



GUIDELINES

FOR SCRAP MANAGEMENT & RECYCLING

DRAFT

Preparation process

Meeting & Discussion with Stakeholders
dated 12.08.2022, for the preparation of
Guidelines for Scrap Management and Recycling

Meeting with representatives of Scrap Dealers Association of the State
dated 22.08.2022, for the preparation of
Guidelines for Scrap Management and Recycling

Presentation and discussion for refinement of
Guidelines for Scrap Management and Recycling
with Stakeholder on 20.09.2022.

SEPTEMBER 20, 2022

SUCHITWA MISSION

GUIDELINE FOR SCRAP MANAGEMENT & RECYCLING

1. BACKGROUND

The background proposes that, the development of the recycling industry for industrial and post-consumer waste, would be an ideal entry point for the State Government, to consolidate and scale up its circular economy activities. To this end, it outlines a broad framework to guide, regulate and promote the activities in the recycling sector, in order to achieve this objective.

The evident scenario in the State features rampant depletion of finite resources, rising populations, rapid urban expansion, growing middle-class consumption levels, rising pollution-levels and anthropogenic climate change. All of these factors are placing our economic and ecological systems under immense burden. Paradigm shift from linear to a more circular and regenerative system, is an opportunity to embrace more innovative processes in order to strive for greater resource efficiency and cleaner production which may fetch potential gains in economic, environmental and cultural terms.

Recycling can act as a fundamental lynchpin of the circular economy and in that, it plays a transformative role in turning post-consumer materials into valuable substances or products, in feeding used materials back into the value chain and correspondingly in achieving the “waste-to-resource” paradigm. It thus presents numerous economic, environmental and social opportunities.

Solid waste from industrial, municipal, agricultural, manufacturing, construction, demolition and other processes typically contains base materials in the form of scrap, like ferrous and non-ferrous metals, plastics, glass etc., that can be potentially recycled for various gainful applications. Scrap recycling hires over many million employees and has been creating “green jobs” for decades. It helps the environment by reducing the use of energy, conserving raw materials, preventing useful materials from being wasted and reducing water and air pollution (from landfills and incineration) and lessening our need for our conventional disposal of waste, which will also reduce the amount of greenhouse gas emissions.

2. FOREWORD

The focus here is to organize the recycling sector, establish safe practices and to promote a circular economy, with a scientific and progressive approach. It calls for an effective framework to facilitate and promote establishments for scrap processing in the State, based on “6Rs principles (of Refuse, Reduce, Repair, Reuse, Recycle, Redesign) through scientific handling, processing and disposal of all types of recyclable scraps, through authorized centers/facility.

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4. INTRODUCTION.

The Kerala State Government's endeavour is to develop a well-ordered scrap recycling sector by introducing state of the art as well as environment friendly technologies and by adopting innovative practices. In order to promote the recycling efforts of the State, the Government envisages an appropriate and efficient guideline to facilitate and promote establishments of "scrap-centers" in the State, which will undertake the scientific processing/recycling of scrap. The guideline is designed to instigate the right direction for overall activities - such as collection, segregation, dismantling, processing, transporting, other logistics as well as the scientific disposal of inert; in an organized, economical, safe and environment-friendly manner.

4.1 Recycling sector in Kerala.

In the State, the Recycling sector activities, i.e., Scrap collection, Segregation and Recycling processes are not organized effectively and are presently executed in an unbecoming manner. Being a highly informal sector, there exists only the possibility of vague estimation, in regard to the level of engagement in related activities, quantification of out-put, as well as the productivity of the sector. However, it is estimated that most of the recyclable waste materials are handled by the 'informal- scrap sector'. This significant contribution of the informal-sector has to be recognized and efforts should be taken in order to transform this sector from 'informal' to 'formal'. The recycling sector is structured in the form of a pyramid, with the scrap collectors at the base and the Re-processors perched at the apex. At the bottom of the pyramid, are the Waste-pickers that engage in the "free" collection of scrap from municipal garbage bins and dumps. Marginally above them are the Line-workers and Itinerant Buyers who purchase small quantities of scrap from households and other sources. Between the scrap collectors and the Re-processors are various levels of traders including retailers, stockists and wholesalers, some of them are registered under 'Kerala Shops and Establishments Act, 1979'. The very best among these traders are the Registered Dealers, who to a certain level, exercises a market influencing role. The Re-processors are rare in the state and most of the recyclable scrap materials are shifted to other States. Trade in scrap is relatively invisible and unrecognised. There are no geographical areas designated as scrap

markets. The scrap trade is generally believed to have a very low status within the hierarchy of commodity trading, regardless of the profit potential. The sector does not enjoy a respectable status. One of the reasons is the common belief that scrap is waste, generated in waste and hence 'dirty'.

The informal waste collectors are mostly illiterate people, landless migrants from other states, part-timers from lower economic strata of the State, Poor and aged who are not able to perform demanding physical jobs etc. The sector is mostly informal (i.e., not officially approved, recognised and acknowledged) besides the fact that they significantly contribute in multi-fold ways with the waste -disposal activities of the State by collecting, sorting, processing, storing and trading waste materials in the recycling value chain.

Though the recycling rate of the State is unclear, evidently it is very low, and this can be attributed to deficiency of formal involvement. This is due to a spectrum of negatively influencing factors such as, inadequate social awareness, scarce guidance as well as encouragement from authorities, inefficient collection, poor segregation at source, lack of suitable infrastructure and technology, social hindrances, lack of tacit know-how about sustainable scrap recycling businesses etc.

4.2. Need of Effective Recycling-sector.

The overall importance of Recycling is based on - the cost reduction goals of industry, for the efficient management of limited resources, and for reduced landfill utilization. Recycling reduces pollution, saves resources, reduces waste going to landfills and prevents the destruction of habitats resultant to mining and other related activities in establishing primary source utilization. Thus, the sector aids not only safeguarding the environment by reducing the production of green-house gases, but conserving the environment by reducing consumption of resources. The sector by providing livelihood for many, brings about significant contribution to the social and economic progress of the State. The circular-economy model latent in the sector, has the potential to bring multiple benefits to the State.

The present need is to develop a well-ordered, environment friendly and economically viable scrap recycling sector. In order to facilitate that, a well-defined 'Guideline', structured

‘Standard Operating Procedures’ (SOP), with focused/motivated and target-oriented efforts are required. However, to engross the progressive steps introduced by the governing bodies, a supportive framework of an organized set-up is essential. Hence, it is a prime requirement to bring the Line-workers and Scrap dealers in our State into an organized set-up, providing them with the deserving recognition and appreciation for their valued service. It is in this context that the Government of Kerala initiated a ground-breaking phase to bring all those contributors of the sector into a structured frame-work.

4.3. The Audience.

Anyone who is engaged in scrap recycling activities, should be well acquainted with the content and purpose of this guideline, as this guideline is structured for identifying hazardous activities and managing with safe practices in activities of the scrap recycling sector; and this may include:

- Authorised LSGIs,
- Enforcing agencies of the State,
- Various implementing, monitoring and governing agencies of the State,
- Managing entity of LSGD owned recycling-oriented facilities,
- Other Stake-holding organizations,
- Private sector facilities,
- Owners, Agents, Contractors,
- Individuals engaged in recycling activities in varied sorts and capacities,
- Independent line-workers,
- Logistic-providers,
- Persons in various regulatory capacity,
- Support groups & Welfare groups,
- Common Public,
- Various associated committees and agencies.

