Guidance Principles for the Sustainable Management of Secondary Metals

Draft 2

ISO IWA 19 Working Draft

Warning for Working Drafts (WD) and Committee Drafts (CD)

This document is not an ISO International Standard. It is distributed for review and comment. It is subject to change without notice and may not be referred to as an International Standard.

Recipients of this draft are invited to submit, with their comments, notification of any relevant patent rights of which they are aware and to provide supporting documentation.

Sustainable Recycling Industries (SRI) Roundtable
c/o World Resources Forum
Empa Building, Lerchenfeldstrasse 5,
9014 St.Gallen, Switzerland
www.sustainable-recycling.org

sri@wrforum.org

© ISO 2016

All rights reserved. Unless otherwise specified, no part of this publication may be reproduced or utilized otherwise in any form or by any means, electronic or mechanical, including photocopying, or posting on the internet or an intranet, without prior written permission. Permission can be requested from either ISO at the address below or ISO's member body in the country of the requester.

ISO copyright office

Case Postale 56 • CH-1211 Geneva 20

Tel. + 41 22 749 01 11

Fax + 41 22 749 09 47

E-mail copyright@iso.org

Web www.iso.org

Published in Switzerland.

Contents

A	crony	ms	4
Iı	ıtrodu	ction	5
A	ims		6
S	tructu	re of the Guidance Principles	7
L	egal N	otice	7
V	alidity	⁷ date	7
1	Sco	ope and users	8
	1.1	Scope	
	1.2	Users	
	1.3	Supporting mechanisms	9
2	Suj	pporting references	10
3	Te	rms and definitions	11
4	Pri	inciples and Objectives	20
	4.1	Introduction	20
	4.2	Overview of the Guidance Principles	21
	4.3	Guidance Principles, Objectives, Explanatory Notes and Supporting Mechanis	ms22
5	Im	plementation, Assurance and Traceability	46
		Introduction	
	5.1		
	5.2	Stepwise approach towards compliance	
	5.3	Assurance Systems	49
	5.4	Traceability (Chain of Custody)	52
	5.5	Making Sustainability Claims about Guidance Principles Compliance	54
	5.6	Supporting mechanisms for the implementation of assurance and	•
	_	rements	
6	Go	vernance	56
7	Bil	oliography	58
A	nnex A	A: 'Worst Practices' of Secondary Metals Recovery	63
A	nnex I	3: Responsibilities of the Coordinating Organisation	66
A	nnex (C: A Monitoring & Evaluation (M&E) system [To be developed]	67
Д	nnev I). Process for the geographic and metal-specific adaptations of the Guidance Pri	incinles 68

1 Acronyms

- 2 CoC: Chain of Custody
- 3 CSO: Civil Society Organisation
- 4 Empa: Swiss Federal Laboratories for Materials Science and Technology
- 5 EPA: Environmental Protection Agency [US]
- 6 EPR: Extended Producer Responsibility
- 7 ISEAL Alliance: International Social and Environmental Accreditation and Labelling Alliance
- 8 ISO: International Organization for Standardization
- 9 ISO IWA: International Organization for Standardization International Workshop Agreement
- 10 OBA: Official Business Activities
- 11 OECD: Organisation for Economic Co-operation and Development
- 12 OHS: Occupational Health and Safety
- 13 PACE: Partnership for Action on Computing Equipment
- 14 SA: Subsistence Activities
- 15 SECO: Swiss State Secretariat for Economic Affairs
- 16 SNV: Swiss Association for Standardization
- 17 SRI: Sustainable Recycling Industries
- 18 UBA: Unofficial Business Activities
- 19 UNEP: United Nations Environment Programme
- 20 WEEE: Waste Electrical and Electronic Equipment [EU]
- 21 WRF: World Resources Forum

Introduction

22

36 37

38

39

- 23 Recycling metals such as aluminium, copper, and gold found in waste from computers and
- 24 electrical equipment to cars and ships is a rapidly growing economic activity worldwide. In Latin
- 25 America alone, the annual amount of e-waste generated is expected to grow from 2.84 million tons
- 26 in 2009 to 4.79 million tons in 2018 (Magalini et al., 2015).
- 27 Yet in developing and emerging economies, the environmental impacts of such activities,
- 28 combined with poor working conditions and poor health and safety practices, create significant
- 29 negative impacts on workers, communities and the environment (Robinson, 2009; ILO, 2012).
- 30 Importantly, the informal sector plays a critical role in the collection, preparation, processing and
- 31 re-use of secondary metals.
- 32 The vision of the Guidance Principles is to promote social equity, environmental justice and the
- optimal recovery of metals in the sustainable management of secondary metals worldwide, for
- 34 present and future generations.
- 35 Key pathways for the implementation of the Guidance Principles will be through:
 - compliance with the Guidance Principles by economic operators involved in secondary metal value chains;
 - integration of the Guidance Principles into government policy, sustainability standards systems and other organisations who would put in place supporting mechanisms.
- 40 The initial idea to develop Guidance Principles for the Sustainable Management of Secondary
- 41 Metals was proposed by the Sustainable Recycling Industries (SRI) Roundtable, an initiative of the
- World Resources Forum (WRF) in partnership with the Swiss Federal Laboratories for Materials
- 43 Science and Technology (Empa). The development of the Guidance Principles is funded by the
- 44 Swiss State Secretariat for Economic Affairs (SECO), as part of the Sustainable Recycling Industries
- 45 (SRI) Programme.
- The process to develop the Guidance Principles followed the consultation processes of the
- 47 International Organization for Standardization's (ISO) International Workshop Agreement (IWA)
- 48 format and the multi-stakeholder approach promoted by the ISEAL Alliance Codes of Good
- 49 Practice. An IWA is an ISO document produced through a number of workshop meetings rather
- than through the full ISO Technical Committee process.²
- 51 The Guidance Principles draw from key research previously carried out and acknowledge the
- 52 complementary work of sustainability standards from the Responsible Jewellery Council (RJC),
- 53 the Aluminium Stewardship Initiative (ASI), the Initiative for Responsible Mining and the
- 54 European Committee for Electrotechnical Standardization (through the CENELEC standards))
- 55 amongst others.
- The process to develop the Guidance Principles began in July 2015 and was completed in
- 57 [December 2016]. This Working Draft was developed, revised and approved through a public and
- 58 transparent process encompassing in-country consultations and workshops involving
- 59 governments, private sector, practitioners, NGOs and researchers working in the field of
- 60 sustainable management of secondary metals.

www.iso.org/iso/home/standards_development/deliverables-all.htm?type=iwa

¹ There are three ISEAL Codes of Good Practice: Setting Social and Environmental Standards; Assessing the Impacts of Social and Environmental Standards Systems; and Assuring Compliance with Social and Environmental Standards. They are available at: http://www.isealalliance.org/our-work/defining-credibility/codes-of-good-practice

² Information on International Workshop Agreement IWA:

- The procedures used to develop this document and those intended for its further maintenance are
- described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed
- 63 for the different types of ISO documents should be noted. This document was drafted in
- accordance with the editorial rules of the ISO/IEC Directives, Part 2. www.iso.org/directives
- 65 Attention is drawn to the possibility that some elements of this document may be the subject of
- patent rights. ISO shall not be held responsible for identifying any or all such patent rights. Details
- of any patent rights identified during the development of the document will be stated in the
- Introduction and/or on the ISO list of patent declarations received. www.iso.org/patents
- 69 Any trade name used in this document is information given for the convenience of users and does
- 70 not constitute an endorsement. For an explanation on the meaning of ISO specific terms and
- 71 expressions related to conformity assessment, as well as information about ISO's adherence to the
- 72 WTO principles in the Technical Barriers to Trade (TBT) see the following URL: Foreword -
- 73 Supplementary information (<u>www.iso.org/iso/foreword</u>).
- 74 The body responsible for this document is ISO IWA 19/Technical Management Board Group.

75 Aims

- 76 The aim of the Guidance Principles is to provide a credible global framework for the sustainable
- 77 management of secondary metals.
- 78 The Guidance Principles are designed to improve practices of economic operators (see Figure 3)
- by complying with the Principles and Objectives and assist the those that wish to demonstrate
- 80 their practices comply with the traceability and assurance mechanisms.
- 81 This document is neither a technical standard for recycling metal, nor is it a stand-alone
- 82 certification scheme. Rather, it is a set of global Principles and Objectives to provide guidance on
- 83 how to deliver change, and requirements for an efficient and credible implementation of the
- 84 Guidance Principles. The overarching values that inform the development and implementation of
- 85 the Guidance Principles are: shared responsibility, transparency, engagement, continuous
- 86 improvement, and equity.
- 87 It is envisaged that there will be many beneficiaries from the improved practices resulting from
- 88 the compliance with the Principles and Objectives by economic operators and the implementation
- 89 of assurance and traceability mechanisms. The Guidance Principles aim to primarily benefit
- 90 economic operators involved in Subsistence Activities (SA), who vulnerable to environmental and
- 91 socio-economic impacts, including child or forced labour and occupational hazards in developing
- 92 and emerging economies.

95

96 97

- Anticipated benefits for the economic operators Subsistence Activities (SA)³, Unofficial Business
- 94 Activities (UBA)⁴ and Official Business Activities (OBA)⁵:
 - Improved safety at work, improved health outcomes for workers and their families;
 - Increased income and longer term more secure contracts;
 - Improved access to funding and credit from financial institutions willing to mitigate risks by requiring compliance with the Guidance Principles;

³ See definition 3.32

⁴ See definition 3.37

⁵ See definition 3.30

- Reduced risk of non-compliance with legal requirements applicable laws and regulations may require that recycled metals fulfil environmental and social criteria in line with the Guidance Principles;
- For OBA and other economic operators (e.g. product manufacturers, exporters, retailers):
 - Increased revenue through improved market access and securing longer term contracts B2B and B2C who may give preferential treatment to enterprises providing Guidance Principles compliant material and products;
 - Improved and more transparent management systems;
 - Secured access to secondary metal resources;
 - Demonstrate commitment to sustainability along their value chains;

Structure of the Guidance Principles

- Section 1 outlines the scope of the Guidance Principles, and Section 2 provides a list of the
- Supporting References cited in the Guidance Principles. Section 3 contains a list of the terms and
- definitions and Section 4 introduces the five Principles and 17 Objectives. Each objective is
- accompanied by a set of explanatory notes and suggested steps, as well as recommendations for
- supporting mechanisms to be taken up by governments, NGOs, and CSOs, as well as by the private
- sector or as public-private partnerships. Section 5 (Implementation, Assurance and Traceability)
- describes the requirements for an efficient and credible implementation of the Guidance
- Principles, through a robust traceability and assurance system. Finally, Section 6 explains the
- 118 Guidance Principles Governance in relation to revision and interpretation as well as the
- responsibilities of the Coordinating Organization.
- 'Annex A' identifies a set of worst practices in metal recovery; 'Annex B' discusses the role of the
- 121 Coordinating Organization to support broader uptake of the Guidance Principles, and 'Annex C'
- will in future explain the Monitoring & Evaluation (M&E) system. Finally, 'Annex D' presents a
- process for the geographic and metal-specific adaptations of the Guidance Principles.

124 Legal Notice

103

104

105

106

107108

109

- 125 Should any of the Guidance Principles and/or objectives included in this document be in
- 126 contradiction with any local or national law, the latter should prevail. However, economic
- operators, policy-makers, standard-setters and other users of these Guidance Principles should
- strive to put in place measures and processes that ensure a higher level of sustainability outcomes.

129 Validity date

130 Version 1.0 of the Guidance Principles shall be effective as of [insert date]

1 Scope and users

1.1 Scope

The Guidance Principles are globally applicable. Geographic and metal-specific adaptations may be considered in future versions.

