

# ISRG Journal of Arts, Humanities and Social Sciences (ISRGJAHSS)



**ISRG PUBLISHERS**

Abbreviated Key Title: ISRG J Arts Humanit Soc Sci

**ISSN: 2583-7672 (Online)**

Journal homepage: <https://isrgpublishers.com/isrgjahss>

Volume – III Issue-I (January- February) 2025

Frequency: Bimonthly



## Analysis on Scrap Collection Activity and its Socio-economic Effects on Children Involvement at Kisesa Ward, Mwanza Tanzania.

**Athanasys Gregory**

Department of History, St. Augustine University of Tanzania <https://orcid.org/0009-0003-8740-9983>

| **Received:** 01.02.2025 | **Accepted:** 06.02.2025 | **Published:** 13.02.2025

**\*Corresponding author:** Athanasys Gregory

Department of History, St. Augustine University of Tanzania <https://orcid.org/0009-0003-8740-9983>

### Abstract

*This study analyzes the socio-economic effects of scrap collection activity on children involvement at Kisesa township, Mwanza-Tanzania. Specific objectives of the study were to identify reasons for children involvement in metal scrap collection activity at Kisesa; examines the socio-economic effects of scrap collection activity on children; and suggest measures to end children involvement in scrap collection activities in Tanzania.*

*The study employed a case study research design. Field Participant observation method of data collection has been used to observe children involvement in scrap collection activity at Kisesa township. Unstructured interviews were designed for key informants. Documentary review method has been used to complement information from online sources, reputable journal articles, books, researches and in libraries on issues pertaining to socio-economic effects of scrap collection activity on children.*

*Findings have revealed that; theft, child labor, laziness, loss of confidence, children trafficking, school truancy and absentism are some of the socio-economic effects of scrap collection activity on children involvement at Kisesa. On the other hand, scrap collection activity is used as a poverty alleviation strategy and wealth accumulation mechanism used by youths in Tanzania rapidly growing towns.*

*The study concludes that scrap collection activities should be controlled by the government local authorities under the Ministries of Environment and Children. Government leaders at the ward, district and municipal levels must formulate strict by-laws and guidelines to protect children from being involved in scrap collection activities.*

*The study recommends for policy formulation and implementation of scrap collection activity legislations that protect children as vulnerable group. Equally, social activists and local government authorities should sensitize and educate the general public on the side effects of children involvement on scrap collection activity.*

**Keywords:** Scrap, Socio-economic, Children, collection activity, Kisesa township, Tanzania.

## Introduction

Scraps collection activity is not a recent invention in human history. The process of recycling metal scrappers has been there in ancient world early city -states such as Mesopotamia and Egypt since 400 B.C. Historians have suggested that from ancient times, Romans would melt down their bronze coins and repurpose that bronze to craft statues instead. In addition, it has been suggested that during ancient wartimes, jewelry and other metal objects were melted and instead made into weapons. (Bliss, 2024). During industrial revolution era, metal was produced in a large quantity and therefore, metal scrap bronze and aluminum recycling was a common and big practice especially in Europe. It was at this industrial era women and children involved in metal scrap collection activities to earn a living and hence the beginning of women and child labor. At this period, people had to be very smart and carefully about using their metal since there was scarcity metal production. Hence, the beginning of metal scrapper recycling. Though, at this time, the recycling of metal was more attributed to economic gains rather than environmental awareness. (ibid).

However, World War II witnessed a big turn for metal recycling, especially in the US. With all the war machines needing to be built, citizens were encouraged to donate all the scrap metal they could so it could be repurposed for the war efforts. This became a cultural practice soon enough. From the 1960s onwards there has been a highly demand and rise of metal scraper collection business activity not only in Europe but everywhere in the world. Following this high demand for metal scraps, Rose Rowan came up with the idea of garbage trucks towing recycling trailers behind them in the early 1970s for hard rubbish. This was the beginning of curbside collection which later became a thing in the late 1980s. This innovation improved the rate at which scrap metal and other solid materials or rubbish was recycled as people no longer had to go out of their way to drop it off somewhere. Rapid growth of urban and township centers increase availability of used metal scraper materials in households and streets, and thus, increased collection, transportation and disposal costs, recycling is currently inevitable as an accepted sustainable approach to all solid waste management. (Kaseva and Gupta, 1996)

Most European consumer-citizens have incorporated recycling of whatever product into their daily routine. Today, modern recycling is usually seen as a product of the 1970s, when grass-root movements and environmental policies generated new consumer practices. The assumption is that recycling only gained public support from industry, politics and consumers a few decades ago. The principle of returning waste to the production cycle-a process that came to be called recycling around 1970-has much longer history. Metal making and use which is the result of Iron Age in human history, produced a human behavioral characteristic of metal material discarding and reusing which became an integral part of human daily lives throughout history. (Berger et. al., 2023).

