US$1.50) on visitors to the countries by air and sea. In 2002, this levy was successful at generating between 12-40% of the operating revenue for the countries and it still continues today. Having a cleaner environment and properly managed waste system also attracts more visitors to the countries, which in turn increases the revenue generated.

COOK ISLANDS

An example of the application of an environmental levy as described in this document comes from the Cook Islands. In 1994, the Cook Islands passed an amendment to its departure tax law, requiring the payment of an additional NZ$5 on the departure tax for everyone over 12 years of age. From 1998, this money was paid directly into an Environment Protection Fund (EPF), which has successfully channelled significant funding over the years into conservation and environmental initiatives. As long as there is travel out of the Cook Islands to international destinations, the EPF will be regenerated from the departure tax, thereby ensuring a measure of sustainability for the Fund.

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5. Deposit Refund Programme

How does it work?

A deposit-refund programme is a way of encouraging desirable behaviour such as recycling. Traditionally, deposit-refund programmes are applied to items with recyclable/reusable value such as beverage containers (glass, aluminium cans, or polyethylene terephthalate (PET)). This is because it is often less expensive to reuse and recycle than to re-create. This instrument can also be applied to products having the potential for significantly damaging the environment (e.g. automobile batteries, pesticide containers, and electronic waste [e-waste]). More generally, it can be applied to wastes to encourage source separation and reduce collection costs.

1. Deposit-refund programmes consist of 2 components: a deposit is paid on a potentially polluting by the purchaser (retailer, wholesaler, or importer); then all or a portion of the deposit is returned when the product is returned to some designated facility.

2. Attaching a value to an item that would otherwise be discarded converts it from a waste to a commodity and creates market forces that encourage recycling behaviour. It also encourages source separation.

3. A portion of the deposit paid under this programme can be withheld as a fee for the management of the material (whether by recycling, export, or landfilling). The challenge is to make the refundable portion of the deposit attractive enough to encourage its return by the user and/or collection by entrepreneurial-minded individuals.

4. Implementation of a deposit-refund program provides opportunities and incentives for private-sector involvement, e.g., professional collectors who collect on an arranged basis from restaurants, bars, etc., and socially marginalised collectors who forage for discarded items.

5. To manage the system effectively, appropriate measures would have to be implemented to avoid fraud by ensuring that items received for disposal or recycling do not find their way back on the market.

Case Studies KIRIBATI

Kiribati has introduced a deposit/refund system on aluminium cans, plastic bottles, and car batteries. A small deposit is paid on purchase and 80% of this is re-paid when the materials are returned to privately operated depots. The Government acts as the Administrator of the fund holding all the deposits collected. For the aluminium cans, the single recycling operator operates the system, and issues a refund of 4 cents for each can collected. Meanwhile, the operator also makes a claim from the fund for the deposits on each can collected (5 cents for each can). The remaining 1 cent comprises the handling fee. The recycling operator pays all costs associated with the processing and handling and shipping, but recovers the value of the materials sold. The government provides the operator with the money to pay the refund, and the balance is used for any subsidies needed to pay for exporting the items for overseas recycling. This programme means Kiribati has less waste going into its expensive landfill, less litter, a source of income for children and the unemployed, a significant small business, and less dumping of toxic waste from

car batteries: all this at zero cost to the government. More details can be found in: *Rubbish is a Resource! A Waste Resource Kit for the Pacific Islands*, in the "Waste Strategies, Container Deposit System" section.

FEDERATED STATES OF MICRONESIA

Other Pacific Island countries are also implementing similar mechanisms. In Yap and Kosrae states of the Federated States of Micronesia, regulations have been passed to enable the collection of a recycling deposit fee of 6 cents for every aluminium, glass, and PET beverage containers and PET cooking oil container. A refund of 5 cents is given for every container brought to the designated collection centre (minimum 5 containers). The regulations also require that the funds are deposited into a separate account which is expressly for the use of the state's recycling program.

6. Tax Incentives and Disincentives

How does it work?

Tax incentives refer to a basket of measures that can be implemented to motivate investment and improvements in the waste management industry. Disincentive measures attempt to drive investment away from polluting technologies and processes towards more environmentally sound options. They help to create the right market environment which encourages private sector participation.

1. Incentives are provided to the private sector for various aspects of solid waste management. Examples include:

    a) granting duty-free (or reduced) concessions on the importation of specialized waste management equipment (e.g. wood chippers, tyre balers, compactors, etc.;

    b) income tax cut for a specified period during the start-up of new waste recycling ventures;

    c) subsidies or concessions for installing (or upgrading to) low waste-producing processes or processes that reuse wastes;

    d) preferential interest rates on loans which finance investments in waste recycling;

    e) preferential allocation of grants for community improvement to communities that voluntarily implement recycling or other waste management initiatives.

2. Disincentives are less favourable measures (higher tax rate, customs duty, and interest rates, etc.) and should be implemented when there is a known alternative which is more waste-friendly. For example: a tax can be placed on printers of newspapers and other publications who use virgin paper rather than recycled paper – exemptions or reductions can be provided for those who demonstrate active involvement in the recovery of used newspapers for recycling; a tax can be imposed on importers of potting soil and similar soil enhancement products, to promote the use of compost produced from local organic wastes.