135136

137

138

131

132

133

134

1.1.1 Materials scope

The scope of the Guidance Principles covers waste that contains metals from a wide range of sources: e-waste, batteries and accumulators, cars and ships, packaging, construction). Waste includes hazardous or non-hazardous.

139140141

142

143

144

145

146

147

148

149150

151

1.1.2 Processes scope

Processes covered by the scope of Guidance Principles are indicated below in *Figure 1*.

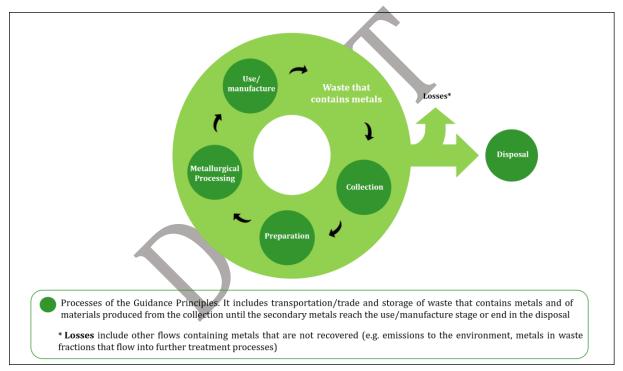


Figure 1: Scope of the Guidance Principles: Processes

1.1.3 Economic operators

Compliance with Principles and Objectives described in Section 4 apply to economic operators involved in the following activities (see Figure 3):

- Subsistence Activities (SA);
- Unofficial Business Activities (UBA) and/or;
- Official Business Activities (OBA).

Only economic operators established as OBAs are required to comply with the traceability and assurance mechanisms described in Section 5.

1.2 Users

- The Guidance Principles may be implemented as part of a verification/certification process, using the recommendations included in Section 5 regarding assurance mechanisms.
- 155 Users of the Guidance Principles are as follows:
 - a. Economic operators that wish to demonstrate that their recovered metals, metal sourced or products manufactured with these metals comply with the Principles and Objectives. Following the Extended Producer Responsible (EPR) approach, these economic operators should be held responsible for taking back waste that contains metals or ensuring that waste that contains metals is collected, prepared and processed in compliance with the Principles and Objectives.
 - b. National or local governments and inter-governmental organisations that develop laws, regulations or policies basing on the Guidance Principles.
 - c. Public/private organisations, financial institutions and development organisations that use the Guidance Principle as a framework to evaluate the impact and risks associated with projects related to secondary metals.
 - d. Non-Governmental (NGOs) and Civil Society Organisations (CSOs) that organize awareness raising and capacity building activities on environmental and socioeconomic impacts of secondary metal productions as well as better practices on the basis of the Guidance Principles.

1.3 Supporting mechanisms

Stakeholders that are not necessarily directly involved in the secondary metal value chain, such as national and local governments, policy makers and non-governmental/Ccivil Ssociety Oorganisations may support and facilitate the implementation of the Principles and Objectives (see Section 4) and their traceability and assurance (see Section 5) through "supporting mechanisms".

While their implementation is facultative, supporting mechanisms would significantly enhance the impact of the Guidance Principles and make the enforcement by economic operators easier, more consistent and cost-effective.

2 Supporting references

The following documents, in whole or in part, are referenced in this document and are recommended for its application.

ISO 14001: 2015. Environmental management systems -- Requirements with guidance for use

ISO/IEC 17025: 2015. General requirements for the competence of testing and calibration

190 laboratories

185



191 3 Terms and definitions

For the purposes of this document, the following terms and definitions apply:

3.1

affected communities

communities which are directly impacted by the consequences of activities related to metal collection, preparation, processing, disposal and/or use of residues. These communities are usually located in the vicinity of operations and may be impacted, either positively or negatively.

Positive impacts may include job creation, infrastructure development, and enhanced livelihoods. Negative impacts may include pollution, noise disturbance, human rights violations.

[SOURCE: PDAC, 2009, modified]

3.2

assurance

grounds for justified confidence that a claim has been or will be achieved.

[SOURCE: ISO/IEC TR 15026-1:2010, 2.6]

3.3

chain of custody (CoC)

chain of responsibility for or control of materials as they pass from one economic operator to another through each step of the process or product system under assessment.

[SOURCE: ISO 13065:2015, 3.7, modified]

3.4

collection [of waste that contains metals]

gathering of waste including the preliminary sorting and preliminary storage of wastes for the purposes of transport to a storage or treatment facility or to the next economic operator. Examples of collection include curb side collections and recycling centres.

[SOURCE: CENELEC, 2014, modified]

3.5

due diligence

detailed assessment conducted by an economic operator to evaluate compliance of a supplier against the Guidance Principles. In the context of the Guidance Principles, due diligence should be conducted through second-party audits.

[SOURCE: Developed by ISO IWA 19]

3.6

economic operator

any individual, enterprise, association, cooperative or organisation involved in the collection, preparation, metallurgical processing, preparing for re-use, storage, transportation, trading, disposal and/or use of waste that contains metals and/or their residues as part of Subsistence Activities (SA), Unofficial Business Activities (UBA) or Official Business Activities (OBA).

[SOURCE: Developed by ISO IWA 19]

3.7

ecosystem services

benefits people derive from ecosystems. Besides provisioning services or goods like food, wood and other raw materials, plants, animals, fungi and micro-organisms provide essential regulating services such as pollination of crops, prevention of soil erosion and water purification, and a vast array of cultural services, like recreation and a sense of place. More specifically, this includes:

- 1) Supporting services: Nutrient cycling, soil formation and primary production.
- 2) Provisioning services: Food, fresh water, wood, fibre and, fuel.
- 3) Regulating services: Climatic regulation, flood regulation, disease regulation, and water purification.
- 4) Cultural services: Aesthetic, spiritual, educational, and recreational

[SOURCE: The Millennium Ecosystem Assessment, 2003]

3.8

environmental and social impact assessment

instrument whose purpose is to identify and assess the potential environmental and social impacts of a proposed project, evaluate alternatives, and design appropriate mitigation/enhancement, monitoring, consultative and institutional strengthening measures.

[SOURCE: African Development Bank, 2001]

3.9

exporter

any person under the jurisdiction of the State of export who arranges for material, products and/or waste to be exported.

[SOURCE: Basel Convention, 1989, modified]

3.10

extended producer responsibility (EPR)

environmental policy approach in which a producer's responsibility for a product is extended to the post-consumer stage of a product's life cycle. In practice, EPR implies that manufacturers, importers/exporters, retailers and consumers of products which contain secondary metals take over the responsibility for collecting or taking back used goods for sorting and treating for their eventual recycling or disposal.

[SOURCE: OECD, 2001, modified]

3.11

extended buyer responsibility

a responsibility starting at the creation or purchase of product and ending at selling or well-defined and documented waste treatment of product.

[SOURCE: OECD, 2011, modified]

3.12

first-party audit

verification process conducted by an economic operator on its own practices and activities. It may be conducted by an employee or an external individual or organisation hired by the economic operator to assess compliance with the Guidance Principles. First-party audits are simpler than second-party and third-party audits, as the sample of interviewed people and processes tend to be smaller, which reduces the administrative burden (e.g. non-disclosure agreements, contracts, rigid audit schedule) and therefore the verification costs. Consequently, first-party audits and associated compliance claims are also considered less robust than third-party audits as they are not performed by independent auditors.

[SOURCE: Developed by ISO IWA 19]

3.13

forced labour

forced labour includes all work or service which is exacted from any person under the menace of any penalty and for which the said person has not offered himself/herself voluntarily.

[SOURCE: ILO Convention 29]

3.14

hazardous waste

waste that is potentially flammable, combustible, ignitable, corrosive, toxic, reactive, or injurious to people or the environment. For the purpose of the Guidance Principles, any other waste is considered non-hazardous.

[SOURCE: ISO 15190:2003, modified]

3.15

importer

any person under the jurisdiction of the State of import who arranges for material, products and/or wastes to be imported.

[SOURCE: Basel Convention, 1989, modified]

3.16

informal sector

sector that covers a wide range of labour market activities. In the context of this document, it is characterised by two groups of economic operators. On one hand, Unofficial Business Activities (UBA); and on the other hand, non-registered Subsistence Activities (SA), as long as this is required by local or national laws and regulations.

[SOURCE: Developed by ISO IWA 19]

3.17

living wage

remuneration received for a standard work week by a worker in a particular place, sufficient to afford a decent standard of living for the worker and her or his family. Elements of a decent standard of living include food, water, housing, education, health care, transport, clothing, and other essential needs, including provision for unexpected events.

[SOURCE: ISEAL Alliance, 2013]

3.18

metallurgical processing

processing of waste that contains metals using processes in which a chemical reaction takes place resulting in the separation of different metals and/or a fraction of higher metal content with specified properties.

Note 1 to entry: examples of chemical reactions are pyrolysis; smelting (i.e. cooking); chemical leaching i.e. dissolution in water, acids, or base; pressure leaching; alloying (i.e. amalgamation, electrolysis); cementation.

Note 2 to entry: metallurgical processing differs from mechanical / physical processing such as sorting and separation based on physical properties, dismantling and size reduction processes such as shredding and grinding.

[SOURCE: Developed by ISO IWA 19]

3.19

storage [of waste that contains metals]

storage of metals in various forms, including collected secondary metals for further processing, and processed metals for further trading or processing.

[SOURCE: Developed by ISO IWA 19]

3.20

official business activities (OBA)

economic activities conducted by registered companies which are under government regulation, taxation and observation.

[SOURCE: The World Bank Group, 2013, modified]

3.21

preparation [of waste that contains metals]

process to separate and concentrate substances in differentiated fractions for further recovery of metals or disposal.

[SOURCE: Developed by ISO IWA 19]

3.22

primary metal

metal extracted from minerals and free of reclaimed metal scrap.

[SOURCE: ASM International, 1992]

3.23

protected area

protected area is a clearly defined geographical space, recognised, dedicated and managed, through legal or other effective means, to achieve the long term conservation of nature with associated ecosystem services and cultural values.

[SOURCE: IUCN, 2008]

3.24

recycling

the series of activities, including collection, separation, and treatment, by which products or other materials are recovered from the solid waste stream for use in the form of raw materials in the manufacture of new products, other than fuel for producing heat or power by combustion.

[SOURCE: Basel Convention, 2004, modified]

3.25

registration

national or local legal licence or set of permissions to operate as an enterprise, with rights to buy and sell products and/or services commercially. The licence or permissions can apply to an individual, a privately-owned enterprise or a publicly-owned corporate entity. The rights to buy and sell products and/or services do not carry the obligation to do so, so legal registration applies also to economic operators without sales of products or services; for example, for unpriced

recreation or for conservation of biodiversity or habitat. In the context of the Guidance Principles there are registered and non-registered enterprises.

[SOURCE: FSC, 2015, modified]

3.26

restoration

in the context of the Guidance Principles, restoration consists of returning an area to a state that corresponds as much as possible to its state prior to conversion for secondary metal operations. Restoration may include revegetation, soil enrichment, land and water depollution and proactive conservation processes.

[SOURCE: Developed by ISO IWA 19]

3.27

retailer

the seller of goods or services directly to consumers.

[SOURCE: The Free Dictionary, 2016]

3.28

second-party audit

verification process conducted by an economic operator (i.e. metallurgical processors, importers, exporters, product manufacturers as well as economic operators involved in OBA) seeking to verify progress of its supplier(s) concerning compliance with the Principles and Objectives and traceability and assurance mechanisms of secondary metals resulting from the concerned value chains. In the context of the Guidance Principles, second-party audits are used to conduct a due diligence.