In this special respect, metal scraper recycling goes back in history than the well-established 1970s or post World War II as the anchor point for recycling history, to argue on the basis that recycling is neither an invention of the affluent post-modern environmental era nor driven exclusively by ecological concerns. In this 21<sup>st</sup> century era, the term 'metal scraper recycling' means people's appropriation of old metal things/materials for reuse and industry's technological transformation of old into new ones. (ibid).

## Literature Review

### Scrap Collection Activities Worldwide

Scrap collection activity is a big industry worldwide. In his book "*Metal scrappers and thieves: Scavenging for survival and profit*" (2017), Benjamin Stickle explored the little -known world of scrappers and metal thieves particularly in the United States of America. The US recycling industry has a significant impact on the economics of the country. In the US and elsewhere in Europe, recycling centers-or scrap yards, as they are usually called, serve as brokers between individuals and businesses who collect recyclable materials and industries who are ready to purchase and reuse the materials. (Stickle, 2017).

The most commonly recycled materials in the United States are various types of metals (e.g., copper, iron, steel, aluminum, brass). These metals are sought primarily for various reasons, such as availability, size and value. Frequently, metals are readily found within built environments, are easily broken down into manageable size and maintain a high resale value for industrial processing. (ibid)

Collecting materials for recycling in US occurs through several methods such as reclamation of large items like ships, curbside recycling or industrial by products and waste. Additionally, some individuals in US search for, collect, pick out and recycle materials as means of income generation. While individual recyclers in US may not recycle the most material by tonnage, the number of people who search for, collect and pick metal scrap materials appear to be growing rapidly and is an area of social curiosity. (ibid)

However, Stickle's book based on field research collected while traversing communities with thieves and scrappers. Stickle's book explores the motivations for metal theft as well as the techniques and methods for successfully committing theft. It discusses how these methods and techniques are learned and adopted by offenders and identifies ways-often through the thieves' own words-to prevent metal theft. Through metal theft offenders' perspective, often quoting their candid responses, Stickle challenges the common assumptions about this community and recommends a wider policy implications to curb the problem of metal scraper stealing in the USA. (ibid).

In his article "*Metals recycling: economic and environmental implications*", Robert (1997), pointed out the increasingly growth of recyclable metals in the industrialized countries in the early 20<sup>th</sup> century which led to the point that efficient collection and logistics systems and efficient markets justified the significant investments in metal scraper recycling in Europe. The study recommended for the quick government policies to reduce unemployment rate among youths who involved largely in metal collection activities in European countries and addressed environmental concerns for sustainable extractive resource use.

### Socio-economic effects of metal scraper collection activities African Cities.

A study on "*Marginalization and integration within the informal urban economy: the case of child waste pickers in Kaduna, Nigeria*" by Adama (2014), examined the way age can shape the position and choices of a child picking wastes in Kaduna, Nigeria. Drawing on the empirical data, the study reports that child waste pickers have limited access to the most valuable recyclables, largely because they are excluded from the spaces where such materials are found. Their access is further reduced by limited

mobility and lesser amount of time spent on waste picking. In a reflection of the socially stratified and highly depended relations found, child waste pickers have little bargaining power when recyclables are traded. They just remain active in waste picking activity due to its significance as a poverty reduction strategy but passive towards contribution of resource recovery. The lack of recognition and the failure to formalize the informal metal scrapper and other waste materials reinforce their vulnerability due to increased susceptibility to exploitation and health risks. At the broadest level, the study confirms on-going socio-spatial processes of exclusion in African cities, both as a result of urban governance practices and power dynamics within the informal economy.