Case Studies

INDIA

The Indian state of Kerala, has recently introduced a series of economic instruments aimed at reducing the waste problem. The have reduced the tax on waste management equipment to 4% to encourage more activity in that sector. They have also exempted paper bags from tax and increase the tax on plastic carry bags to 12.5% to discourage their use. This is in addition to a previous ban on thin plastic bags (i.e., less than 0.03 millimetres thick).

PACIFIC ISLANDS

The FSM government provides a tax concession to companies on any income related to exporting recyclable materials.

In Fiji Government's 2008 budget, the fiscal duty rate on paper bags, sacs, and biodegradable bags was reduced from 27% to 15%. The budget also called for a ban on the import of plastic bags and on motor vehicles more than 4 years old.

7. Waste Management Trust Fund

How does it work?

A Waste Management Trust Fund is a tool that can be used to provide long term support for waste management activities. It is a legal arrangement in which one party (called the *trustor*) donates money to another party (the *trustee*), who manages the money on behalf of a third party (the *beneficiary*). The beneficiary is allowed to use the money exclusively for a specified purpose agreed beforehand. Trustors, trustees, and beneficiaries can be individuals, groups of individuals, institutions, or governments. Public trust funds, which are established for public purposes, are usually established through some form of enacting legislation that forms the trust, sets out its legal terms and assigns the rights and responsibilities to different parties.

1. Trust funds can be of three types: true, sinking, and revolving trust funds. A true trust fund has the following characteristics:

    a. the initial funds (principal capital) and subsequent funds put into the fund are preserved and not consumed unless the trust fund is dissolved;

    b. all or part of the initial moneys placed in the fund are invested in order to earn investment income;

    c. the real value of the principal (after adjustment for inflation), is always maintained; and

    d. the income arising from investment of all or part of the principal (less any management fees for the fund) can be used for waste management activities, or can be re-invested.

2. With a sinking trust fund, the principal capital and income from any investments are consumed over a fixed period. At the end of this period, the fund is dissolved.

3. Revolving trust funds are those in which both the investment income, and the principal are consumed, but the fund is regularly replenished (usually annually) from a source (e.g., taxes, guarantor, donor, or other source). Most revolving funds have a limited life and are usually dissolved when predetermined goals or conditions are met.

4. In order for a waste management trust fund to work successfully, sufficient money must be invested in the fund to generated the income necessary to fund waste management programmes on a long-term basis. How much money must be invested? The answer to this question depends on the scope of use for the trust fund (e.g., funding for solid waste educational activities; research and demonstration projects; landfill site development, recycling market development activities, etc.), and the rate of return on the investment that can realistically be achieved.

5. The initial capital for establishing a trust fund, and subsequent credits to the trust fund can be obtained:

    a. from funds arising from any environmental and waste management levies, user fees, fines, etc.;

b. from income from investment and reinvestment of the funds held in the trust fund;

c. from grants, loans, or both arising from bilateral, multilateral and/or national sources;

6. Management of the trust fund is critical to ensuring that the maximum return on investment is obtained. Management functions can be contracted to service providers, with due diligence to ensure that:

   a. knowledgeable and reputable service providers are engaged. Performance data of service providers for at least 10 years should be demanded and scrutinized closely.

   b. a sound investment strategy and official investment policy is undertaken. An official investment policy statement should clarify the overall objectives, asset allocation, risk tolerance, diversification, rebalancing, liquidity, and performance measurement.

   c. consultants and advisors are entirely independent form trustees as well as custodians and money managers.

   d. management fees, investment expenses and other costs reported by service providers are monitored by trustees and other administrators.

7. More information can be found at: http://www.adb.org/Documents/Reports/Trust-Funds-Pacific/trust-funds.pdf

Case Studies

Several examples on the establishment and operation of trust funds exist in the Pacific region. The two most successful examples, being:

KIRIBATI

the Kiribati Revenue Equalization Reserve, which was established to provide general-purpose revenue for use in the annual budget. The fund grew from its original A$556,000 in 1956 to A$576 million in 2002, injecting A$114 million into the Kiribati budget;

TUVALU

the Tuvalu Trust Fund (TTF), designed to contribute to financial stability of the country by providing revenue for recurrent expenses. From an initial principal capital of A$27.1 million in 1987, this fund grew to A$81.3 million by early 2004. To complement the TTF, the Tuvalu government established a second revolving fund which received trust fund earnings, and other sporadic income. This revolving fund smoothed out the fluctuations in income generated from the TTF, and allowed the government to make withdrawals during the years when the TTF generated zero or negative income.

INSTITUTIONAL ARRANGEMENTS

Often times, the responsibility for providing waste management services falls within the domain of the Ministry of Environment or the Public Works Department. In such situations, the officer holding responsibility for waste also has to deal with other environmental but non-waste related issues, with the result that many crucial waste management projects and ideas never get off the ground. Furthermore, the effectiveness of training courses and other capacity building activities is usually diminished as the trained officer does not have the time (due to other work commitments) to practice, and build on what he/she is taught.