Second-party audits and associated claims are generally seen as less robust than third-party audits, due to potential conflicts of interest between an economic operator and its suppliers and/or customers.

[SOURCE: Developed by ISO IWA 19]

3.29

secondary metal

metal which does not directly originate from a primary ore but from a recycling process or from processing of waste streams from primary production.

[SOURCE: Developed by ISO IWA 19]

3.30

severe degradation

severely degraded area of land/or water that no longer provides a range of ecosystem functions

and services with a loss of the goods and many other potential environmental, social, economic and non-material benefits that are critical for society and development.

[SOURCE: FAO's land degradation assessment, 2016]

3.31

stepwise approach

pathways that enable economic operators to move in a gradual way towards improved socioeconomic and/or environmental performance.

[SOURCE: ISEAL Alliance, 2011, modified]

3.32

subsistence activities (SA)

activities conducted by economic operators (mostly individuals and families) who earn a wage that is barely sufficient to support or maintain themselves and is below the minimum tax threshold required per national laws and regulations to pay taxes.

These activities can be found in both the formal and the informal sector. In the context of this document, if registration is required by local or national laws and regulations, non-registered Subsistence Activities (SA) remain hidden from monitoring by local or national authorities and are considered part of the informal sector.

[SOURCE: Developed by ISO IWA 19]

3.33

sustainability claim

message used to set apart and promote a product, process, business or service with reference to one or more of the three pillars of sustainability: social, environmental and/or economic⁶.

[SOURCE: ISEAL Alliance, 2015]

3.34

third-party audit

verification process performed by an independent organisation (i.e. assurance providers such as certification bodies), which assesses whether the economic operator complies with the Principles and Objectives and the assurance and traceability mechanisms it committed to comply with. Third-party audits are generally accepted as the most robust type of assurance systems.

[SOURCE: Developed by ISO IWA 19]

3.35

traceability

ability to trace the history, application or location of that which is under consideration.

⁶ ISEAL Alliance Sustainability Claims Good Practice Guide. Version 1.0 - May 2015. Available at: www.isealalliance.org/online-community/resources/iseal-sustainability-claims-good-practice-guide

[SOURCE: ISO 14200: 2012]

3.36

treatment [of waste that contains metals]

recovery or disposal operations, including preparation prior to recovery or disposal.

Note 1 to entry: In the context of this document, recovery is limited to 'metallurgical processing'.

[SOURCE: EC, 2008]

3.37

unofficial business activities (UBA)

activities conducted by economic operators whose income is above the living wage as well as the minimum tax threshold and who purposefully desire to deceive national and/or local laws and regulations. These activities are conducted by non-registered organisations, hence not monitored by any government.

In the context of this document, these activities are part of the informal sector.

[SOURCE: Developed by ISO IWA 19]

3.38

vulnerable workers

those who are at risk of having their workplace entitlements denied, or who lack the capacity or means to secure them

[SOURCE: UK Health and Safety Executive (HSE), 2016]

3.39

waste disposal

the final or temporary placement of wastes that are not salvaged or recycled

[SOURCE: Developed by ISO IWA 19]

3.40

waste that contains metals

hazardous or non-hazardous materials that are disposed of, are intended or required to be disposed and contain metals or metal compounds with the potential to be recovered

[SOURCE: Basel Convention, 1989, modified]

3.41

workers

all persons including workers in the informal sector (subsistence and unofficial business activities), in official business activities. This includes part-time and seasonal workers of all ranks

and categories, including labourers, administrators, supervisors, executives, contractor workers, as well as self-employed contractors and sub-contractors

[SOURCE: ILO Convention C155 Occupational Safety and Health Convention, 1981, modified]



4 Principles and Objectives

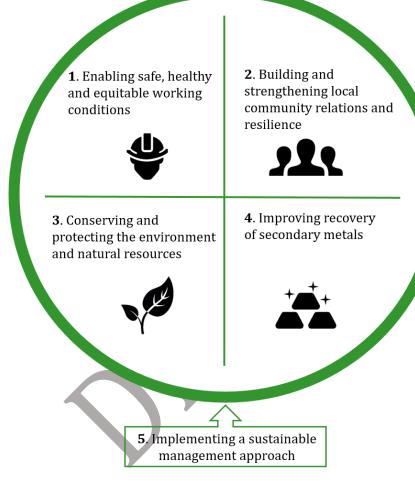
194 4.1 Introduction

195 The Guidance Principles on the Sustainable Management of Secondary Metals consist of five key

196 principles (

193

197 Figure 2).



198 199

Figure 2: The Five Guidance Principles for Sustainable Management of Secondary Metals

4.2 Overview of the Guidance Principles

203

202

PRINCIPLE 1 - Enabling safe, healthy and equitable working conditions

- **Objective 1.1 -** Enable safe and healthy work places.
- **Objective 1.2** Establish working terms and conditions that are decent and equitable.
- **Objective 1.3** Eliminate child labour, forced labour, harassment and all forms of discrimination.
- **Objective 1.4** Ensure freedom of association and the right to collective bargaining.
- **Objective 1.5** Provide clear channels for communication, transparency and dialogue with workers.

PRINCIPLE 2 - Building local community relations and resilience

- **Objective 2.1** Respect and foster local communities' rights.
- **Objective 2.2** Enable the social inclusion of workers in the community.
- **Objective 2.3** Establish clear channels for communication, transparency and dialogue with local communities and affected stakeholders.

PRINCIPLE 3 - Conserving and protecting the environment and natural resources

- **Objective 3.1** Conserve and protect water, air and soil resources.
- **Objective 3.2** Conserve and protect biodiversity, ecosystems, and ecosystem services.
- **Objective 3.3** Restore severely damaged areas from metal recovery operations.

PRINCIPLE 4 - Improving recovery of secondary metals

• **Objective 4.1** – Develop, implement and promote technologies and strategies to increase secondary metal recovery related to quantity and quality.

PRINCIPLE 5 - Implementing a sustainable management approach

- **Objective 5.1** Document and evaluate the existing baseline conditions of secondary metal operations in the areas addressed by the Principles and Objectives.
- **Objective 5.2** Mitigate negative impacts and strengthen positive impacts of secondary metal operations through the development, implementation and continuous improvement of a management plan.
- **Objective 5.3** Strengthen the organisational capacity of economic operators involved in secondary metal operations.
- **Objective 5.4** Ensure compliance with local and/or national laws, rules and regulations.
- **Objective 5.5** Implement measures to eliminate bribery, money laundering and corruption.

4.3 Guidance Principles, Objectives, Explanatory Notes and Supporting Mechanisms⁷

The following tables are developed per objective and include:

- Explanatory Notes and Suggested Steps which are to be undertaken by the economic operators under Subsistence Activities (SA), Unofficial Business Activities (UBA) and Official Business Activities (OBA) (See Figure 3) involved in collection, preparation, metallurgical processing, transportation and trade.
- *Supporting Mechanisms* are provided at the bottom of each table.

Figure 3 presents the economic operators involved in SA, UBA and OBA that are required to comply with the Principles and Objectives.

215

205

206

207

208

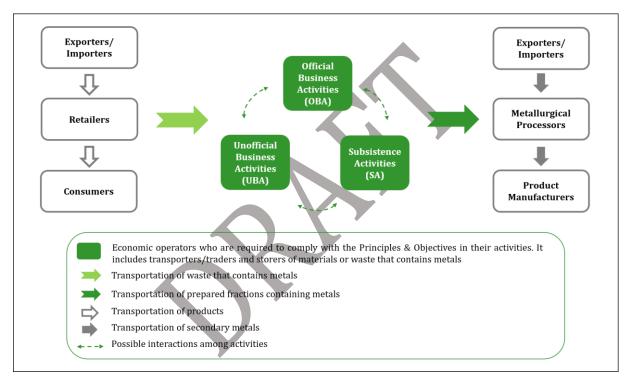
209

210211

212

213

214



216217

218219

220

221222

Figure 3: Scope of the Guidance Principles: Economic operators

Economic operators that ask their suppliers to be compliance with the Guidance Principles (see users defined in 1.2.a) may assist economic operators (SA, UBA and OBA) throughout the implementation of *Suggested Steps*. Assistance can be provided through e.g. training, technical and legal assistance and, if possible, financial resources. SA should be especially considered due to their precarious situation and lack of resources.

⁷ etc.

PRINCIPLE 1

Enabling safe, healthy and equitable working conditions

224

OBJECTIVE 1.1

Enable safe and healthy work places

Explanatory Notes

Identification, awareness raising and training on occupational health and safety (OHS) issues

Economic operators should identify existing OHS risks in secondary metal operations and implement mitigation measures.

Training of workers on OHS, and emergency response and first aid at work shall be provided by economic operators in an appropriate form, manner and language (s).

Workers' training materials and information including technical guidance documents (e.g. WEEE disassembly procedures) detailing the nature of risks (physical, chemical or biological), risk assessments, safety statements, photos or examples and safety data sheets for hazardous chemical components shall be available at the work place and be easily accessible at all times.

Training shall cover safe handling, management, use and disposal of hazardous waste, components and substances. Workers should be able to demonstrate awareness of all OHS procedures and risks.

Equipment and facilities

Personal Protective Equipment (PPE), e.g. masks, goggles, gloves, safety helmets, safety equipment and clothing to protect workers from hazards and hazardous waste, components and substances shall be provided by economic operators to workers at no cost...

First aid equipment shall be available to all workers.

Toilet and sanitary facilities shall be provided and made known to workers. Primary hygiene practices to be encouraged including handwashing. Clean potable water to be provided to workers.

Specific measures should be in place to address specific issues in relation to women's health (e.g. pregnancy, maternity).

A clean designated space for eating shall be provided by economic operators. Whenever workers are housed on site, housing and accommodation should be in line with ILO Recommendation R115 (1961).

Economic operators should provide clearly marked emergency exits, escape routes, firefighting equipment and fire alarms for every indoor workplace, according to industry standards. Fire exits and escape routes are kept clear from obstacles allowing for swift and safe exit.

Emergency exits shall be made known to all workers.

Monitoring

Economic operators shall maintain records of all accidents, occupational injuries and work-related diseases. Records should be made accessible to workers and relevant authorities, with exception of HIV-related diseases.

Economic operators should monitor workers' exposure to hazardous waste, components and substances and ensure it remains within acceptable levels. Exposure may be measured directly (e.g. air sampling) or through medical examination of workers (e.g. blood samples). Economic operators

should follow acceptable levels (thresholds) set by national authorities. In absence of national thresholds, international references (e.g. WHO) should be used.

Medical checks should be provided for workers, at least once per year, and paid for by economic operators.

Suggested Steps and Timeline	SA: Year	UBA: Year	OBA: Year
Identify OHS risks/issues and affected workers	1	1	1
Identify applicable laws and regulations	1	1	1
Develop and implement a training plan on awareness raising and training activities with active participation of workers in the process of identification and monitoring the issues of concern related to OHS	1-2	1	1
Provide required equipment and facilities to enable safe and healthy work places	1-2	1	1
In case of lack of facilities and resources for equipment, actively seek for support from Governments, local authorities or CSOs to get access to them	1-2	-	-
Regularly monitor workers' health and exposure level	3	2	2
Monitor incidents and accidents on OHS issues and assess evolution over time	3	2-3	2

Supporting Mechanisms

Governments are encouraged to provide support to economic operators willing to put in place OHS procedures, e.g. including training, equipment, financial incentives.

Trade unions and worker associations are encouraged to provide workers with information about their labour rights as well as advice and support for their enforcement.