Francis (2013) conducted his study on *“Activities of Scavengers and itinerant buyers in Greater Accra, Ghana”* and investigated, among other things, the level of education of those engaging in scavenging activities, their residential status, and number of their working hours per day, alternative occupation apart from scavenging, their income level and the type of materials recovered during scavenging activities. The study revealed that materials recovered include plastics and metals such as iron, copper and aluminum. On the average, scavengers earn between US 7 and US 17 per day depending on items recovered and market trends. It was, however, noted that their average daily earnings surpass the US 1 a day target for poverty reduction under the Millennium Development Goals. The activities of scavengers contribute to waste recovery and recycling through their sorting and cleaning activities. The study recommends for the Ghana local authorities to improve waste recycling and resource utilization and recognize scavengers of metals and other waste materials as important stakeholders in the waste management sector.

Kauzya (2020) did a study on *“Reflections on African Cities in Transition: Selected Continental Experiences”* looking at the role played by African local governments and cities in the implementation of the 2030 agenda to achieve sustainable development goals. A synopsis of the 2030 Agenda for Sustainable Development (2030) with its Sustainable Development Goals (SDGs) which also commits to support the implementation of Africa’s Agenda of 2063 was presented before the heads of States and governments of the African Union (AU) adopted Agenda 2063 in January 2015 as both a vision and action plan to build a prosperous and united Africa based on shared values and common destiny.

The seven Aspirations of Africa expressed in Agenda 2063 are: *“(i) a prosperous Africa based on inclusive growth and sustainable development; (ii) an integrated continent, politically united and based on ideals of Pan-Africanism and the vision of Africa’s Renaissance; (iii) an Africa of good governance, democracy, respect for human rights, justice and the rule of law; (iv) a peaceful and secure Africa; (v) an Africa with a strong cultural identity, common heritage, shared values and ethics; (vi) an Africa whose development is people-driven, relying on the potential of African people, especially its women and youth, and caring for children; and (vii) Africa as a strong, united and influential global player partner”*.

He argues that local governments and cities in Africa continue to play a critical role in implementing the 2030 Agenda to achieve the SDGs not only because SDG 11 puts emphasis on cities and local governments but mainly because all SDGs have to be achieved in and by local communities in local governments and by city authorities.

Linda et. al., (2019), researched on *“Solid Waste Management in Africa: Governance failure or development opportunity”*, acknowledged that waste management is a social, economic and environmental problem facing all African countries. The study argued that *“if the 2030 Agenda for Sustainable Development Goals (SDGs) are to be achieved, sustainable waste management approaches must be an environmental and public health imperative deserving political priority”*. It was observed that the current reasons for the poor management of waste in African cities and towns, include, among other reasons, weak organizational structures; lack of appropriate skills; inadequate budgets; weak legislation; lack of enforcement; low public awareness; corruption; conflict of interests; political instabilities; and lack of political will. At the heart of the problem, is the failure of good governance. The study sums up its findings by arguing that *“bringing waste under control in Africa and unlocking the opportunities that waste provides as a secondary resource, will require immediate interventions by governments, businessmen, legal officers, civil society and environmentalists who will protect vulnerable groups in the community such as children below 5 years and school children from engaging in such secondary source of income”*. This is because metal scrapper recyclers and other used plastic material collectors in almost every African cities today use and convince children to collect metal scraps in exchange of very small and invaluable gifts such as biscuits, sweets and bubbles for valuable metals and steel for super profit making.

*“An assessment of socio-economic impact of waste scavenging as a means of poverty alleviation in Gwagwalada, Abuja”* (Dakyes and Magaji 2011) assessed the socio-economic impact of scavenging on people. The targeted population was waste scavengers. The findings showed that all of the scavengers in the studied area were males and majority of them were below 25 years. Most of them were reported to have joined the scavenging activity so as to take care of themselves and that of their families. Only 4.1% wished to continue with the job. Most of them (87.7%) were about 5 years and below in the profession and wished not to proceed with scavenging. They wished to change to another more paying job. Items scavenged include bottles, plastics, iron electronics, aluminum and others. Their monthly income ranges from N4000-N1300 (81.9%) and just about 18.1% earned N 14, 00-N24, 00 per month. Their major challenges during scavenging activities include molestation, fatigue, diseases, injuries, waist pain among others.