4.4. Scope and Limitation.

In order to streamline the recycling sector of the State, the authority envisages an appropriate and efficient guideline to facilitate the overall activities related to scrap recycling in the State. The guideline is designed to impart right direction for the general activities of the sector - from collection to sorting/ dismantling/ processing/ transporting and recycling; in an organized, economical, safe and environment-friendly manner. However, this document does not provide an in-depth evaluation of every recycled material or every associated process that are involved; rather it provides a necessary overview to regulate all related activities in a scientific and progressive manner. Already there exist, many literatures and guide-lines that are associated with various specific recycling activities and this 'guideline' includes references to these documents through-out the text, along with short summaries where appropriate.

5. DEFINITIONS.

5.1 **‘Advisory Authority’**, the State Suchitwa Mission or its appointed agency or other designated statutory bodies to be the competent authority to monitor and issue necessary advisory instructions as may be deemed fit to ensure activities befitting relevant Policies/Acts in the State.

5.2 **‘Authorisation’** - Authorisation means granting permission for activities pertaining to collection, reception, segregation, dismantling, treatment, transport, storage, reuse, recycling recovery and pre/re-processing in accordance with different laws enumerated and issued by different competent authorities as stipulated under the respective Act.

5.3 **‘Authorising Authority’** is the appointed nodal agency for designating statutory body/agencies as the competent authority to issue necessary permissions, clearances and instructions as may be deemed fit to ensure activities befitting relevant Policies/Acts. In the context of this guideline ‘Suchitwa Mission’ to be recognized as the Authorizing agency and hereafter will be referred as ‘SM’, in this document.

5.4 **‘Authority’** is the regulatory capacity vested with a government appointed body/agency or an existing statutory body of the State, to govern/regulate/manage or restrict activities based on Policies/Acts, that are relevant to the sector.

5.5 **‘Authorized Scrap Collection Centres’ (ASCCs)** – are Private sector collection centers operated by individuals/ local scrap dealers/ distributors facilitating the collection of scrap items from Line-workers, product-manufacturers and from other source of scrap generation directly or through intermediaries like Line-workers/agencies etc., and are duly authorized for the activity by Authorizing Authority. The facility may be equipped with necessary infrastructure, machinery, tools and man power to sort, clean and store recyclable scrap materials.

5.6 **‘Authorized Scrap Processing Centres’ (ASPCs)** are entities that are authorized by Authorizing Authority to perform the sorting, depollution and dismantling activities of the scrap items for value addition of products for the purpose of trading or for recycling production. This includes any process for making, altering, ornamenting, finishing, packing, oiling, washing, cleaning, breaking up or demolishing or otherwise treating or adapting an article or substance with a view to its use, sale, transport, delivery or disposal.

5.7 **‘Collection Activity’** - Collection activity is defined as the process of collecting the end-of-life products, discarded goods of Plastic/Paper/Metal, White goods, and other recyclable items from

the source, Line-workers/ Collection-centers/ Itinerant buyers/ Scrap Traders etc., performing initial value addition by performing necessary sorting / segregation for the purpose of giving out to the Scrap Re-processor.

5.8 **‘Dismantling Activity’** - Dismantling activity include process of inspection of product for any potential hazards like radiation, spillage, fire, air or water pollution etc., engaging adequate precautionary methods to eliminate such hazardous outcome, performing further activity of stripping-down, disbanding, down-sizing, segregating etc., in order to ready it for effective recovery of reusable, recyclable materials, for further scrap processing activity by the Scrap Re-processor.

5.9 **‘Informal Waste Collectors’** – According to the Solid Waste Management Rules (2016), ‘informal waste collectors’ includes individuals, associations or waste traders who are involved in sorting, sale/ purchase of recyclable materials.

5.10 **‘Itinerant Buyers’**, Itinerant buyers, are scrap collectors who collect small quantities of recyclable scrap from households and shops/ offices/ hospitals/ hotels and other commercial establishments in exchange for cash or kind.

5.11 **‘Line-Worker’**, A person who is attached to a particular collection center/processing center and formally engaged in the collection of reusable and recyclable scrap items for monetary benefit, with or without initial processing for value addition, handing over the same to the Itinerant Buyers, Scrap Traders, Collection centers or Processors. Those who collect recyclable scrap from wastes and other sources, are the base level workers and this category, will be referred with the term ‘line-workers’ and this term will substitute all other terms referring to people engaged in this particular activity.

5.12 **‘Manufacturer’**, A manufacturer is a person or company that produces finished goods from raw materials by using various tools, equipment, and processes, and then sells the goods to consumers, wholesalers, distributors, retailers, or to other manufacturers for the production of more complex goods. In this particular context, a manufacturer is the final entity who does the effective recycling of scrap material as their manufacturing process or uses recycled material as their resource for making new products.

5.13 **‘Material Recovery Facility’ (MRF)**, is an associated facility attached to a governing local body or agency, where recyclable scrap is segregated from waste materials, temporarily stored or

subjected to minimal processing for proper material recovery. The process may include segregation, sorting and recovery of various components and recyclable waste collected by any work force engaged for the purpose before the waste is delivered or taken up for its processing or disposal. The facility is provided with necessary infrastructure, machinery, tools and human power to sort, clean and store non-biodegradable discards from primarily sorted municipal waste and made available for production or consumption purposes. MRF is the common term to be used hereafter in this document to refer, the existing facilities that are classified either as Material Collection facility (MCF) and Resource Recovery Facility (RRF).

5.14 **‘Recycling activity’**, means the process of transforming segregated material into raw material or new product.

5.15 **‘Retail Scrap Trader’**, is one who purchases recyclable scrap from scrap collectors and/or other scrap traders and/or industry and commercial establishments for sale in the market.

5.16 **‘Scrap’** - is the discarded or rejected material suitable for reprocessing. In context of this guideline, the category ‘scrap’ includes all those recyclable items that are not classified under ‘Hazardous waste’ and includes recyclable material from scrap categories of Plastic/ Paper/ Rubber/ Wood/ PVC/ Metal/ Fabric or other reclaimable materials, etc.

a) **‘New’ & ‘Old-scrap’** New or Industrial scrap - represents scrap generated in the downstream processing during manufacturing; whereas Old- scrap, includes end-of-life products that have served their useful life.

b) **‘White-Goods’ & ‘e-Scrap’**. White Good means any large metal consumer appliance (also considered as type 1 category of e-waste) such as a clothes washer, dishwasher, clothes dryer, range, stove, hot water tank and Refrigeration Unit, including those that contain ozone depleting substances. The type 2 category e-waste includes small appliances (vacuum cleaners, irons, blenders, fryers etc.) e-waste is a popular, informal name for electronic products nearing the end of their “useful life.” Computers, televisions, VCRs, stereos, Solar panels, LED bulbs, monitors, telephones, PCs, laptops, mobile phones, copiers, and fax machines are common type 3 category electronic products.

c) **‘Hazardous scrap’** - is discarded material that has substantial or potential threats to public health/ the environment and in the context, it means the hazardous waste as defined in Clause

(17) of Sub-rule (1) of Rule 3 of the Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016.

d) **‘Battery Scrap’** - Lead acid batteries have a shelf-life ranging from 3 to 5 years and after completion of its life; it gets converted into lead acid battery scrap. It is categorized as hazardous scrap and very limited scope for Trans – boundary movement.