Governments are encouraged to recommend maximum exposure levels and appropriate protective equipment, and support economic operators with the measuring and monitoring of safe and acceptable levels of exposure to hazardous waste, components and substances. Governments are encouraged to develop a programme of enforcement, financial incentives, and financial penalities.

Governments are encouraged to develop affordable facilities and standard protocols for the testing and monitoring of workers' exposure to hazardous waste, components and substances.

OBJECTIVE 1.2

Establish working terms and conditions that are decent and equitable

Explanatory Notes

Employment contracts

Economic operators should ensure that all workers are aware of the terms and conditions of their contract.

Economic operators should provide workers with a written contract that covers all terms related to working conditions and employer's / worker's rights and responsibilities. Terms include but are not limited to:

- Working hours & overtime
- Remuneration

- Holidays
- Notice period
- Social benefits

Working hours & overtime

For OBA, applicable laws and regulations shall prevail for working hours and rules for overtime. Based on ILO Convention 1, the recommended maximum number of hours per week is 48.

Overtime should be negotiated with workers on a voluntary basis and should not exceed 60 hours per week (including regular hours). Economic operators involved in SA and UBA should strive to keep working hours within the above-mentioned conditions.

Remuneration

If higher than the minimum wage, economic operators should apply the applicable living wage applicable. Otherwise, the minimum wage shall prevail. Remuneration should be negotiated and agreed by both parties.

Whenever possible, payment per hour should be preferred over payment by unit e.g. by weight or piece work). If payment by unit is applied, a minimum remuneration equivalent to a payment per hour for a similar amount of time should be ensured.

In line with ILO Convention 100, economic operators shall ensure there is equal remuneration for men and women for work of equal value. Rates of remuneration are established without discrimination based on gender.

Holidays

All paid holiday leave and national holidays shall be due as per the law. Paid sick leave to be provided as prescribed by law or in compliance with worker's unions' or other guidance.

Social benefits

In case of sickness or injury at the work place, the economic operator should provide medical assistance.

Suggested Steps and timeline	SA: Year	UBA: Year	OBA: Year
Identify issues of major concern including non-compliances and affected workers.	1	1	1
Identify applicable laws and regulations.	1	1	1
Develop and implement an action plan towards improvement of the situation	2	2	1
Organise awareness raising activities on working terms related topics.	2	2	1
Organise advisory service e.g. a helpdesk focal point for workers to discuss issues in relation to working terms and conditions.	2	-	-
Monitor evolution of the status of the issues of concern and non-compliances and assess the evolution over time.	3	2-3	2

Supporting Mechanisms

Governments are encouraged to contribute to enabling environment to improve working conditions by supporting awareness raising activities, information, helpdesk focal point, sharing of equipment and provision of credits.

Governments are encouraged to develop and enforce laws and regulations and policies to ensure all workers are provided with a legal written contract. Controls and inspections may be put in place to verify that the terms and conditions in workers' contracts are respected.

Governments are encouraged to implement measures to facilitate the legal registration of workers in the social security system, payment of workers' wages and general administrative processes.

Governments in partnership with business, NGOs and CSOs are encouraged to support the establishment of a Living Wage, which allows workers and their families to fulfil their basic needs (e.g. nutrition, health, shelter, education and transport).

Trade unions and workers' associations are encouraged to provide workers with information about their labour rights as well as advice and support for their enforcement.

226

OBJECTIVE 1.3

Eliminate child labour, forced labour, harassment and all forms of discrimination

Explanatory Notes

Child labour

In the absence of national applicable laws, application of the ILO Conventions is recommended.

In line with ILO Convention 138, child labour shall be phase out: no child under 15 years of age shall be employed, except in support of their family and outside of schooling hours.

In line with ILO Convention 182, worst forms of child labour shall be eliminated: children under 18 years of age shall not be employed in any activity with a risk of death, injury, disease, or psychological damage.

Forced labour

In line with ILO Convention 29, no work or service exacted from any person under the menace of any penalty and for which the said person has not offered himself voluntarily shall take place.

Workers should be free to leave the operation site at all times and the freedom of movement of those who live on the site shall not be restricted.

Harassment

Economic operators should put in place measures to prevent harassment and corporal punishment, with a specific focus on vulnerable and disadvantaged workers, women and migrant workers.

Discrimination

Economic operators should put in place measures to ensure workers are free from discrimination. Discrimination includes:

- (a) any distinction, exclusion or preference made on the basis of gender, ethnicity, nationality, religion, political opinion, disability, age, language, sexual orientation and sexual identity;
- (b) such other distinction, exclusion or preference which has the effect of nullifying or *enrolment* impairing equality of opportunity or treatment in employment or occupation as may be determined by the State concerned after consultation with representative employers' and workers' organisations, where such exist, and with other appropriate bodies (ILO Convention 111).

Suggested Steps and timeline	SA: Year	UBA: Year	OBA: Year
Identify issues of forced labour, child labour, harassment and discrimination, and affected workers.	1	1	1
Identify applicable laws and regulations.	1	1	1

Develop and implement an action plan to phase out forced labour, child labour, harassment and discrimination.	2	1	1
Worst forms of child labour (ILO Convention 182) shall be phased out within one year.	2	1	1
Child labour (ILO Convention 138) shall be phased out within 3 years; programmes to promote children's enrolment in school, in partnership with their families, local authorities and Civil Society Organisations should be implemented within one year.	3	2	1
Any identified harassment and discrimination practices shall be phased out within one year.	3	2	2
Organise awareness raising activities to enforce the elimination and prevention of forced labour, child labour, harassing and discriminatory practices.	2	1	1
Organise advisory or helpdesk services for workers to be able to consult on potential or current forced labour, child labour, harassing and discriminatory practices.	3	2	2
Monitor the status of the issues of concern and non-compliances and assess their evolution over time.	3	3	2

Supporting Mechanisms

Civil Society Organisations are encouraged to support governments (Formal Education) and/or develop Non-Formal Education programs for children supporting their family and income generation programmes to compensate for children not working.

Civil Society Organisations are encouraged to organise awareness raising activities and workshops to feed into education and income generation programmes.

Governments are encouraged to enforce ILO Convention 29 and put controls and inspections in place to verify that no forced labour occurs. Sanctions may be developed and enforced against offenders, appropriate to the size and nature of the economic operator.

Governments are encouraged to enforce ILO Convention 138 and 182, and put controls and inspections in place to verify that no child labour occurs. Capacity building programs may be developed and enforced to support economic operators with the phasing out of child labour. Sanctions may be developed and enforced against offenders, appropriate to the size and nature of the enterprise.

Governments are encouraged to enforce ILO Convention 111, and put controls and inspections in place to verify that no discrimination occurs. Sanctions may be developed and enforced against offenders, appropriate to the size and nature of the enterprise.

Trade unions and workers associations are encouraged to provide workers with information about their labour rights as well as advice and support for their enforcement.

OBIECTIVE 1.4

Ensure freedom of association and the right to collective bargaining

Explanatory Notes

Freedom of association and collective bargaining

Workers should be free to form or join workers' associations of their choice, as per ILO Convention 87 and to collectively bargain with their employer over working conditions.

Economic operators should inform workers of their right to collectively bargain, join associations or unions and/or to facilitate their creation.

Economic operators should inform workers of any existing collective bargaining agreement at workplace site (s).

If the formation of worker's associations or unions is prohibited in the country of operations, economic operators should provide other legal mechanism(s) to engage with workers such as a health and safety committee with representatives from workers and management.

Suggested Steps and timeline	SA: Year	UBA: Year	OBA: Year
Identify issues of major concern including non-compliances and affected workers.	1	1	1
Identify applicable laws and regulations.	1	1	1
Develop and implement an action plan to ensure freedom of association and the right to collective bargaining.	2	1	1
Facilitate the activities of worker's unions and associations i.e. by providing the space and time for meetings and by providing representatives of worker's unions and associations with required information to implement their activities.	3	2-3	2

Supporting Mechanisms

Governments are encouraged to work to enforce ILO Convention 87 and authorize the creation of worker's unions and associations and ensure their right to collectively bargain with employers.

Governments are encouraged to implement measures to support local communities, workers and enterprises throughout grievance processes, e.g. by providing legal support or facilitating mediation processes.

Trade unions and worker's associations are encouraged to provide workers with information about their labour rights as well as advice and support for their enforcement.

OBJECTIVE 1.5

Provide clear channels for communication, transparency and dialogue with workers

Explanatory Notes

Grievance mechanism

A grievance mechanism should be developed to resolve conflicts or grievances involving employers, workers, contractors, sub-contractors, local communities and/or others.

The system should be made easily accessible and explain how to file a grievance, how it is being handled, length of time to receive a response, how the results are communicated and how to file an appeal.

Communication with workers

Regular meetings and communication platforms should be organised by economic operators to inform workers and obtain feedback from them on relevant issues.

Communication with external stakeholders

Dialogue between stakeholders from SA, UBA and OBA should be promoted by economic operators from OBA to inform and get feedback on key issues of concern.

Suggested Steps and timeline	SA: Year	UBA: Year	OBA: Year
Identify issues of major concern regarding communication with workers and external stakeholders.	1	1	1
Identify applicable laws and regulations.	1	1	1
Develop and implement an action plan to improve communication with workers and external stakeholders.	2	1	1
Facilitate and support regular meetings between management and workers to discuss workplace issues and make them aware of their rights and possibilities.	2	2	1
If a grievance mechanism has not been yet created and/or implemented, organise a helpdesk focal point or possibilities for workers to raise, discuss and resolve issues of concerns or requirements, whenever needed.	3	2-3	2
Monitor the number of complaints and cases resolved and assess trends over time.	3	2-3	2

Supporting Mechanisms

Civil Society Organisations are encouraged to support economic operators and workers in their efforts to establish and maintain fluent communication channels.

PRINCIPLE 2

Building local community relations and resilience

231

OBJECTIVE 2.1

Respect and foster local community rights

Explanatory Notes

Community rights

Economic operators should identify existing local communities' rights and concerns, respecting local cultures and traditions. Where relevant, focus should be on the following, but not limited to:

- Right to health and security;
- Access to natural resources:
- Land rights, land-tenure rights, and land-use rights;
- Water rights.

Strengthening relations and continuous improvement

Improvements should be identified in consultation with the community and implemented, wherever feasible, and monitored to assess the uptake and intended benefits.

In consultation with the community, mechanisms and activities should be developed to reduce negative impacts on local community and enhance benefits. This should be done by taking into account different cultural backgrounds.

Suggested Steps and timeline	SA: Year	UBA: Year	OBA: Year
Identify issues of major concern regarding rights of local communities.	1	1	1
Identify applicable laws and regulations.	1	1	1
Develop and implement an action plan to build respect and foster local communities' rights.	2	1	1
Organise awareness raising activities with the local communities and jointly identify issues of concern in relation to health and security, access to resources, among others.	2	2	2
Organise a helpdesk focal point to support local community representatives to be able to ask questions and raise concerns.	3	2	2
Monitor the number of complaints and cases resolved and assess trends over time.	4	3	2

Supporting Mechanisms

Governments are encouraged to monitor transactions between economic operators and local communities and make sure that operations do not infringe on the rights of local communities, especially land rights, land-tenure rights, land-use rights, water-use rights.

Civil Society Organisations are encouraged to support joint activities and facilitate the resolution processes toward the improvement of the local community conditions.

OBJECTIVE 2.2

Enable the social inclusion of workers in the community

Explanatory Notes

Baseline and continuous improvement

Economic operators should be aware of the issue of social exclusion of workers (e.g. workers not accepted by neighbours and/or local community). They should assess the situation and propose and implement measures to overcome the problem, in collaboration with governments, local authorities, public entities and Civil Society Organisations. Measures could include hiring people from the local communities, wherever feasible. The process and measures should be supported by the economic operator(s) and take into account the sensitivities and potential different backgrounds of the workers.