Furthermore, the state of waste management in many pacific islands is such that there are still serious negative impacts on the environment, health, and other development areas. Given the urgency of the issue, priority should be given to establishing a dedicated waste management authority. Such an authority should preferably be established as a government-owned corporation, distinct from any government ministry in order to achieve separation of regulatory and operational functions. It is further suggested that a division of this authority (e.g., "Resource Recovery Division") be established to focus on cost recovery through EIs and waste minimization; in the absence of a corporate body, this division could be established within the Ministry). Such a division could be charged with responsibility for:

- planning, progressing, and implementing the economic instruments discussed in this document.
- working with the Attorney General, central finance agency, and other government agencies to implement appropriate EI.
- designing and promoting industry stewardship mechanisms (e.g. Extended Producer, or Importer Responsibility) for waste materials.
- monitoring recycling schemes to ensure that waste recycling and reduction targets (as specified in the National Waste Management Strategy) are met.
- monitoring other implemented cost recovery mechanisms to ensure they function as intended and that funds are used as intended.
- negotiating terms of contracts, and managing contracts with private sector (e.g., contracts for operating deposit/refund depots)
- researching and developing private public partnerships for waste recycling and other waste management initiatives that contribute to waste reduction.

It would be advantageous to staff such a division with persons knowledgeable about government systems, and with experience in policy formulation, negotiations, and business development.

A GENERAL IMPLEMENTATION GUIDE FOR ECONOMIC INSTRUMENTS

Checklist

This general guide can be used to help implement the EI measures discussed in this document.

☐ Select applicable products, processes, or services to which the economic instrument will be applied. For example:

- for the deposit/refund system, aluminium cans, glass and plastic bottles are relatively simple and well understood. Once the system is established it can be expanded to cover difficult wastes, such as car bodies or lead acid batteries.
- Small- and medium-sized recycling companies or companies using recycled material (paper, glass, plastics) as their feedstock can be considered for tax incentives.

☐ Determine the aim and set level of levy to achieve the aim. The aim may be to discourage consumption of the selected products or to recover the end-of-life management costs. For example:

- with the deposit/refund system: 5 cents deposit on each aluminium can = 4 cents for the refund and 1 cent to administer and subsidise the system. Pick simple whole numbers as the refunds will need to be paid in cash (e.g. in Kiribati, a 4 cent refund becomes a refund of 20 cents for 5 cans).
- in the case of an environmental levy, the levy on non-degradable plastic bags may be set at a very high level; at the same time, the levy on eco-friendly alternatives (biodegradable, canvas, and paper bags) is reduced or removed altogether to encourage their use.

☐ Determine where the levy will be collected (at retail or wholesale point? at import?). Based on experience, the best place would be on importation, as it is very difficult to implement levy collection at point of sale.

☐ Determine who will collect it (the retailer or wholesaler? importer? waste authority? private contractors?) While the traditional approach is to use retailers/wholesalers, secure and dedicated depots may make future expansion easier.

☐ Determine measures to ensure the funds are spent as intended (e.g., a levy on plastic bags could be used to fund litter reduction, plastic recycling, or provision of eco-friendly alternative, or all three. How can you ensure that this happens?

☐ Determine the criteria for operating the system, and who will operate it.

- Government?
- Private business? How will you choose the operator? (i.e., tender criteria, existing experience, contract duration, etc. Someone with import/export business experience may be advantageous).

- [ ] Document all aspects of the preferred strategy (implications for government, costs and benefits (social, financial, health, tourism, etc), impact on the public, waste outcomes, etc). This will also be very useful guidance in drafting implementing legislation.

- [ ] Hold consultations with:

    - stakeholders (i.e., retailers, large-scale consumers, importers)

    - the country's central financial agency to discuss the proposed arrangements, costs of administering the scheme, and how to ensure funds are safe-guarded for their intended use. Levies or fees collected through government departments such as Customs typically end up in the national accounts and it is notoriously difficult to extract funds for their intended purpose. If possible, a special waste management fund should be established into which all levies and fees are paid, to be readily available for administering the programme.

- [ ] Seek legal advice on adequacy of existing laws to implement the preferred strategy.

- [ ] Brief Minister and/or Cabinet on proposed implementation, and obtain approval to proceed.

- [ ] Draft new legislation or regulations if current ones are inadequate. Future-proof such legislation by specifying a wide scope, so that products, processes, or services can be specified from time to time under more detailed subsidiary regulations.

- [ ] Consult with stakeholders on the drafted legislation.

- [ ] Determine whether a delay in commencement date is required to allow existing stock to clear or contracts to be completed.

- [ ] Work through specific details with local operators. For example:

    - with a deposit/refund system: location of depots, refund re-payments procedures, export issues, fraud-prevention measures (to ensure that waste received for recycling does not re-enter the market), and cross-subsidies from viable material like aluminium cans to plastics which do not recover their costs).

    - with a tax incentive programme: the duration of the tax-breaks or preferential treatment; monitoring procedures to prevent fraud and ensure that qualifying equipment, processes, or services are being used as intended.

- [ ] Develop a communications strategy to inform the public and private sector.

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