#### **Socio-economic effects of metal scrap collection activities and similar solid waste management recycling in Tanzania**

Tanzanian cities and municipalities like any other East and Central African cities and towns faces challenges associated with metal scrapper collection activities and similar related solid waste management impediments such as Dar es Salaam, Mwanza, Tanga, Mbeya, Dodoma and Arusha respectively. With such a rapid growth of towns precipitated by rapid population growth in urban areas and in major cities as a result of multiple factors such as uncontrolled rural to urban migrations, availability of self-employment opportunities in towns compared to rural areas and assured availability of social facilities in towns compared to rural facilities like health services, transportation, water, electricity, housing, education and recreational facilities; hence, production of high rate metal scraps like steel and iron used materials; and similar solid waste including used plastic bottles, broken plastic chairs, utensils, cups, bowls, plastic buckets and many other used household containers and appliances becomes inevitable in towns



due to high purchasing power of assets and liabilities done by people every day to satisfy their basic needs and wants. (*My emphasis*).

Metal scrapper collection activities provides important opportunities to people who have few or no marketable skills and education and no alternative sources of income to survive. However, scrapper collectors' living conditions remains deplorable, and their working conditions continue to be at risk due to hazardous waste. Given the social, economic and environmental benefits waste pickers bring, and particularly their contribution to circular economy goals in developing nations. And the most collected metal scrapers include already used iron and steel materials like spade, hoes, frying pans, plates and even 'crosses' inserted at tombs and many other plastics. (Jandira et. al, 2022).

A study by Kisaka (2016) on "*Sustainable Access Income through Metal Scrapers Collection and Sales for Industrial Recycling in Dar es Salaam*", and his study aimed at promoting metal scrap collection and sales in Kinondoni municipal for income poverty reduction by Formalization done through Community Needs Assessment (CAN). However, the study sensitized 60 Tegeta community members on metal scrapper collection and sales project by March 2016 and equipped 30 community with knowledge and skills on how to manage and run metal scrapers collection and sales project by March 2016. The study recommends for quick and clear Tanzania government's law enactment and policies on metal scrapper collection and sales so as to formalize and legalize this ever increasing metal scrapers recycling industry in the country's tremendous growing municipalities and towns through the provision of licenses to all metal scrapers recycling practitioners.

## Methodology

This study has employed both qualitative and quantitative research approaches through interviews and documentary analysis to collect data, which was analyzed thematically.

Primary sources include personal interviews or written testimonies while secondary sources involved account descriptions of persons who were not eyewitnesses. The sources were available in libraries. The conversation process or asking of questions was organized using the constructed interview guiding questions focused on specific objectives of the study. The questions in the interview guide were open-ended questions. The study used Kiswahili in conducting the interview and translated into English language. Observation method has been used by a researcher to observe scraps collected and exchange relations between children and youths to suffice other data collection methods.

Regarding secondary data, the scholar read various works already done by other scholars in relation to the study to establish what have been already done to complement the primary data. The researcher visited St. Augustine University of Tanzania and Mwanza regional libraries and various online libraries. The materials the author surveyed included dissertations, manuscripts, journal articles, research reports and books that address the objectives of this study. The collected information was analyzed through the content analysis approach.

Quantitatively, the study purposively used ten (10) metal scrap collectors to interview and get their views on the reasons behind involving children when collecting scraps. The study also randomly used a sample of thirty five (35) children under the age of 10 years involving in scrap collection activities at different times

at Kisesa ward. The study used also One (1) Kisesa Ward Executive Officer, One (1) Kisesa Ward Educational Officer, ten (10) community members, One (1) Community Development Officer and One (1) Kisesa Social Welfare Officer who assessed the socio-economic effects of metal scrap collection activity on children involvement at Kisesa ward.

## Findings and Discussion

The findings and discussion of the study were guided by the following specific objectives:

### i. Reasons behind children involvement in metal scrapper collection activity at Kisesa Town.

In an attempt to analyze this specific objective which sought to identify the reasons behind children involvement in metal scrapper collection activity at Kisesa town, Magu-Mwanza, data gathered through snowball methodology, majority of parents and guardians revealed the following as reasons behind children involvement in metal scrapper collection activity at Kisesa town : "*We (parents/guardians) think one of the reason our children involve in the collection of scrapers and other used plastics is the presence/provision of gift (s) such as sweets, biscuits, bubbles, and sometimes little money coins and some salt packages given to our children by metal scrapper collectors. Also, some children find themselves involved in this business due to their family economic hardships and therefore resort to scavenging and collecting scrapers so that they can earn a living*". (Source: Interview)

Additionally, other parents and guardians reported the following as reasons behind involvement of children in metal scrapper and plastics collection activity:

*"Some parents and guardians especially women who, in most cases, stay idle at their homes waiting for metal scrapper and used plastics collectors order and convince their children to find, collect scraps and plastics and give them to scrapper collectors in exchange with gifts such as sweets, biscuits, some salt and bubbles. This behavior is caused by a number of factors such as laziness of some parents and guardians especially from single mother families who believe that they can get their physiological needs such as salt and food out of gifts and little money given by metal scrapper collectors after giving them a heap of metal scrapers and used plastic vessels for recycling purposes. Consequently, some parents and guardians are at the extreme poverty line and are completely ignorant of the socio-economic effects their children are likely to get in the process of involving them in this risk activity."* (Source: Interview).

Kisesa Ward Social Welfare Officer shared the following as reasons behind children involvement in metal scrapper collection activity at Kisesa town:

*"Poor parental care strategies from parents and guardians. Nowadays, children are very free from their parental care and control. This is caused in most cases by the parents and guardians investing less time on parenting role and responsibility through monitoring and guiding all games, habits and restricting bad peer group interactions which may attract bad behaviors such as theft, engaging in metal scrapper collecting activities in return for sweets and gum bubbles and so forth. In this 21<sup>st</sup> century era, most parents and guardians devote much of their time at workplaces or entrepreneurial activities and forget their major role and responsibility of parenting and correcting their children' behaviors. Furthermore, it has been observed that, lack of*

awareness from parents, guardians and the community at large on the socio-economic effects of metal scrapper collection activities on children might jeopardize their future and put them at health risk” (Source: Interview)

## ii. Socioeconomic effects of metal scrapper collection activity on Children at Kisesa Ward.

The following are some of the socio-economic effects of metal scrapper collection activity on children at Kisesa town:

Children involving and engaging in scavenging, picking and collecting metal scrapers “are likely to develop a theft behavior due to the fact that these metal scrapper collectors regularly visit the same households with their loud speakers calling and inviting children bringing collected metal scrapers in exchange of sweets and biscuits. Once children miss such metal scrapers and similar used plastic utensils, some of them dare to steal family's good utensils for gift (s) exchange with the metal scrapper collectors. Hence, theft habit and behavior may develop out of children involving in regular scrapper collection activity business”. (Source: Interview)

Social Welfare Officer added on other effects such as: *loss of confidence and self-esteem in children; encourage child labor, develop dependency syndrome among children involving in metal scrap collection activity. Children may undergo inferiority complex especially in the aspect of bargaining power even if they grow up. There is a high possibility of getting health problems and infections due to dirty and risk environments such scrapers are found*”. (Source: Interview)

Kisesa Ward Educational Officer added that “*school children involving in scrapper collection activity are likely to develop school truancy tendency; school dropout; lower academic performance and concentration; laziness and academic negligence*” (Source: Interview)

On their note, most youths (boys) ranging between 20-25 years when interviewed by a researcher to assess the economic effects of metal scrapper collection activity had this to explain: “*Kazi hii ya kukusanya magwangala/mabangala kama wengine wanavyoyaita, ni shughuli ngumu na nzito sana.....lakini watu wengi wanaidharau na sisi tunaoifanya wanatuona ni masikini tu. Lakini nikwambie kaka, tunapata pesa ya kulisha na kuhudumia familiya zetu licha ya mateso na jua ama mvua wakati wa kukusanya kwenye mitaa na kaya mbalimbali. Mfano mimi kwa wastani kwa siku nikiamka mapema na kuanza kutembea na trolu langu kuanzia saa tatu au nne asubuhi hadi saa kumi na mbili jioni huwa nakusanya mzigo (magwangala) ya kilo hamsini hadi themanini na kila kilo moja huwa tunauza Tsh 600/- hadi 1000/ Kg kutegemeana na siku hiyo yanahitajika kiasi gani .*” (Source: Interview)



Above picture shows a scenario of children involvement in scrap exchange activity with a young man at Kisesa town.

Source: Researcher

## iii. Measures which can end children involvement problem in Scrap Collection Activity

With consideration to the adverse socio-economic effects of Scrap Collection activities in the peri-urban areas like Kisesa, different stakeholders shared the following views, opinions and suggestions to curb the problem as follows:

The Kisesa Ward Executive Officer had the view that “there must be a collective role for all people to protect children involvement in scrap collection activity regardless of whose children belongs to a particular family”. It is an urgent call for all people and all stakeholders to restrict children involvement in scrap collection activities because it denies their rights to education. (Source: Interview).