5.17 **‘Scrap Processing Activity’**, includes the activities of shredding, shearing, baling, slitting etc. on sorted and segregated materials in order to further refine the recovery process and to bring the scrap material in form, as a resource for secondary production.

5.18 **‘Scrap Re-processor’**, is a person or an establishment who purchases recyclable scrap from wholesale scrap traders for processing of the scrap in such a manner that it physically transforms the scrap into intermediate or final products.

5.19 **‘Waste-Picker’** - Solid Waste Management Rules (2016) define a ‘waste picker’ as a person informally engaged in the collection and recovery of reusable and recyclable solid waste from the source of waste generation to the sale of waste to recyclers directly or through intermediaries.

5.20 **‘Wholesale Scrap Trader’**, is one who purchases recyclable scrap in bulk from retail scrap traders, industry and commercial establishments for sale in the market.

6. GUIDING PRINCIPLE.

- ... Waste will be considered as a resource and ‘Wealth from Waste’ is the initiative.
- ... Inculcating ‘Circular Economy Model’ in the waste recycling sector.
- ... Elevating ‘Environmental Health’, sustaining Ecological Biodiversity and conserving Primary Resources.
- ... The overarching principles that apprise the development and implementation of the Guidelines are: shared responsibility, transparency, engagement, and continuous improvement.
- ... Key pathways for the implementation of the Guidance Principles will be through commitment of facilities in grama panchayats, municipalities and Corporations of the State. Government aims to actively collaborate with all interested organisations on such integration.

7. GOVERNING LEGISLATIONS.

Governing Legislations include various Acts, Policies and other following legislations with its latest subjective amendments, governing rules, official notifications/orders and guidelines, that had been published subsequently by respective authorities/governing institutions.

1. Environment (Protection) Act, 1986, amendment 1991, various rules published, along with the Environment Protection Second Amendment Rules, 2022; issued by MoEF&CC.
2. Water (Prevention and Control of Pollution) Act, 1974, Act No. 6 of 1974’ amended 1988; statutory body - Central/State Pollution Control Board under MoEF&CC.
3. The Air (Prevention and Control of Pollution) Act, 1981, Act no.14 of 1981, amended 1987; statutory body - Central/State Pollution Control Board under MoEF&CC.
4. The National Green Tribunal Act, 2010; vide notification no. S.O. 2569 (E) October 2010; under the Ministry of Law and Justice.
5. The Public Liability Insurance Act, 1991; Published by the Ministry of Law and Justice.
6. The Factory Act 1948 (Act No.63 of 1948) as amended by the Factories (Amendment) Act, 1987 (Act No. 20 of 1987) administered by the Ministry of Labour and Employment.

7. The Kerala Shop and Commercial Establishment Act (Act 34 of 1960) with its Amendment Act of 1979 and along with The Kerala Shop and Commercial Establishment Rules 1961; Acts and Rules of 2013 etc.
8. Hazardous & Other Wastes (Management & Transboundary Movement) Rules, 2016 and amendment Rules 2022; issued by MoEF&CC.
9. Solid Wastes Management Rules, 2016; S.O. 1357(E); issued by MoEF&CC.
10. The Ozone Depleting Substances (Regulation and Control) Rules, 2000, vide S.O. 670(E) 2000; issued by MoEF&CC.
11. The Batteries (Management and Handling) Rules, 2001, S.O. 432(E); Battery Waste Management Rules, 2022; MoEF&CC.
12. The E-waste (Management) Rules 2016, G.S.R. 338(E), G.S.R 1349(E) 2017 and E-Waste (Management) Amendment Rules, G.S.R. 261(E)2018; issued by MoEF&CC.
13. The Bio-medical Waste (Management & Handling) Rules, 2016, notified under G.S.R. 343(E) by MoEF&CC.
14. The Plastic Waste Management (Amendment) Rules, 2018, notified under G.S.R. 320 (E) by MoEF&CC. The Plastic Waste Management Rules, 2021; Guidelines on Extended Producer Responsibility (EPR) as per Amendment notification on 16.02. 2022 by MoEF&CC.
15. The Construction and Demolition Waste Management Rules 2016, notified under G.S.R. 317 (E) on 29th March 2016 by MoEF&CC.
16. Atomic energy (Radiation Protection) Rules 2004, notified under G.S.R 303 by Department of Atomic Energy, Government of India.
17. Any other rules notified by any other Ministry or the State Government from time to time in this regard.
18. Kerala Occupational Safety, Health and Working Conditions Rules 2021, Kerala Gazette No. 3695; 2021.
19. Kerala State Pollution Control Board – Guidelines for consenting Scrap Collection Centers; No. PCB/HO/SEE-3/TECH/130/2021.

8. OBJECTIVE.

The guideline aims to achieve, following objectives –

1. To promote a circular economy in the scrap recycling sector.
2. To promote a formal and well-organized recycling ecosystem management methodology, that enables proper data assimilation and monitoring features.
3. To promote systematic collection of discarded and end-of-life products, that are sources of recyclable material, followed by technically reinforced dismantling and processing of these products in order to minimise the effect of end-of-life products on landfills and environmental pollution.
4. To ensure conservation of primary resources and to effect energy savings.
5. To advance the sector to a responsive ecosystem by involving all partakers.
6. To practically implement the concept of ‘wealth from waste’, through scrap recycling by strategizing for economic progress, livelihood generation and infrastructural development.
7. Improving recovery of Secondary Resources, to produce high quality scrap re-usable as raw material, thus minimizing the dependency on imports.
8. To set up means for treating waste items and residues produced from scrap processing activities in compliance with various Acts, Rules, Guidelines and Orders brought out by competent authorities that are involved in various governing, regulatory roles.
9. To encourage the principle of 6Rs (Reduce, Reuse, Recycle, Recover, Redesign and Remanufacture) through scientific handling, processing and disposal of all types of recyclable scraps through authorized centers/ entities.

9. IMPLEMENTATION OF GUIDELINE.

For the implementation of this framework, as well as to effectively transform this framework to function as a sustainable recycling ecosystem, it requires significant involvement and adequate engagement of multiple stake-holders, such as

- ... Local Self Government Institutions such as Municipal Corporations, Municipalities and Grama Panchayats; hereinafter referred as LSGIs
- ... Kerala State Pollution Control Board hereinafter referred as KSPCB
- ... Suchitwa Mission, under the Local Self Government Department, Kerala; hereinafter referred as SM
- ... Clean Kerala Company Ltd, Government Stake holding entity hereinafter referred as CKCL
- ... Kudumbashree, community organization of Neighbourhood Groups (NHGs) of women in Kerala.
- ... Haritha Kerala Mission - State / District and LSGI level managing bodies
- ... Authorized Scrap Collection Centers, private sector entities engaged in collection of recyclable scrap material, hereinafter referred as ASCCs
- ... Material Collection Facilities (MCF) and Resource Recovery Facilities (RRF), hereinafter jointly referred as Material Recovery Facilities (MRFs)
- ... Authorized Scrap Processing Centers, private sector entities engaged in processing of scrap material, hereinafter referred as ASPCs
- ... Manufacturers - Facilities engaged in the final conversion of recycled material into products for the end-user, hereinafter referred as Manufacturer.
- ... Line-workers engaged in scrap material collection activities.