Monitoring

Cases of social exclusion should be documented, monitored and evaluated annually in a manner which establishes the fulfilment of manufacturers' responsibility towards the rights of communities.

Suggested Steps and timeline	SA: Year	UBA: Year	OBA: Year
Assess the risks of social exclusion of workers with support of local specialists.	1	1	1
Develop and implement an action plan to enhance social inclusion.	2	1	1
Organise regular awareness raising events with workers at risk of social exclusion with the aim to jointly identify ways and measures to minimize the risks	2	2	2
Organise opportunities, such as a helpdesk focal point, for concerned workers to raise, discuss and resolve issues of concerns or requirements, whenever needed.	3	2	2
Monitor the number of social exclusion related cases resolved and assess the evolution over time.	4	3	2

Supporting Mechanisms

Governments may support economic operators with the identification and assessment of cases of social exclusion and help proposing measures and actions to improve their situation.

OBJECTIVE 2.3

Establish clear channels for communication, transparency and dialogue with local communities and affected stakeholders

Explanatory Notes

Awareness raising

Economic operators should inform affected communities and authorities about any risks to the environment or the community, as well as measures to be taken into account and implement to enable healthy and safe living conditions.

Grievance mechanism

Economic operators should develop and implement a grievance mechanism for local communities.

Affected communities and authorities acting on their behalf should have the opportunity to contact the economic operator using post, telephone, email, website, and/or an in-person visit. Economic operators should ensure that a written response is provided to stakeholder(s) within one month of initial contact.

Emergencies

Economic operators should provide local communities with a clear communication procedure in case of emergency (e.g. explosion, fire, contamination, accident, etc.).

Suggested Steps and timeline	SA: Year	UBA: Year	OBA: Year
Identify issues of major concern regarding communication with local communities and affected stakeholders.	1	1	1
Identify applicable laws and regulations.	1	1	1
Develop and implement an action plan to improve communication with local communities and affected stakeholders.	2	1	1
Organise regular meetings with the communities in order to establish a relationship based on trust between the local communities, affected stakeholders and the economic operators and thus ensure fruitful agreements between them.	2	2	2
Facilitate the resources and infrastructure needed for engaging with the local community in a proper way.	3	2	2
If a complaint resolution mechanism has not been established yet, organise regular meetings and workshops with the local communities and affected stakeholders to identify possible concerns and/or complaints.	3	3	2
Monitor the number of complaints and cases resolved and assess trends over time.	4	3	2

Supporting Mechanisms

Civil Society Organisations are encouraged to facilitate communication between economic operators and local communities and support the resolution of complaints related to the environmental and/or socio-economic impacts of secondary metals.

PRINCIPLE 3

Conserving and protecting the environment and natural resources

236

OBJECTIVE 3.1

Conserve and protect biodiversity, ecosystems and ecosystem services

Explanatory Notes

Baseline and reporting

Whenever secondary metal operations occur in the vicinity of natural areas, economic operators should:

- Identify and map⁸ of all legally protected or conserved natural areas (e.g. World Heritage Sites) adjacent to and/or in close proximity to secondary metal operation site(s);
- Identify all threatened species⁹ and ecosystems services¹⁰.
- Produce a baseline report.

Protection measures

Whenever secondary metal operations occur in the vicinity of natural areas, economic operators should:

- Protect threatened species and their habitats, taking into account the geographic range and ecological requirements of threatened species beyond the boundary of the operation site;
- Put measures in place to avoid damage to the protected or conserved natural area(s) surrounding the operations. Measures include but are not limited to the containment of any hazardous waste, component or substance, and the creation of buffer zones between the operation site(s) and the protected and/or conserved natural areas;
- Ensure that ecosystem services within and around the operation site(s) are maintained or improved.

For operation sites (e.g. storage sites, factories, landfills) established or extended over natural areas after 1 January 2017 (one year following first publication of Guidance Principles), previous land use(s) type should be documented.

New operations or extension of existing operations should not lead to the conversion of any protected or natural area after January 1, 2017.

Suggested Steps and timeline	SA: Year	UBA: Year	OBA: Year
Evaluate existing ecosystem services using tools such as ARIES11 or HCV	1	1	1
Resource Network or equivalent.			
Identify applicable laws and regulations	1	1	1
If surrounding areas foster biodiversity, ecosystem services and other high conservation values, buffer zones should be created between operations and surrounding areas.	2	2	1

⁸ Maps are available at: UNEP-WCMC IUCN World Database on Protected Areas www.protectedplanet.net/884

⁹ Threatened species to be identified in accordance with IUCN Red List of Threatened Species available at www.iucnredlist.org/search

¹⁰ Ecosystem services to be identified in accordance with ARIES at <u>aries.integratedmodelling.org/</u> or HCV Resource Network at <u>www.hcvnetwork.org</u>

¹¹ ARtificial Intelligent for Ecosystem Services (ARIES). Available at: www.ariesonline.org

Supporting Mechanisms

Governments and Civil Society Organisations are encouraged to ensure that Economic Operators are aware of conservation issues by providing biodiversity expertise and specialists; ; they are encouraged to conduct ecological assessments of areas, which have not been mapped or documented.

OBJECTIVE 3.2

Conserve and protect water, air and soil resources

Explanatory Notes

Baseline and reporting

Economic operators should map and produce a baseline report with potential risks and current impacts of their activities on water, air and soil in the surrounding area(s).

Economic operators should identify the source of the water used for operations e.g. public water transportation network, rainwater harvesting, recycled water, water well, borehole, rivers and lakes. Economic operators may conduct their own water footprint calculation, in line with ISO 14040 and ISO 14046.

Economic operators should be aware of existing water shortages, droughts and other difficulty to fulfil local water needs. Economic operators should be aware of other users of the same water resources.

Economic operators should identify the amount and kind of land used for operations and impacts on soils.

Economic operators should identify the overall processes components and outputs of the operations that consume energy and cause GHG emissions as well as sources of other emissions including particulate, thermal, odor, noise and vibration pollution.

Conservation and protection measures

Economic operators should not pollute air, soil, surface water, ground water or other water sources. No evidence of water or soil pollution is found on site or downstream.

Air quality is a major concern in relation to secondary metal recovery, economic operators should introduce alternative practices and avoid worst practices such as open-air burning of waste material shall be avoided.

Economic operators should eliminate sources of waste during the operations, and if this cannot be avoided, it should be minimized, recovered and recycled before treatment or disposal.

Economic operators should put measures in place to prevent potential negative impacts of any waste generated through their own activities on the surrounding areas and local community. Hazardous substances and components should be removed from waste before treating and disposal.

Disposal of waste and hazardous materials is handled without damaging air, soil or water resources. All chemicals and/or wastes are stored in a safe environment following manufacturer's instructions.

Water conservation measures should be in place, including but not limited to water recycling and reuse practices that encourage improvements in the mechanical, chemical or physical processing of collected metals, to use less water per unit of output.

In areas with water shortage issues, economic operators should not contribute to water depletion, i.e. withdrawal of water beyond the replenishment capacity of the water basin, catchment areas, river or watershed.

Wastewater treatment should be in place, either through the municipal water treatment system (sewage) or the economic operator shall be able to demonstrate it is being appropriately treated through an alternative process.

Economic operators should remove and depollute the waste from hazardous components or substances and dispose them in line with the Guidance Principles and any applicable law.

Monitoring

Economic operators should put measures in place to monitor identified risks of their current activities.

Suggested Steps and Timeline	SA: Year	UBA: Year	OBA: Year
Identify potential environmental risks and current impacts of their own activities on the surrounding areas and on the local community.	1	1	1
Identify applicable laws and regulations.	1	1	1
Prepare a water flow and land use needs map and identify main issues of concern.	1	1	1
Identify all polluting substances/mechanisms that might contaminate the water/land/air resources. This concerns air emissions and leakages from the operations, service areas and bad practices such as dumping of hazardous and non-hazardous waste wastes wastewater and chemicals in watersheds and soils.	1	1	1
Implement water conservation and protection measures.	2	2	2
Provide training to workers concerned with the implementation.	2	2	2
Implement waste water treatment solutions. No polluting chemicals/toxic substances should be emitted into water sources.	3	3	2
Implement measures to avoid soil pollution (such as improved waste management practices, leakage control, soil protection by means of geotextiles).	4	3	2
Implement practical measures to avoid air pollution (such as mechanical and chemical filters).	4	3	2
Develop a system to monitor the results of improvement measures implemented.	4	3	2

Supporting Mechanisms

Governments in collaboration with **universities, research institutes and Civil Society Organisations**, are encouraged to evaluate the state of air, water and land resources within their jurisdiction, and make this information available to economic operators. Training programmes on air, water and soil conservation, as well as recommendation for improved practices and monitoring tools, may be proposed to economic operators.

Governments in collaboration with economic operators, are encouraged to build and maintain sewage and water treatment systems to ensure that industrial operations do not contaminate local water resources. Such system may be made available to economic operators at a reasonable cost.

Governments in collaboration with economic operators, are encouraged to put a system in place, whereby industrial waste and chemicals are safely collected, stored, disposed of and/or recycled. Such systems may be made available to economic operators at a reasonable cost.

Governments are encouraged to build and maintain facilities for the identification, measurement and monitoring of air quality.

Governments are encouraged to promote the integration of clean technologies through financial incentives (e.g. tax exemptions, low interest loans, subsidies).

238

OBJECTIVE 3.3

Restore severely degraded areas from metal recovery operations

Explanatory Notes

Baseline and reporting

Economic operators should map and produce a baseline report with severely degraded areas in consultation with local communities and Civil Society Organisations to jointly determine whether operations and third parties' activities ran prior to their implementation of the Guidance Principles led to the severe degradation of natural or protected areas. The report should assess the types of use of the concerned areas and whether the activities are legally allowed to continue. Severe degradation may include but is not limited to:

- Change in land use (e.g. conversion from forest to industrial area);
- Eutrophication of surface water or depletion of ground water;
- Soil degradation e.g. compaction, erosion, contamination.

Restoration measures

Whenever it is established that the economic operator is responsible for severe degradation, and as long as the local or national regulation allow the activities to continue, measures should be implemented to restore severely degraded areas to a situation as close as possible to their initial state, their original function, productivity and ecological integrity. Restore severely degraded areas due to previous and current metal recovery operations to a future use as agreed with affected stakeholders, and demand the restoration caused by previous third parties' activities.

If areas have been severely degraded by previous third parties' activities, the economic operators in consultation with the local community should demand the Government and local authorities for the restoration of the concerned areas and seek for support and resources from other organisations (e.g. industrial associations, donor agencies, universities) to implement this measure.

Suggested Steps and timeline	SA: Year	UBA: Year	OBA: Year
Identify severely degraded areas within operation sites(s) and surrounding area and the cause of the degradation.	1	1	1
Identify applicable laws and regulations.	1	1	1
In consultation with the local community identify environmental risks or negative impacts on their population and options for mitigation and remediation.	1	1	1
If the current economic operator is responsible for the severely degraded areas,	3	2	2

implement effective restoration measures.			
If the current economic operator is not responsible for the severely degraded areas but former third parties' activities, actively seek for support and resources to restore the areas concerned within the operations site and in the surroundings.	3	2	2
Provide training to workers concerned with the implementation of the restoration activities.	2	2	2
Develop a system to monitor the results of improvement measures implemented.	4	3	2

Supporting Mechanisms

Civil Society Organisations and research institutes are encouraged to provide information and documentation to inform previous land uses and the occurrence of conversion, as well as expertise to support economic operators with the development and implementation of effective restoration measures.