Consequently, the Kisesa Community Development Officer wanted strict and protective laws and by-laws at the village/ward and district levels to be enacted by the parliament to provide guidelines for scrap collection activities taking place at the household level and in the streets. “The current practice shows that there are no rules and regulations prohibiting scrap collection activities taking place in the streets and worse enough children are the main victims of this business because they are involved by scrap collectors to bring to them scraps with a very cheap price” (Source: Interview).

## Conclusion

Based on its findings, the study concludes that, metal scrap collection activities have far socio-economic effects to children involved in it; and that if this business is left unattended by the district and central government authorities, then children are in a very dangerous situation and their future will be in jeopardy. Therefore, civil societies, Non-governmental Organizations, Parents and the Public should come together and join hands to curb the problem explored by this study.

## Recommendations

The study recommends proper parental care and provision of physiological needs to children by their parents, safety and security from parents and general public, legal recognition of the on-going unfair business by prohibiting the inclusivity of children in metal scrapper collection activity by the local government authorities, fair bargaining mechanisms by the ministry of Trade and Commerce, formalization of the sector and safe working conditions to metal scrapper collectors by the Government.

## REFERENCE

1. Adama O. (2014). Marginalization and integration within the informal urban economy: the case of child waste pickers in Kaduna, Nigeria. *Journal of International Development Planning Review* Vol. 36 (2), 155-180.
2. Ayres R. (1997). "Metals Recycling: Economic and Environmental Implications", *Journal of Resource Conservation and Recycling*, Vol.21 No.3, pp 145-173.
3. Berger et. al., (2023). *World History: Cultures, States and Societies to 1500 A.D.* University of North Georgia Press. U.S.A.
4. Bliss S. (2024). Promoting Modern Jewelry and Accessories in Adam, 1925-1940. *Journal of Fashion Theory*, Vol. 28 (1), 5-34.
5. Denton & Weber (2022). "Rethinking Waste within Business History: A Transnational Perspective on Waste Recycling in World War II". *Journal of Business History*, Vol. 64 No.5, pp 855-881.
6. Francis G. (2013). "Activities of Scavengers and itinerant buyers in Greater Accra, Ghana", *Journal of Habitat International*, Vol. 39, pp 148-155.
7. Jandira M. et. al., (2022). "Global Review of Human Waste –Pickers and its Contribution to Poverty Alleviation and a Circular Economy", *Journal of Environmental Research Letters*, Vol.17, No.6, pp 063002.
8. Kaseva & Gupta (1996). "Recycling-an environmentally friendly and income generating activity towards sustainable solid waste management. Case study –Dar es Salaam City, Tanzania", *Journal of Resources, Conservation and Recycling*, Vol.17 No. 4, pp 299-309
9. Kauzya M. (2020). African Local Governments and Cities in the Implementation of the 2030 Agenda to achieve Sustainable Development: Reflections on African Cities in Transition: Selected Continental Experiences, pp 119-146.
10. Ladan.S. (2015). Examining Metal Scrap Recycling in Katsina Metropolis, Northern Nigeria.
11. Linda et al., (2019). "Solid Waste Management in Africa: Governance failure or development opportunity", *Journal of Regional Development in Africa*, Vol. 235 No.10, pp 5772.
12. Magaji & Dakyes. (2011). "An Assessment of Socio-economic impact of Waste Scavenging as a means of Poverty Alleviation in Gwagwalada, Abuja-Nigeria", *Confluence Journal of Environmental Studies*, Vol. 11, pp 42-56.
13. Nammara J. (2012). *Solid Waste Management and Cost Recovery in Kampala City: A case study of Wabigalo Parish.* Makerere University, Uganda.
14. Sakanyi & Kooma (2022). "Challenges and Opportunities Associated with Solid Waste Management in Chililabombwe District, Zambia", *Journal of Management*, Vol.13, No.18, pp 125-146
15. Stickle .B. (2017). *Metal Scrappers and Thieves: Scavenging for Survival and Profit.* Springer Shop, Amazon.com
16. <https://www.metalmenrecycling.com.au/the-complete-history-of-metal-recycling/>. (Accessed on 17<sup>th</sup> July, 2024).