Following implementation guidelines have been laid down for scrap recycling: -

9.1 ‘Registration’ and features of Registering Web-Portal

A mechanism for registration of ASCCs, MRFs, ASPCs, Manufacturers and the line-workers, will be developed in order to effectively transform the existing system into a formal sector. The registration will be facilitated by an on-line platform developed for this particular purpose. The registration of entities will be with the ‘LSGIs’ and the designated soft-ware will manage to generate a unique ‘serial number registration code’ for each registering entity. A geo-tagging feature will be provided, which

enables pinpointing the exact location of the registering entity. The geotagging of the entities will be carried out by the LSGIs. Due consideration will be given to incorporate a provision for a grading system on the basis of the ‘performance-capability’ or ‘storage-capacity’. The Portal/Software will facilitate, SM, as the authorized system-administrator, with control of the overall systems including access to complete data. This will enable SM to generate specific data suiting the requirement. In order to facilitate various governing roles, SM will provide restricted temporary access to other governing agencies.

The online registration portal will also feature the provision to register individuals engaged in the activities in each of the entities. ASCC, MRF, ASPC and Manufacturer, is responsible to carry-out the registration of their workforce (individuals- engaged as line-workers, segregators, processors and those who are engaged in various other related activities) in their facilities. Web-portal will enable registering entities to print out a system generated ID-card for their work-force. Each entity will be required to register the line-workers associated with them and the LSGIs should encourage this. The simple registering process will require the Aadhar Card of the registering individual.

The online registration portal will as well feature the facility to portray the logistical services available with the entities, for sharing it with other entities on fiscal or any other beneficial basis. Registering facilities can upload the logistic services that they can provide, (like transportation loading/off-loading machineries, weighbridge services etc.) This not only will enable us to gather valuable information regarding the associated supporting sectors, but also will set the ground for incorporating these sectors in the next level drive, and as well fetch the necessary data for formalizing it.

Beneficial features of the Web-Portal, for the registering facilities include,

- ... a feature enabling the companies to advertise on their requirements of scrap material with/without price or their requirement of a specific material with quantity,
- ... a feature that enables them to lodge complaints or apprehension and to enquire about useful guidance.
- ... a feature that will update official announcements from the authorities, latest developments in the sector, information on innovative technology and logistics

providers, reports of various activity pertaining to this sector, announcements on upcoming work-shops and seminars etc., will also be beneficial for the companies.

- ... the web-portal will generate a unique registration certificate with a unique 'registration code'. Companies/facilities can download this certificate, print and maintain the copy as the authenticated 'Certificate of registration'.
- ... From the Web-portal facilities can download, print and issue identity cards for their registered workforce.
- ... Registered establishment will have the facility to dispose of the reject/inert in coordination with LSGIs.
- ... The Web-portal will provide data of logistical services available
- ... The Web-portal can feature the logistical services for hire.

9.2 Standardizing the Operations –

The standardizing of operating procedures for collection and recycling activities of recyclable scrap materials in consonance with all relevant Acts/ Policies / Guidelines / Rules of Central as well as State Government; will be recognized. The structure of this 'SOP' is designed to facilitate a safe environment, to increase productivity and to enhance economic benefits of stakeholders. Necessary procedures for the purpose of transforming the sector to a 'formal-sector' are also incorporated in the 'SOP'.

9.3 Monitoring

Necessary steps will be undertaken for periodic inspection and review of the activities of ASCCs, MRF, ASPCs and Manufacturers. SM can organize inspections on a periodic basis, through 'LSGIs' and for this purpose the lead role of KSPCB is to be recognized. Supporting roles of HKM, CKCL and Kudumbasree units may be utilized for this purpose. For this, an action plan has to be developed by SM, by forming a committee including various stake holding organizations in the capacity. The structure and working methodology of the committee may be finalized by the committee after consultation with relevant authorities/ agencies.

9.4 Technology Upgradation

Technology upgradation and adoption of Best Available Technology (BAT) for Scrap recycling to be promoted in line with existing environmental compliances. Provisions are to be laid down to maximise the recovery of material and reduce the

impact of residue from all activities. A technical committee formed in the official capacity is required to provide awareness and deliver necessary directives for this purpose. Seminars and Workshops with the participation of technology providers, various associations, facility owners and concerned officials will help in a long way for upgrading the existing systems. The scope and use of custom made soft-wares can as well facilitate the upgradation process. Capable organizations who are ready to work in this direction have to be recognized and promoted. Promoting use of software platforms for sourcing materials as well as for trading activities will ensure transparency and will improve the ease-of-doing-business.

9.5 Research Initiatives

The government will encourage and provide support to Research & Development (R&D) programmes in the Scrap recycling sector. The scope for institutional mechanism for carrying out detailed studies and advance research related to recycling of scrap, will be considered. It is observed that Internships and Project Studies can attract ‘focused thought-process’ to this sector, which can promote progressive developments. Participation of R&D experts in the activities of Technical Support Group will be advantageous. R&D experts can as well contribute to the sector by their active participation and effective engagements in Seminars, Workshops and Training sessions.

9.6 Infrastructural Facilities

Specified Scrap recycling zones with facility for collection, segregation, dismantling, processing, etc., of scrap will be developed. LSGIs shall earmark areas and develop special zones to encompass overall activities in order to function as a supply source of ready to recycle materials (raw materials) for the recycling units. Technical Support Groups, should be able to modernize the infrastructural facility, by introducing new innovative technological solutions. LSGIs to identify non-functional State-owned facilities within the Government sector and necessary steps to be taken to provide such facilities to the private sector for related recycling activities. This arrangement either can be on a profit -sharing basis or on any other arrangement like, monetary/logistical-support benefit to the local body.

9.7 Transformation to the formal sector.

As a business model, the economic benefits latent in this sector is enough to encourage any party involved and engaged in these activities. However, provisions for fiscal and non-fiscal incentives for registered recycling units may be considered to promote formal recycling operations and simultaneously discourage informal operations. Financial assistance and concessions may also be considered to reduce cost of registration and operations. Detailed discussions with associations and representatives may throw light on the right areas - for exploring further, in this purview. Data, Opportunities and other relevant information to be shared with interested Start-up companies to promote their engagement. Recognize those organized establishments with capabilities to engage in activities of the sector and encourage them to involve, by providing them with the business model.

9.8 Private-Sector Participation

Encouraging private-sector participation, by introducing them to the business potential and economic benefits latent in this sector. Simplifying the process of establishing business, standardizing as well as stream lining associated activities and facilitating smooth-functioning, will yield huge economic benefits to the public sector, in the form of reduced expenses on waste disposal and increased revenue in the form of tax, fees and other revenues from the sector. Encouraging new entrepreneurs, to comprehend the business model latent in these activities and promoting their involvement will result in an effective circular economy system, which will have far reaching effects in channelizing the activities and enhancing the benefits.