Governments and Civil Society Organisations are encouraged to provide support and, if possible, resources to restore inherited areas with severe degradations.

Governments are encouraged to develop and enforce regulatory frameworks for restoration of areas on a "polluter pays" basis.

Civil Society Organisations are encouraged to demand those responsible for damaging the concerned areas to restore them and/or to provide expertise for their restoration.



PRINCIPLE 4

Improving recovery of secondary metals

241

OBJECTIVE 4.1

Develop, implement and promote technologies and strategies to increase secondary metal recovery related to quantity and quality

Explanatory Notes

Baseline

Economic operators should document the quantities and operational composition of material flows entering into and generated from their operational processes. They should aim over time to continually improve the quality and quantity of secondary metal recovered in terms of non-metallic impurities and non-target metals shares.

Improvement practices

Economic operators should identify improved practices based on the following criteria: recovered metal amount and quality-output criteria, cost- and resource efficiency and minimization of emissions. Examples of improved recovery processes include hydrometallurgical processes and the optimisation of interface between preparation, smelting and refining steps.

Economic operators shall refrain from worst practices (e.g. open burning, amalgamation) and gradually implement improvements in their activities (See Annex A).

Monitoring

Economic operators should monitor the secondary metal recovery rate and ensure that the quality and quantity of secondary metal recovered increase over time.

Suggested Steps and timeline	SA: Year	UBA: Year	OBA: Year
Establish baseline conditions regarding the quality and quantity of secondary metal recovery in existing processes.	1	1	1
Identify and assess areas for technological improvements.	1	1	1
Identify applicable laws and regulations.	1	1	1
Select the priority improvements e.g. to refrain from worst practices.	2	2	1
Provide training to workers concerned with the implementation.	2-3	2	2
Monitor the results based on the criteria established.	4	3	2
Create a platform for economic operators with the aim to promote the exchange of experiences.	5	3	2

Supporting Mechanisms

Governments are encouraged to support the development of a monitoring system to understand material flow in metals, their by-products and residues.

Governments are encouraged to fund research in science, technology and innovation to facilitate improved technologies for disassembly and recycling. Research outcomes and improved processes should remain in the public domain and made available to economic operators.

Governments are encouraged to develop financial incentives to promote optimal recovery of metals through upstream separation of waste and Extended Producer Responsibility (See also Section 5.3.1.2**Error! Reference source not found.**). This could include taxing the use of primary resources w henever secondary resources are available at a comparable cost. Tax revenue may be ring-fenced and made available to fund technical assistance and capacity building and to support research and development in technological innovations.



PRINCIPLE 5

Implementing a sustainable management approach

244

OBJECTIVE 5.1

Document and evaluate the existing baseline conditions of secondary metal operations in the areas addressed by the Guidance Principles

Explanatory Notes

Baseline

Baseline conditions describe the initial level of performance and, for some indicators and parameters, compliance of the economic operator. This should be part of the management plan as the basis for continual improvement.

Appropriate to the size and intensity of operations, the baseline conditions should be established through an assessment of operations against the Principles and Objectives. A self-assessment is also possible.

If risk assessments are developed, they should be conducted according to ISO 31000:2009.

The baseline conditions should provide an assessment about the status of: health and safety conditions (Obj. 1.1), contractual agreements (Obj. 1.2), child labour, forced labour, harassing and discriminatory practices (Obj. 1.3), existing worker's unions or associations (Obj. 1.4), internal and external communications (Obj. 1.5 and 2.3), community relationships (Obj. 2.1), proper inclusion of workers (Obj. 2.2), impacts of ecosystems and biodiversity (Obj. 3.1), impacts on protected areas and natural resources (Obj. 3.2) severely degraded areas (Obj. 3.3), technologies used (Obj. 4.1), organisational capacity and training needs (Obj. 5.3), legal compliance (Obj. 5.4) and corruption risks (Obj. 5.5). The baseline should also include the definition of scope (See Section 1.1), legal compliance, technical capacity and equipment and facilities available, and roles of responsibilities of stakeholders along the secondary metal value chain. Details on the baselines are provided under each objective.

The identification of potential impacts of secondary metal operations on the environment and local communities can be done either through an Environmental and Social Impact Assessment (ESIA) (existing operations) or a Risk Assessment (new operations or expansion of existing operations). ESIA and Risk Assessment report(s)to be made publicly available.

Documentation and communication

The baseline conditions should be documented and a summary report be made publicly available, within the limits of non-confidential or business-sensitive information. The full version should be made available to workers.

Suggested steps and timeline		UBA: Year	OBA: Year
Develop a management plan that includes baseline reporting.	2	1	1
Document and keep records of the baseline conditions for a minimum period of 3 years.	2	1	1
Develop an executive summary of the baseline report.	2	1	1
Communicate the executive summary broadly.		2	2
Make available the full version of the Management Plan with the workers.	2	1	1

Provide training to workers to enhance their understanding on their role in improving the performance according to the results of the baseline report.	2	2	2
Monitor the baseline results regularly considering different periods for different indicators (e.g. some indicators will require annual others bimonthly monitoring).	4	3	2

Supporting Mechanisms

As part of the development of a management plan, **governments and product manufacturers** (through their Extended Producer Responsibility) are encouraged to provide support (e.g. training, tools and specialist assistance) to the economic operators performing due diligence, risk evaluation, monitoring and mitigation of risks to the environment and local communities.

Civil Society Organisations and specialists are encouraged to support economic operators towards a better understanding the Guidance Principles, objectives and how to assess secondary metal operations against them.

Governments are encouraged to provide support for conducting Environmental and Social Impact Assessment and Risk Assessments, for example:

- by maintaining a list of environmental/social experts able to assist;
- by making environmental and social resources and statistics (e.g. maps of protected areas, population census, earth observation data, etc.);
- by developing financial incentives measures (e.g. tax exemption) to offset the cost of the environmental and social impact assessment;
- by publishing the results of environmental and social impact assessments, within the limits of commercial confidentiality.

Governments in collaboration with **universities, research institutes and Civil Society Organisations**, are encouraged to maintain maps, inventories and land records to support enterprises with the evaluation of past and present land-uses and land-use changes.

Governments in collaboration with **universities, research institutes and Civil Society Organisations**, are encouraged to support the evaluation, inventory and mapping of existing ecosystem services. Programmes may be developed to support enterprises with the preservation of ecosystem services.

245

OBJECTIVE 5.2

Mitigate negative impacts and strengthen positive impacts of secondary metal operations through the development, implementation and continuous improvement of a management plan

Explanatory Notes

Scope of the management plan

Based on the baseline results, economic operators should develop, implement, regularly review and update a management plan, which includes:

- The setup of a coordinating group or focal point to lead the development and implementation of the management plan;
- The identification of priority areas related to Principles 1-4 to be improved based on the criticality of the issues identified (e.g. non-compliances with the law require immediate reaction), strategic decisions and resources available;
- A waste control hierarchy whereby waste is reduced, reused or recycled over disposal;
- Measures to be implemented by the economic operator including the timeline and responsible persons within the operation;
- A feedback mechanism for stakeholders towards the improvement of the management plan;

• A monitoring mechanism to measure progress and continuously improvement the management plan to achieve compliance with the Guidance Principles.

The management plan should be developed according to ISO 14001:2015.

New operations, closure, decommissioning and restoration

New operations or expansion of existing ones include any situation where infrastructure building or a modification of the production processes is required.

When developing new operations, economic operators should identify risks of environmental and/or socio-economic impacts and implement mitigation actions, in line with the Guidance Principles.

The management plan should cover how operators undertake closure of an operation, decommissioning and/or restoration plan is in place, and financial provisions to implement the site(s) closure, decommissioning and restoration plan are set aside.

Training

Workers should be aware of the management plan and receive training on how to implement the specific tasks. Workers should be aware of their rights regarding exposure to accidents, death, permanent disabilities or health care caused by exposure to metals and hazardous waste, components and substances across the secondary metal value chain.

Monitoring

Management plans should be monitored, reviewed and revised on a regular basis.

Corrective actions

Following regular reviews of the system, deviations identified should lead to corrective actions.

Suggested Steps and timeline	SA: Year	UBA: Year	OBA: Year
Designation of a coordinating group or focal point to lead the development and implementation of the management plan.	1	1	1
Identification of areas that require attention, if needed, in consultation with concerned stakeholders (e.g. with workers when related to health and safety issues, etc.).	2	1	1
Identification of measures on the areas identified including responsible persons, resources needed and timelines to be respected.	2	1	1
Implement training programs to all involved stakeholders.	2	2	2
Implement the management plan as well as the monitoring system and corrective actions in continued cycles.	3-4	2	2
Setup a feedback mechanism towards the improvement of the management plan.	4	3	2

Supporting Mechanisms

Governments are encouraged to provide support to economic operators with the implementation of management plans, e.g. by providing training, capacity building, tools and advice from experts on:

- Human resources
- Environmental impacts
- · Social impacts
- Emergencies (fire, explosion, accidents and natural disasters)
- Hazards related to the inappropriate recovery of metals from their products
- Coverage of accidents, deaths, permanent disabilities and health costs related to the unsafe recovery of secondary metals.

OBJECTIVE 5.3

Strengthen the organisational capacity of economic operators involved in secondary metal operations

Explanatory Notes

Progress towards OBA

Economic operators engaged in SA or UBA should aim to progress towards OBA

Economic operators engaged in SA) may create or join associations or cooperatives, through which they may obtain a legal status and be able to reach compliance with the Guidance Principles.

Economic operators engaged in UBA should apply for legal registration.

Suggested Steps and timeline	SA: Year	UBA: Year	OBA: Year
Identify the legal aspects in the country for legal registration as well as challenges, needs and advantages for SA) and UBA.	1	1	1
Develop and implement an action plan to support the transition of economic operators involved in SA and UBA towards OBA.	2	1	2
Organise training activities on organisational aspects and options to strengthen the organisation.	2	2	2
Assess potential pathways as well as resources required towards the legal registration of the activities including immediate, short and mid-term steps.	3	2	1
Gradually implement the actions needed to make progress towards OBA and monitor the evolution over time.	4-5	2-3	-

Supporting Mechanisms

Governments, local authorities and public entities are encouraged to put measures in place to support the recognition of individual workers and/or families working under structures with no legal commercial activity status.

Local authorities are encouraged to implement mid-term and long-term planning at city level to improve the organization of the recycling activities and incorporate informal workers in the value chain.

Civil Society Organisations are encouraged to support groups of workers with the creation and management of associations and cooperatives and put accessible financial mechanisms in place.

OBJECTIVE 5.4

Ensure compliance with local and/or national laws and regulations

Explanatory Notes

Regulatory compliance

Economic operators shall respect all applicable laws and regulations of the country in which they occur, and international treaties and agreements to which the country is a signatory.

Whenever laws are credibly enforced, it is not necessary to demonstrate compliance with each applicable law and administrative requirement of the country, the absence of judiciary or penalties records in relation to relevant laws being deemed sufficient.

Supporting Mechanisms

Governments are encouraged to put measures in place to support economic operators towards legal compliance, appropriate to the size and intensity of operations i.e. through the creation of a health insurance system for workers.

Governments are encouraged to introduce Extended Producer Responsibility laws and guidelines and establish monitoring systems to evaluated progress.

Civil Society Organisations and Trade Associations are encouraged to support with the setup of web based sources of legal information and legal subscriptions.

OBJECTIVE 5.5

Eliminate bribery, money laundering and corruption

Explanatory Notes

Non-participation

Economic operators should combat bribery, money laundering and corruption in all its forms. Economic operators shall not directly or indirectly offer, promise, give, or demand a bribe or other undue advantage to obtain or retain business.