10. WORKING MODEL.

In recent years, a substantial increase in scrap generation is evident and this trend is expected to continue in a progressive way, in coming years. Burgeoned use of white goods, shortened life-period of products (caused by regular technological upgradation & frequent introduction of multi-featured/advanced products into the market) are prime factors that had resulted in generating extensive quantities of end-of-life products. However, this bulk source of available scrap should be rightly channelized through the recycling process in order to ensure the sustenance of a pro-environment system. Hence to make it practical in the recycling sector, there is a requirement of standardizing the operating procedures, along with proper record keeping and efficient monitoring; by the authorities of local governing bodies of State.

The ‘Hub-Spoke Working model’, is suggested to be adopted as a suitable working model, to address the issue of collection of end-of-life products and discarded recyclable items for resource generation in the State. This system is also expected to transform the informal recycling sector into regularity, in order to base their activities in tune with the scientific as well as environmental facets.

The collection centers for scrap material, ASCC or MRF should ideally be set up in a way, that it is associated with an ASPC or a Manufacturer. ASCC / MRF should handover the sorted/ depolluted/ dismantled scrap/ sized material with a clear record and without any legal liabilities/encumbrances to the ASPC/Manufacturer, for further processing.

Safe, Healthy and Environment friendly measures to be adopted by all parties involved in operations related to this sector (as stipulated by various regulatory agencies via relevant Rules/ Acts/ Guidelines etc., as mentioned here under ‘Governing Legislations in Para 7) for the storage, handling, processing of scrap material, the logistical arrangements as well as in the transportation of scrap materials. The scrapping centres (ASCCs, MRFs, ASPCs and Manufacturers) need to be structured with suitable logistical facilities in consonance with the “National Logistic Policy, Department of Commerce; Ministry of Commerce and Industry”.

Eventually, as the industry evolves over time, setting up of ECO Parks / Recycling zones with scrapping / recycling centres shall help in boosting the economic activities around these centres besides generating large employment opportunities.

11. GUIDELINES

This Guideline for Scrap recycling activity is applicable to every Local body, Manufacturer, Waste generator, Scrap Collectors and Scrap Processors. The structure is designed to upgrade the segment into an organized set-up, regulate the activities in appropriate manner to suit the multi-fold purposes of objectives and to instil overall progress in the recycling sector. For this purpose, the scrap recycling sector is categorized into the following four categories.

10.1. Categorization of Facilities.

All scrap related activities take place in the following four categories of facilities.

- ... Material Recovery Facility (MRF) in the public sector.
- ... Authorized Scrap Collection Center (ASCC),
- ... Authorized Scrap Processing Center (ASPC) and
- ... Manufacturer in the private sector.

10.2. Registration of Facilities.

All entities/establishments that are currently performing scrap related activities and those intended to newly establish, are directed to make registration through an on-line platform, whereby the registration of the entity will be sited with the 'LSGIs'. The registration procedure and formalities shall remain same for all existing as well as new facilities.

Registration process

- 1) For the purpose of registration, an existing entity who is presently functioning in this field or a new establishment intending to engage in this line of activities, has to categorize themselves into any one or all of the above categories (mentioned above as in para 10.1) in their respective sectors (public or private as featured in registering web portal), based on the types of activity ('performing' or 'intending to perform').
- 2) The entity has to make an online registration in the assigned web-portal assigned to the LSGI and authorized by the Authorizing Agency. The web portal will comprise formats for collecting maximum details of the

establishment in regard to the particulars of owners, work-force, activities, facilities, location, etc. It is mandatory for the entities to furnish maximum details pertaining to their activity in an accurate manner.

3) The registration is also applicable for the base level work force and all engaged in base-line activities will be registered as line workers.

The work-force, (i.e., associated Line-workers or the workers engaged for processing activities) of an establishment will be linked to these establishments (ASCCs, MRF, ASPCs or Manufacturers). The registration of this workforce will be the responsibility of that particular ASCCs/MRFs, ASPCs or Manufacturers; and to be carried out by them in a prescribed format as specified in the web-portal. The web-portal registration requires providing relevant information of the entity, (such as details of owner/responsible persons/ address/ type of activity/ Item categories/ workforce details etc.). The web-portal also features, a market place to facilitate trading activity for interested registered entities as well as for displaying available logistical services on offer. Once the registration process is successfully completed, LSGIs will be responsible for geo-tagging these registered entities. After geo-tagging, the registered entities can download the 'Registration Certificate' from the web-portal, print and maintain it as the authenticated proof of registration. The registered entities can as well download, print the 'identification card' (in the name of the registering facility) and issue the same to their workforce.

10.3 Requisites for Entities.

Mandatory requisites required for units that are engaged in recycling activities (ASCC, MRF, ASPC or Manufacture) with clear minimum standards as well as specific criteria for the processing of recyclables to produce consistent, high-quality streams of recyclable material include: -

- a. All entities have to be registered (as per the procedures mentioned in para 10.2 (a); and they should also meet the mandatory requirement of registering their

workforce (engaged as line-workers or processors) with their personal identification details; in the web-portal.

- b. All entities engaged in Scrap related activities (Collection/ Segregation/ Processing) are required to obtain a 'consent letter' from the State Pollution Control Board (SPCB). The criteria for obtaining this consent letter are as described in the 'SPCB - Guidelines for consent', attached as annexure (1) of this guideline. The facilities are required to renew and maintain the validity of the 'consent'.
- c. While registering in the assigned web-portal, all entities are required to furnish full and clear details with regard to the establishment, particulars of owners/ responsible person, work-force, activities, location, etc., through the designated format.
- d. There should be adequate area, covered with a proper roof, demarcated with proper boundaries and separated with proper barriers for the collection, storage, segregation and other related activities of scrap materials.
- e. The establishment should be geared to attend with first hand response to emergencies like fire accidents or other physical accidents, as per the Health and Safety standards as prescribed by Kerala Occupational Safety, Health and Working Conditions Rules, Kerala Gazette No.3695, 2021.
- f. Location of the entity to be preferably such, with proper and easy vehicular access enabling easy accessibility for ambulance and fire-engines. However, a clear access to the facility, to be present in tune with the type and magnitude of the recycling activities that are performed in the premises.
- g. The entity should have dry areas (free from water logging), impermeable surfaces like concrete flooring, The area assigned for material collection, segregation and processing to be suitably organized to prevent the contamination of soil or water bodies.
- h. The entity should have adequate fire protection systems and first-aid kit in order to maintain a safe workplace. The centers shall comply with relevant health and

safety legislation/regulation and environmental norms as laid down by BIS Guidelines on Occupational Health and Safety management systems as per IS 18001 & IS ISO 45001; 'Kerala Occupational Safety, Health and Working Conditions Rules, 2021, to ensure safe operating practices.

- i. The entity shall be equipped with a depollution system. Should resort to use the best available technology for processing scrap materials, preferably with zero discharge of inert/rejects. The facility shall comply with the regulations and environmental norms as laid down by MoEFCC / SPCB and Hazardous & Other Wastes (Management & Transboundary Movement) Rules, 2016; for such operations.
- j. The premises should have a proper weighing mechanism in tune with the operations and should as well possess adequate handling devices appropriate for intended activities.
- k. There should be adequate arrangement to store segregated materials in an orderly manner and within the boundaries of the premises as stipulated in the 'Guideline for consenting Scrap Collection Centres' 2021; by Kerala State Pollution Control Board, (KSPCB).
- l. The entity should have provision for electricity specifically assigned for the purpose with adequate payloads in tune with the activities of the setup.