Prevention

Economic operators should develop and adopt adequate internal controls to prevent and detect bribery and corruption including a system of financial and accounting procedures that are regularly monitored and assessed. (Adapted from 2011 OECD Guidelines for Multinational Enterprises).

Suggested Steps and timeline	SA: Year	UBA: Year	OBA: Year
Assess potential risks of corruption, money laundering and bribery and identify the most vulnerable areas and workers within the scope of activities of the economic operators.	1	1	1
Identify applicable laws and regulations.	1	1	1
Develop and implement an action plan to eliminate corruption, money laundering and bribery.	2	1	1
Organise awareness raising activities to enforce non-participation and prevention of bribery and corruption practices. Provide the workers with tools to identify the concerned cases and how to denounce them as well as clear explanations on legal consequences for involved persons.	2	2	2
Avoid economic relationships with other economic operators that are or might be related to bribery and/or corruption.	3	2	2
Monitor the number of corruption and bribery cases identified and assess the evolution over time.	4	3	2

Supporting Mechanisms

Governments are encouraged to develop and enforce strong anti-corruption policies and support economic operators implementing measures to eliminate bribery and corruption.

Civil Society Organisations are encouraged to are encouraged to support governments with the implementation of anti-corruption policies, campaigns, and the public reporting of bribery and corruption cases.

5 Implementation, Assurance and Traceability

5.1 Introduction

This Section of the Guidance Principles provides recommendations for effective and efficient implementation of the Guidance Principles (see the stepwise approach in Section 5.2), assurance mechanisms (Section 5.3) and traceability elements (chain of custody in Section 5.4), for economic operators and users to demonstrate that recovered metals comply with the Guidance Principles.

5.2 Stepwise approach towards compliance

Economic operators in the secondary metal value chain who are interested in demonstrating compliance with the Guidance Principles should aim to comply with all applicable Principles and Objectives verified through an assurance system.

- However, full and immediate compliance with the Guidance Principles may require significant changes in the processes used by economic operators. Therefore a stepwise approach is outlined in this Section to provide more flexibility and time for economic operators implementing the Guidance Principles. The stepwise approach is adapted to the type of economic operator (OBA, UBA or SA).
- The pathway and timeline towards full compliance is appropriate to the capacity of each type of economic operator and their specific socio-economic context in a 'stepwise approach'.
 - 5.2.1 Economic operators involved in Subsistence Activities (SA)

The timeline for economic operators involved in Subsistence Activities (SA):

health or safety of workers, in consultation with workers.

- Short term (Year 1): Economic operators should engage in processes to improve working conditions to reduce impacts on health and ensure a sustained revenue stream through partnerships with metal recycling industries and metal processors. Economic operators involved in Official Business Activities (OBA), national and local governments, public entities and non-governmental/Civil Society Organisations are required to provide training and technical assistance and, if possible, financial resources to support economic operators involved in SA. They may also support the implementation of the Guidance Principles (via supporting mechanisms in Section 4.3), for example, with legal assistance and the identification and elimination of practices with most damaging impacts on the environment (such as disposal of
- **Medium term (Year 3)**: Those involved in Subsistence Activities (SA) should organize themselves as cooperatives, associations, micro- or small enterprises, which would give them status as Official Business Activities (OBA) in the context of these Guidance Principles.

chemicals into rivers or groundwater and release of toxic gases in the air) and/or the

- Continued training, technical assistance, financial resources (if possible) is required to be provided, by Economic operators involved in OBA, national and local governments, public entities and non-governmental/Civil Society Organisations. Monitoring of developments as well as support with establishment of communication channels.
- Economic operators involved in OBA, national and local governments, public entities and non-governmental/Civil Society Organisations may provide legal advice to

economic operators and support their legal registration process and the implementation of formalisation procedures for workers (e.g. contracts) via supporting mechanisms (see Section 4.3).

The management of cooperatives, associations, micro- or small enterprises should implement procedures to achieve full compliance at the cooperative/association/enterprise level, identify areas of non-compliance with local, national and regional environmental laws and regulations by their members and implement corrective actions to bring each of them into compliance. Verification of compliance would be performed at the management level.

• Long term (Year 5): Members of the cooperative/association/enterprise shall individually reach full compliance with the Guidance Principles. Verification of compliance would be performed at the individual member's level.

5.2.2 Economic operators involved in Unofficial Business Activities (UBA)

The timeline for economic operators involved in Unofficial Business Activities (UBA):

• Short term (Year 1): Partial compliance (approx. 30% of principles & objectives) is suggested as an intermediary objective within one year. UBAs should organize themselves as cooperatives, associations, micro or small enterprises, which would give them a collective status of Official Business Activities (OBA) in the context of these Guidance Principles. They should also identify and eliminate practices with most damaging impacts on the environment (such as disposal of chemicals into rivers or groundwater, release of toxic gases in the air) and/or the health or safety of workers and communities, in consultation with workers and communities. At the end of year 1, a monitoring system should be in place as well as the establishment of internal communication channels.

Before Year 3, the management of cooperatives, associations, micro- or small enterprises should implement procedures to achieve full compliance at the cooperative/association/enterprise level, identify areas of non-compliance with local, national and regional environmental laws and regulations by their members and implement corrective actions to bring each of them into compliance. Verification of compliance would be performed at the management level.

Economic operators involved in OBA, national and local governments, public entities and non-governmental/Civil Society Organisations may support economic operators involved in UBA with training, technical and legal assistance.

• **Medium term (Year 3):** UBAs shall become registered enterprises i.e. Official Business Activities (OBA). All members of thecooperative/association/enterprise shall individually reach full compliance with the Guidance Principles. Verification of compliance would be performed at the individual member's level.

5.2.3 Economic operators involved in Official Business Activities (OBA)

Economic operators involved in Official Business Activities (OBA) should achieve full compliance within two years. They should put environmental and social due diligence in place

334 335	(See 5.3.1.1) to guarantee that the Guidance Principles are implemented by their suppliers and support economic operators involved in Subsistence Activities (SA) towards compliance.
336 337 338	National and local governments, public entities and non-governmental/Civil Society Organisations may support economic operators involved in OBA with training, technical and legal assistance.
339	The timeline for economic operators involved in Official Business Activities (OBA):
340 341 342 343 344 345	 Short term (Year 1): Partial compliance (approx. 50% of principles & objectives) is suggested as an intermediary objective within one year. OBA should identify and eliminate practices with most damaging impacts on the environment (such as disposal of chemicals into rivers or groundwater, release of toxic gases in the air) and/or the health or safety of workers and communities, in consultation with workers and communities.
346	• Medium term (Year 2): Throughout Year 2, OBAs should have:
347 348	 A monitoring system in place as well as the establishment of internal communication channels;
349	 implemented procedures to achieve full compliance at the enterprise level;
350 351 352	 identified areas of non-compliance with local, national and regional environmental laws and regulations and implemented corrective actions to bring each of them into compliance;
353	 performed verification of compliance at the management level.
354 355	OBAs shall reach full compliance with the Guidance Principles. Verification of compliance would be performed at the individual member's level.
356	The suggested path towards full compliance is described in <i>Table 1</i> .

Operation Type	Timeline (Target) ¹²	Level of compliance
Subsistence Activities (SA)	Year 1	Identify most damaging practices on the environment and/or the health or safety of workers; improve working conditions.
	Year 3	Participation in cooperative/association/micro & small enterprises;
		implement improvement measures to reduce and/or eliminate negative impacts;
		full compliance at cooperative / association / enterprise level.
	Year 5	Full compliance at individual economic operator level.
Unofficial Business Activities	Year 1	Partial compliance (30%)
(UBA)	Year 3	Legal registration. Full compliance
Official Business Activities	Year 1	Partial compliance (50%)
(OBA)	Year 2	Full compliance at business level

Table 1: Stepwise approach towards compliance

5.3 Assurance Systems

Assurance refers to the mechanisms whereby compliance of a given economic operator with parts or the whole Guidance Principles is demonstrated and verified by a credible source.

Assurance systems typically rely on an auditing process (either third-party, second-party or first-party audits – see below). However, due to the specific nature of secondary metal value chains and the existence of non-registered economic operators requiring attention, alternative assurance systems, such as self-assessment and Extended Producer Responsibility (EPR) are recommended to offer a practical and cost-effective solution in the short and medium term.

In the longer term, it is recommended that the Guidance Principles assurance system be based on the verification of the entire secondary metal value chain through third-party audits (See Section 5.3.2).

Standard/certification systems willing to integrate the Guidance Principles, which implement assurance systems with demonstrated compliance with the ISEAL Alliance Assurance Code should be considered in line with the requirements outlined in this Section.

-

¹² The suggested timeline is flexible and may be adjusted according to the context.

Section 5.3.2 suggests a pathway and framework towards the implementation of third-party verification.

5.3.1 Assurance Mechanisms for the Guidance Principles – Short & Medium Term

It is suggested to start implementing the Guidance Principles with an assurance system based on a self-assessment (through a first-party audit) followed by a due-diligence (through a second-party audit) and EPR approach. This would allow covering the entire secondary metal value chain while placing more responsibility on larger economic operators in the short and medium run. In addition, independent review could be conducted by governments and Civil Society Organisations.

5.3.1.1 Due diligence

Due diligence should be implemented by metallurgical processors, importers, exporters, product manufacturers among their suppliers, contractors and subcontractors to ensure compliance with the Guidance Principles.

Suppliers, contractors and subcontractors should conduct a self-assessment and provide results to metallurgical processors, importers, exporters or product manufacturers. The latter are required to support suppliers from SA due to their vulnerable situation and lack of resources.

In order to confirm the self-assessment results, metallurgical processors, importers, exporters or product manufacturers might conduct second-party audits (See definition in Section 3) over a selected sample of their suppliers, contractors and subcontractors. Gaps towards compliance should be fully documented and corrective actions put in place by the audited economic operator towards full compliance.

Product manufacturers (e.g. Original Equipment Manufacturers) may also audits their suppliers of secondary metals (e.g. recyclers) with a view to fulfil EPR obligations.

Due diligence may also provide an opportunity for larger economic operators to support economic operators located in emerging and developing economies.

5.3.1.2 Extended Producer Responsibility

Extended Producer Responsibility (EPR) should be applied by manufacturers, importers/exporters, retailers and consumers of products which contain secondary metals to ensure that end-of-life products are adequately recycled or disposed of, in line with the Guidance Principles. Corrective actions and supporting mechanisms should be put in place whenever appropriate.

Manufacturers, importers/exporters, retailers and consumers of products which contain secondary metals should be held responsible for taking back waste that contains metals or ensuring that waste that contains metals is collected, prepared and processed in compliance with the Principles and Objectives. The effective application of EPR is intrinsically linked to the existence of a coherent regulatory framework, which ensures that EPR is properly applied by economic operators. Revenue raised through EPR programmes should be ring-fenced and service providers authorised. The recycling and/or disposal of products that contain metals should be paid directly by the obligated party and based on evidence after treatment/disposal takes place.

5.3.1.3 Independent review by governments and non-governmental organisations

An independent review can be provided anytime by governments, CSOs and industrial associations through the assessment of economic operators who are implementing the Guidance Principles and want to claim compliance with them. This independent review and subsequent publication of results ("name and shame" or "Report Cards") can be a powerful incentive to drive change. This can also help to ensure that economic operators have a mechanism for continuous improvement.

Governments, CSOs and industrial associations can also publicly report any use of false claims in relation to the Guidance Principles.