10.4 Requisites for Operation.

- a. The operations in the premises should be performed by competent workforce who are skilled and specifically trained to perform necessary activities.
- b. The workforce to be trained in practices of Occupational Safety and Health Measures and has to follow the operational standards as directed in 'Kerala Occupational Safety, Health and Working Conditions Rules, 2021.
- c. In order to manage the entity in an eco-friendly manner, necessary training to be provided to the workforce, and the management should follow the directives of Environment Protection Act, 1986; Ministry of Environment, Forest and Climate Change (MoEFCC) – amended 1991.

- d. Materials that can potentially contaminate the soil or water bodies have to be stored in a befitting manner that will prevent such hazards. The storage and handling activities have to be in tune with the mandatory performing standards stipulated by the State Pollution Control Board (SPCB).
- e. Proper segregation and processing methods have to be adopted with the help of skilled workforce and appropriate handling tools. Workforce to be provided with passable safety gears like helmets, gloves, goggles, face-masks, etc.
- f. Operations of entities to follow Kerala Occupational Safety, Health and Working Conditions Rules 2021, Kerala Gazette No. 3695; 2021.
- g. Entities should have necessary set-up and assigned staff for maintaining records of material stock as well as should record the movement of scrap materials.
- h. The details regarding the inventory and movement of stock to be shared with the concerned govt agency periodically as decided by the competent authority.
- i. Entities lacking adequate authorization/ capability /provisions for recycling of hazardous waste like, e-waste, lead acid batteries, lithium-ion components, or recycling of material which is outside its scope, should have such materials to be sold/ handed-over to authorized recyclers, as per the stipulated procedures for handling and transportation.
- j. Entities should coordinate with the relevant LSGIs for proper disposal of inert/reject and should ensure transporting such material to respective sites as directed by LSGI authorities.
- h. Scrap processing centres should preferably accredit their centres/ units with the latest version of quality standards viz ISO 9001 (Quality management system), 14001 (Environmental Management System) and 18001 (Occupational health and safety) besides compliance to other norms / rules as laid down in various statutory rules/regulations. This is required to establish

Environmentally Sound Scrap Management Systems with focus on continuous improvement on technology, safety and environment.

10.5 Restrictions for activities

Certain restrictions are placed as a precautionary step for a safe working environment and to prevent the activities that are hazardous to the environment.

- a. **Battery Waste;** Lead acid batteries have its shelf-life ranging from 3 years to five years and after completion of its life; it gets converted into lead acid battery scrap. It is categorized as hazardous scrap and very limited scope for Trans – boundary movement. These batteries are only permitted to be processed in specified centers authorized by the SPCB. Hence, it is to be ensured that, batteries received in an entity, are handled as per the Battery (Management and Handling) Rules 2001; Battery Waste Management Rules, 2022 MoEF&CC); Hazardous and other wastes (Management and Transboundary Movement) Rules 2016. Entities who are not authorized to process battery scrap, should transport such scrap material to centers having authorization of the State Pollution Control board, and this is applicable in the case of interstate transport.
- b. **e-Waste;** The facilities are not permitted to collect e-waste category, however, most of the scrap collection centres receive e-waste, even though they are not authorized ‘e-waste collection centres.’ In such cases, the collection of e-waste shall be on behalf of registered dismantlers/recyclers/Manufacturer. The e-waste thus collected, shall be transported only to recyclers having authorization of the State Pollution Control board, and this is applicable in the case of interstate transport.
- c. **Bio-medical Waste;** There are specified entities authorized to collect and process the scrap materials that are categorized under bio-medical scrap and any activity in this category, outside the designated system is prohibited by law.
- d. **Hazardous Waste;** The facilities under the scope of this guideline are not permitted to conduct any activity in connection with hazardous waste category, until and unless they are authorized to perform such activities by the authorizing agencies as specified in ‘Hazardous Wastes (Management, Handling and Transboundary Movement) Rules, 2016’ issued by Ministry of Environment, Forest and Climate

Change, (MoEF&CC). Under this rule, the hazardous wastes generated in any establishment shall be sent or sold to a recycler or re-processor or re-user registered or authorized under these rules or shall be disposed of in an authorized disposal facility. The hazardous wastes transported from the origin to a recycler for recycling or reuse or reprocessing or to an authorized facility for disposal shall be transported in accordance with the provisions of these rules.

10.6 Authorization / Deauthorization

Authorization for any facility to perform Scrap-recycling activity will be based on the criteria stipulated in this guideline and in addition, the facilities shall necessarily adhere to the following statutes / relevant guidelines issued by the

- ... Government (MoEF&CC and CPCB or any other Statutory Body)
- ... Environment (Protection) Act, 1986, amended 1991.
- ... Water (Prevention and Control of Pollution) Act, 1974, amended 1988.
- ... The Air (Prevention and Control of Pollution) Act, 1981, amended 1987.
- ... Hazardous and Other Wastes (Management and Transboundary Movement) Rules 2016.
- ... Waste regulations notified by the Ministry of Environment Forest (MoEF&CC), as applicable for Scrap recycling
- ... Atomic-energy (radiation protection) rule 2004
- ... Solid Wastes Management Rules, 2016
- ... The Ozone Depleting Substances (Regulation and Control) Rules, 2000
- ... The Batteries (Management and Handling) Rules, 2001, and Battery Waste Management Rules, 2022 MoEF&CC, (upon its official confirmation)
- ... The E-waste (Management) Rules 2016.
- ... The Bio-medical Waste Management & Handling Rules, 2016
- ... The Plastic Waste Management (Amendment) Rules, 2018
- ... Factory Act 1948 along with amendments 1987 and rules made therein
- ... Any other rules notified by any Ministry or the State Government from time to time in this regard.
- ... Kerala Occupational Safety, Health and Working Conditions Rules 2021, Kerala Gazette No. 3695; 2021.
- ... Kerala State Pollution Control Board – Guidelines for consenting Scrap Collection Centers; No. PCB/HO/SEE-3/TECH/130/2021.

Authorizing agency may de-authorize such a center, if it is found to be violating norms issued by any of the above agencies.

12. ROLES & RESPONSIBILITIES OF STAKEHOLDERS

Development of an organized scrap recycling ecosystem requires mechanisms based on a system of shared responsibility involving all key stakeholders. It is critical that the roles and responsibilities of different stakeholders in such a shared responsibility system are defined. Constant efforts are to be made by all responsible to have an organized recycling sector.

12.1 Role and responsibilities of Government.

- a. To consider/ review/ restructure - the scope of State's supportive norms by engaging other relevant authorities and agencies for actions of encouragement and promotion such as;
 - ... Providing relief on fees, other Government charges, stamp and registration charges
 - ... Providing them with available vacant land suitable for the recycling operations, for mutual economic benefit.
 - ... Providing them with existing non-functional infrastructural facilities, etc. for mutual economic benefit.
 - ... Facilitating with necessary logistics support for the recycling units.
 - ... Setting-up of specified scrap recycling zones, identifying land in Industrial Development Parks, in other centres developed by the State Government, for the setting up ASSCs / ASPCs.
 - ... Developing provision for fiscal and non-fiscal incentives in consultation with the concerned departments and authorities.
- b. Setting up an institutional mechanism for carrying out detailed studies and advanced research related to recycling of scrap. Providing necessary support to promote Research and Development (R&D) in Scrap recycling.
- c. Setting up of a Technical Support Group involving R&D experts, to facilitate and guide the activities in a technically sound manner, to introduce innovative technologies and to bring overall progress in the operational methodology.

- d. Considering, the setting up of a State Coordination Committee for Recycling Sector Development involving all relevant departments and representatives from different associations in the recycling sector of the State.
- e. Envisaging programs and seminars, designing methods of propaganda for creating public awareness about the value of scrap business, the value of the significant service they provide to society, the environmental benefits of efficient scrap collection, segregation and recycling, the concept of ‘wealth from waste’, etc.
- f. Planning initiatives to promote Start-ups in the recycling sector for the creation of an organized recycling eco-system, to improve economic activity and to enhance employment generation.

12.2 Role and responsibilities of SM.

- a. Developing a mechanism for registration of facilities, reducing compliance burden by rationalizing multiple registrations licensing and reporting requirements and promoting Ease of Doing Business, in recycling.
- b. Facilitating registration of line-workers engaged in the recycling activities, as well as facilitating the web portal with adequate software support in order to obtain necessary data.
- c. Establishing infrastructural standards and pre-requisites for obtaining clearances for setting-up/registration of recycling units. Developing technical, safety and environmental norms and Standard operating procedures for handling and processing of scrap items in consonance with directives of regulatory agencies like, MoEF&CC, CPCB, SPCB, etc.
- d. Engaging the governing as well as monitoring bodies to ensure safe and healthy practices. Engagement of various departments in coordination with SPCB and other agencies are required, to prevent illegal scrap collection, processing and recycling. Forming ‘Inspection-teams’ or Committee, under the lead-role of SPCB, with the

participation of concerned LSGIs to effect regular monitoring of facilities involved in scrap recycling, through periodic inspections.

- e. Efforts for strengthening the sector and developing a well-organized Scrap Supply Chain, with participation of Government agencies like 'Clean Kerala Company Ltd' (CKCL). Assessing the scope for an online market platform/ exchange platform for scrap products.

12.3 Role and responsibilities of LSGIs.

- a. To engage in necessary field work in order to validate and geo-tag the registration of the entities in the web portal; as well as to ensure registration of all entities operating in their jurisdiction as well as the workforce engaged.
- b. Through coordination, with SPCB, ensure effective enforcement of regulations to prevent illegal activities in the scrap recycling sector that are hazardous to the environment.
- c. To facilitate necessary guidance workshops and training sessions to promote safe and healthy practices in the sector.
- d. To facilitate and implement promotional activities of the Government as well as to spearhead the propaganda programs.
- e. To facilitate the Scrap collection/processing centers for safe disposal of reject/inert materials by providing them with suitable directives and providing them with details of the sites where such materials can be disposed in a safe way.

12.4 Role and responsibilities of Public

- a. Public should responsibly dispose the recyclable waste materials at designated scrap collection centers for safe and effective recycling.

- b. It may ensure that scrap does not contain any hazardous waste. Hazardous scrap may be disposed-off separately at the designated centers.
- c. Efforts to be made to ensure that all scrap waste go to the authorized recycling units or to the manufacturers/ dealers/ distributors having 'take back' facilities.
- d. Social groups, Academic institutions, NGOs & Welfare-groups, etc. should take significant roles for public awareness, to bring in innovative ideas and also should work together to bring amicable solutions for the smooth functioning of all stakeholders.

12.5 Roles and responsibilities of ASCC, MRF and ASPC.

The scrap processing entities are responsible for

- a. The setup, to have proper registration (as mentioned here, in para 10.2), should satisfy those necessary requisites to perform the specific function (as mentioned here, in para 10.3) and should adhere to the right procedures and practices (as mentioned here, in para 10.4). These establishments as well have to make sure that they have adapted to the rules / norms and policies of various governing bodies and competent authorities (as mentioned in para 8, Governing Legislations). The entities are also responsible to be in possession of a valid 'consent' issued by SPCB, Kerala.
- b. Use of appropriate equipment and best available technology for recycling activities, to be ensured. Adequate and continuous training and evaluation of quality of workforce to be periodically reviewed for effective performance and minimizing risks.
- c. Facility maintains a record of stock and flow of scrap and processed material preferably on a digital platform. Data pertaining to scrap trading and recycling be shared periodically with the concerned government agency.
- d. Hazardous waste or recycling of material outside the scope of a recycling unit, should be processed only by an authorized recycler, having required authorization and adequate capability. ASCC, MRF, ASPC are responsible for safe and monitored transportation of such material to those specified sites.

- e. MRF, ASCC and ASPC are urged to streamline their operations in a way that there is zero rejects/inert generated in the process. They are however, directed to minimise the reject/inert generation and that the generated reject/inert should be safely disposed at sites that are specified by the LSGIs. Irresponsible and unsafe practise of disposing such material in public places, streams, rivers or vacant lands are strictly prohibited and such actions may be penalized by the relevant authorities.
- f. ASPC / Manufacturer are pursued to team up themselves with the ASSC / MRF to strengthen the reverse supply chain for collection of scraps through long term arrangement enabling continuous and regular supply of scraps. Entities may explore the possibility of entering into collection contracts with industrial and commercial establishments.
- g. MRF/ASCC has to extend a supportive role to ASPC / Manufacturer, by performing proper segregation and compliance to BIS scrap specifications and codes, which may increase the productivity as well as the value of the product.
- h. Further, MRF/ASCC & ASPC may involve line-workers as partners, for collection of scraps, who belong to the unorganized and informal sector. They shall support and assist them in adopting safe and environmentally sound practices.
- i. It is suggested that the facilities preferably be RIOS (Recycling Industry Operating Standards) certified (established by ISRI, The Institute of Scrap Recycling Industries) to provide a systematic framework to achieve measurable continual improvement in their Quality, Environmental, Health and Safety (QEH&S) performance.

12.6 Role and responsibility of Manufacturer

- a. To ensure that any extended producer responsibility (EPR) guidelines/regulations issued by MoEF&CC be strictly adhered to and to incorporate their purview with the existing Scrap recycling activities and to facilitate a maximum supportive role.
- b. Designing the products to contain safer materials or designing products that are easier to recycle and reuse in an efficient and environmentally sound manner.

- c. To make adequate provisions relating to the classification, packaging, labelling and colour scheme for dangerous substances. Proper coding of reusable components and material must be ensured. Information on reusable components should be available in the public domain for recycling units.
- d. To provide dismantling information for each type of product and should assist/guide the recycling centers to expand the technological knowhow for segregation and recycling.
- e. To facilitate the collection of recyclables either through its take back schemes or through tie ups with scrap recycling units.
- f. Work towards creating consumer awareness on environmentally friendly management of waste and inform them about special incentives on new products upon exchange or scrapping of end-of-life products.

13. POWER TO AMEND

Notwithstanding anything contained in the foregoing paras, the Suchitwa Mission, under Ministry of Local Self-Governing Department of Kerala; may amend various aspects of this guideline from time to time as required depending upon the experience gained during implementation, market dynamics, participant interest etc.

14. CONCLUSION.

This guideline envisages to promote and facilitate the Scrap recycling sector of the State, to bring overall development in the sector, which will facilitate its recognition as an Industrial sector. The focus of this guideline is to develop a self-sustainable business model with an Environmentally Sound Management system for Scrap recycling. The structure of the guideline is designed to bring multiple advantages, such as – to create a circular economy model, to facilitate transformation into a formal sector, to enhance the conservation of valuable resources/energy, to adopt to environment friendly methods, to reduce pollution, to improve economic benefits of all the stakeholders, to uplift the living standards of individuals, etc.

ANNEXURE – 1



PCB/HO/SEE-3/TECW130/2021

Date: 26/10/2021

Guidelines for consenting scrap collection centres

A meeting was convened by the Chairman of the Board on 01.10.2021 with the State Committee members of the Kerala Scrap Merchants Association. In the meeting, it was decided to formulate guidelines for bringing the scrap collection centers in Kerala under the consent purview of the Board. Accordingly, these guidelines are formulated.

1. Scrap collection is the basic step in the recycling of waste for the purpose of converting it into a new product. There are more than 10,000 scrap collection centers in Kerala employing around 3.5 lakhs people.
2. The quantum of waste recycled in Kerala is very low and recycling needs to be encouraged. This can be achieved by organizing and recognizing scrap collection centers.
3. The materials recycled by scrap merchants include paper (book, magazine, newspaper) plastic (PET bottles, carry bags), cartons, metal (Iron, steel, Bronze, Copper, Tin & Aluminum), glass, e-waste, battery waste, old fridge/washing machine, tyre/tube/flap, rubber items, PVC (poly vinyl chloride) etc.
4. Materials that are rejected by scrap merchants include sandal (chappal), Rexene bags, thermocol, fibre items, PU (polyurethane used in the chappal/sandal soles) etc. It is illegal to collect any bio-medical or hazardous waste.
5. Scrap is collected from households by the unorganized rag pickers. As per rule 15 (b) of the Solid Waste Management Rules, 2016, the local bodies are required to establish a system to recognize organizations of waste pickers or informal waste collectors and promote and establish a system for integration

of these authorized waste-pickers and waste collectors to facilitate their participation in solid waste management including door to door collection of waste. The term rag picker/waste-pickers/waste collectors, in these guidelines are replaced by the term pickup person. Materials collected by the pickup person are brought to the scrap collection centres where it is segregated, baled/shredded and packed in bundles. The packed materials are then dispatched to various processing centres which are located mostly outside Kerala.

6. Most of the scrap collection centres occasionally receives e-waste and battery waste even though they are not authorized battery waste or e-waste collection centres.
7. Electrical scrap is usually dismantled manually in the centre to recover metals. Glass bottle received is usually broken to reduce the volume. Metal is usually cut using manual or hand cutter. Breaking of fluorescent tubes shall not be done in the unit
8. At present there is no proper record keeping in the centres and hence there is no quantification of various types of wastes collected for recycling.
9. Scrap collection centres are equivalent to MCF/MRF (Material Collection Facilities/Material Recovery Facilities) of the local bodies. However, these are private facilities collecting much more waste than, that collected by MCF/MRF of the Local Bodies.
10. All the scrap collection centres in Kerala shall be brought under the consent purview of the Board. The Board is required to create a complete database of the scrap collection centres in Kerala.
11. Automobile scrapping centres are governed by the CPCB norms and are not covered in these guidelines.
12. Consent applications shall be processed based on the following: -
 - (i) Those units collecting bottles, plastic and metal and having no machinery are categorized as white. Those units having machinery as per item 12.5 of these guidelines are classified as green.
 - (ii) Most of the scrap collection centres occasionally receives discarded batteries. Centres receiving scrap battery are categorized as 'green'. It is to be ensured that batteries are handled as per Battery (Management and Handling) Rules 2001, Hazardous and other wastes (Management and Transboundary Movement) Rules 2016. No processing is permitted in the collection centre. The battery scrap shall be transported only to authorized recyclers having consent/

authorization of the Board or the concerned SPCB in the case of interstate transport.

- (iii) It is a known fact that most of the scrap collection centres receives e-waste even though they are not authorized e-waste collection centres. The collection of e-waste shall be on behalf of registered dismantlers/registered recyclers/producers. Those units collecting e waste are categorized as green and the conditions for collection centres under e-waste Management Rules, 2016 shall be incorporated as consent condition. No processing is permitted in the collection centre. The e waste shall be transported only to authorized recyclers having consent/ authorization of the Board or the concerned SPCB in the case of interstate transport.
- (iv) The minimum facility required for scrap collection centre is a fully enclosed building/shed with door opening for to and fro movement of the scrap. While submitting application for the consent of the Board, the applicant shall report the quantum of waste that can be stored in the building/shed. Storing the scrap outside the building shall not be permitted and needs to be considered as a consent condition violation. Sufficient measures to prevent fire shall be provided.
- (v) Machinery permitted in scrap collection centres are bailer machines (used for compressing scrap metal and waste material into dense block), shredding machines and hand cutter (for metal cutting). No other machinery is permitted. Facilities for neutralization of battery water with soak pit facilities shall be provided in all scrap collection centres receiving scrap battery.
- (vi) Facilities for recording the quantity of scrap received/scrap dispatched shall be provided in all centres. Separate records shall be maintained for battery, e waste and battery scrap. Usually, scrap collection centres are classified as retailers and wholesalers. Recording data shall be done at retailer level in order to avoid duplication of data. These details shall be prepared and compiled into an annual report. The Association shall provide training to its members in this regard. This data shall be shared with the local bodies and the Kerala State Pollution Control Board. Such data will be highly useful in the preparation of Annual Report under the Solid Waste Management Rules, 2016, Plastic Waste (Management & Handling Rules, e-waste Management Rules, 2016, Battery (Management and Handling) Rules 2001. It shall also be reported as to where each of the items are dispatched for processing.

- (vii) The scrap collection centres shall have own fleet of pickup men and women. Dependence on external agencies in this regard shall be avoided as far as possible.
- (viii) The Association shall organize adequate training to the pickup people. The pickup people shall also be equipped with adequate safety gears and equipment. They are also need to be recognized by the concerned LSGD.
- (ix) It is an encouraging fact that the 'All Kerala Scrap Merchants Association' is bringing out a mobile application for the public, the vendors and the pickup people. In the next stage, the vehicles transporting the scrap to the collection centres and from the collection centres to the processing centres shall be GPS tagged.
- (x) Consent fee need be collected only from the month of approval of these guidelines.
- (xi) The scrap collection centres shall ensure that no nuisance to nearby residents occur by way of noise, dust or acidic water. Necessary fire-fighting facilities shall be provided for preventing fires.
- (xii) Approved copy of these guidelines may be forwarded to all Local Bodies and District Administration.

MEMBER SECRETARY

SD/-

*** Note**

Public comments and suggestions regarding changes to be made in the guidelines for Scrap Management and Recycling should be submitted on or before 15/03/2024 through e-mail "sanitationkerala@gmail.com".