Figure 4 describes how the suggested assurance mechanisms would cover the entire secondary metal value chain :

- Due diligence should be requested by metallurgical processors, importers, exporters or product manufacturers (see dotted green arrow) over economic operators such as collectors, waste processors and metallurgical processors (see full green arrow). Please note that depending on the circumstances, metallurgical processors can play two roles.
- Extended producer responsibility (see grey arrow) of products manufacturers should extend throughout importers/exporters, retailers and consumers.
- The eventual implementation of a third-party certification would require all economic operators to undergo a third-party audit, thus covering the entire secondary metal value chain.

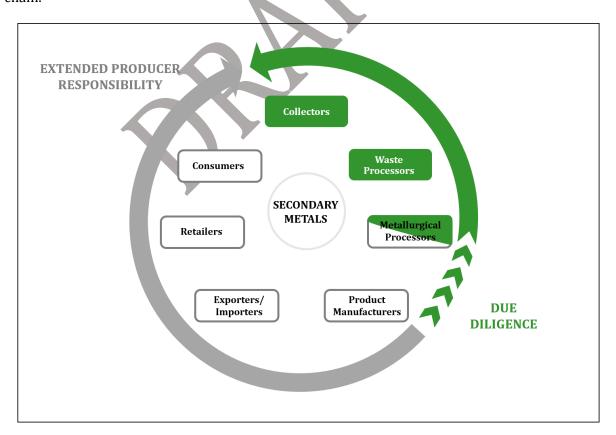


Figure 4: Short and long term approaches to assurance

5.3.2 Assurance Mechanisms for the Guidance Principles – Long Term

439

443

444

445 446

447

448

449 450

451 452

453

454

455

456 457

458

459

460

461

462 463

464 465

In the long term, the Guidance Principles should be implemented using a robust assurance scheme involving third-party audits (See also Section 5.4), covering all economic operators in the secondary metal value chain.

The implementation of third-party audits would require preliminary steps such as the development of compliance indicators (with possible local adaptations) and the implementation of an oversight mechanism for the training, evaluation, accreditation and monitoring of auditors by an independent organism to ensure consistency in auditing and prevent conflicts of interest.

Third-party audits are based on a combination of desk-based verifications (documentation checks) and on-site verifications (field checks). Upon successful completion of a third-party audit, the auditor will issue a certificate of compliance to the economic operator, which is then allowed to produce off-product claims13 and on-product ones¹⁴ limited to the certification scope.

A robust assurance scheme for the Guidance Principles could be achieved through different approaches, including but not limited to:

- The establishment of an audit process including appropriate accreditation of auditors and assurance providers, following ISEAL Alliance and ISO 17065;
- The integration of the Guidance Principles into an existing sustainability standard/certification system (e.g. stewardship initiatives and standards on mining, metals, jewellery etc.).

5.4 Traceability (Chain of Custody)

A credible traceability system is required to guarantee to product manufacturers and other purchasers of metals recovered that claims in relation to the Guidance Principles have been verified. It is particularly important to guarantee that the Guidance Principles were implemented at **all** steps preceding the end-product. Without such guarantee, no credible on-product claim could be associated to the end-product.

- Such characteristics should be documented and attached to consignments of metals delivered by the economic operator.
- Before a third-party verification system is in place (See Section 5.3.2), no Chain of Custody (CoC) system should be implemented.
- Whenever a third-party verification system is in place, it is advised that only economic operators involved in Official Business Activities (OBA) and in Subsistence Activities (SA) organised as cooperatives/associations/micro or small enterprises implement the chain of custody requirements and are entitled to on-product claims. Users (See Section 1.3) enforcing compliance of the Guidance Principles are required to support Subsistence Activities (SA) in this process.
- If concerned compliant batches include waste that contains metals, local laws and regulations for waste management need to be strictly fulfilled. If a transboundary movement of waste needs to

© ISO 2016 – All rights reserved

¹³ Off-product claims are made in general communications (e.g. annual reports, marketing documents, etc.).

¹⁴ On-product claims are attached to a specific batch of physical product as guarantee that the content is compliant.

take place, according to the Basel Convention Guidelines, there needs to be first determined if the delivery to be exported/imported is hazardous waste or not:

- Non-hazardous waste consists or materials recovered consisting only of metals or alloys or with no hazardous characteristics,
- Hazardous waste has the characteristics described in the definition,

Correspondingly, specific documentation should be attached to the delivery according to the Basel Convention Guidelines.

5.4.1 General requirements – Chain of custody

Economic operators seeking compliance with the Guidance Principles shall develop and publish a Chain of Custody (CoC) policy and procedures in line with at least one of the following three models:

- 1. *Physical segregation.* Consignments of waste that contains metals, or secondary metals with demonstrated origin and compliance with the Guidance Principles are kept physically separated from other waste consignments, secondary metals of unknown origin and primary metals.
- 2. Mass balance. Consignments of waste that contains metals, or secondary metals with demonstrated origin and compliance with the Guidance Principles are physically mixed with other waste consignments, secondary metals of unknown origin and primary metals. Documentation and records of material entering an operation ensures that the amount of outgoing Guidance Principles-compliant secondary metals does not exceed the amount of incoming Guidance Principles-compliant material, taking conversion factors or other calculation methodologies into consideration.
- 3. *Book and claim.* Economic operators in compliance with the Guidance Principles may create certificates and trade them on a dedicated platform. Product manufacturers using secondary metals may buy such certificates and the claims of compliance with the Guidance Principles associated to it.

In case of SA, collection and physical segregation might be the most suitable practices to be implemented with support of economic operators requesting for verifiable claims, other economic operators or stakeholders via supporting mechanism.

5.4.2 CoC Manager

A dedicated Chain of Custody (CoC) Manager should be appointed by the economic operator seeking compliance with the Guidance Principles. The appointed manager should be responsible for the correct implementation of the CoC policy. If organized as cooperatives, associations or micro- or small enterprises, it can be expected that SA count on a dedicated CoC Manager.

Workers involved in the acquisition, processing and delivery of compliant (i.e. produced according to the Guidance Principles) waste that contains metals or secondary metals – including workers involved in SA - should be adequately trained and monitored by the CoC Manager.

© ISO 2016 - All rights reserved

5.4.3 Documentation and records 517 Any economic operator acquiring, processing or delivering batches of compliant waste 518 519 that contains metals, material that bears metals or secondary metals and seeking 520 compliance with the Guidance Principles should document and record important characteristics, including but not limited to: 521 1) Name and address of supplier; 522 2) Unique reference number; 523 3) Date of receipt of goods/Date of release/shipment of goods; 524 4) Origin (address) of batch; 525 526 5) Shipment address; 527 6) Nature or state of metal/material/waste that bears metal¹⁵; 528 7) Weight; 529 8) Proof of compliance with the Guidance Principles and any other claim (e.g. provenance), established by a third-party organisation (e.g. assurance 530 provider); 531 9) Name and address of the third-party organisation (e.g. assurance provider); 532 533 10) Name and address of all supplier(s), contractor(s) and sub-contractor(s) involved in the acquisition, processing and delivery of the batch or products. 534 Recorded material without appropriate documentation should be considered to be of 535 unknown and uncontrolled origin and therefore not in compliance with the Guidance 536 Principles. 537

5.5 Making Sustainability Claims about Guidance Principles Compliance

Before an independent third-party assurance system is implemented (See Section 5.3.2), claims of compliance with the Guidance Principles should be limited to general claims for internal or external communication purposes. The latter could include audiences such as consumers or local and national Government authorities (e.g. enterprise commitment claims such as "Enterprise X plans to source X% by 2025", general website claims).

The implementation of a third-party verification system will allow compliant economic operators to use compliance claims attached to the secondary metals and derived manufactured products ("on-product claims"), as well in their general communication. A communication and claim policy should be developed whenever a third-party verification system is implemented.

5.6 Supporting mechanisms for the implementation of assurance and traceability requirements

National and local governments, policy makers, Non-governmental/Civil Society Organisations and sustainability standard organisations are invited to facilitate the implementation of assurance and traceability requirements through a range of supporting mechanisms:

- Design and develop policies and programmes for Extended Producer Responsibility and/or due diligence;
- Develop and monitor and enforce regulations and laws on product claims and advertising

538

539 540

541

542

543

544

545

546

547

548

549

550

551

552553

554

555

¹⁵ A colour code may be used to differentiate among metal types.

- Verification of compliance through the establishment of monitoring programmes (e.g. public complaint resolution mechanism, self-reporting by economic operators, site visits);
 Develop and implement an easily accessible information exchange platform for economic
 - Develop and implement an easily accessible information exchange platform for economic operators in the secondary metal value chain;
 - Develop awareness raising campaigns to increase re-use and recycling of waste that contains metals
 - Provide financial support.

560

561



6 Governance

564

572

573

574

575

576577

578579

580 581

582

583

584

585

586

587

588

589

590

591

592593

594 595

596 597

598599

600

601

- The ownership of the Guidance Principles lays with the International Organization for Standardization (ISO) which will facilitate the international dissemination of the Guidance Principles and revision (see 6.3) with support of its national standards bodies (NSBs) in about 163 countries and ensure free access of the Guidance Principles document.
- To strengthen and actively support ISO in its dissemination efforts, a dedicated Coordinating Organisation should be set up to serve as focal point and ensure the promotion, implementation and monitoring of the Guidance Principles according to the rules enclosed in this document.

6.1 Responsibilities of the Coordinating Organisation

The Coordinating Organisation would be responsible for the setup of a complaint resolution mechanism (see 6.2), dissemination, monitoring of the robust and transparent implementation of the Guidance Principles and of compliance and associated claims (see 6.3), revision (see related tasks (see 6.4), and geographic and/or metal specific adaptations, if needed (see 6.5). More details are in Annex B.

6.2 Establish a complaint resolution mechanism

A complaint resolution mechanism would be developed and implemented by the Coordinating Organisation. It should allow any interested party to voice concerns to the Coordinating Organisation regarding the implementation of the Guidance Principles, such as non-compliances, inappropriate claims, misrepresentation, dispute between stakeholders, etc. The mechanism could be accessible to and used by economic operators of the secondary metal value chain, civil society organisations, individuals, governments and any other third party.

6.3 Monitoring & Evaluation

A Monitoring & Evaluation (M&E) system in line with ISEAL Alliance Impacts Code¹⁶ is presented in Annex C. The M&E system should build upon a *Theory of Change*, which describes the short, medium and long term intended impacts the Guidance Principles, including but not limited to:

- Improved working conditions throughout the secondary metal value chain;
- Improved living conditions and socio-economic benefits for local communities;
- Increased and optimized recovery of metals throughout the secondary metal value chain;
- Engagement with workers involved in Subsistence Activities (SA) and support their progress towards official recognition and formalization;
- Reduced negative impacts on the environment through elimination of hazardous substances emitted to water, soil and air and improved use of natural resources;

Annex C includes impact indicators following guidance from the ISEAL Alliance Impacts Code. The Coordinating Organisation should monitor and evaluate whether the expected impacts are observed and, if appropriate, suggest modifications in the Guidance Principles, their implementation and the general strategy of the ISO IWA 19 to achieve the desired impacts.

-

¹⁶ ISEAL Code of Good Practice for Assessing the Impacts of Social and Environmental Standards. Version 2.0 – September 2014. Available at:

www.isealalliance.org/our-work/defining-credibility/codes-of-good-practice/impacts-code

6.4 Revision of the Guidance Principles

602

603 604

605

606

607

608

623

624

625

626 627

628

According to ISO Directives clause SI.9, "three years after publication, the member body which provided the workshop secretariat¹⁷ will be requested to organize the review of an IWA¹⁸, consulting interested market players as well as, if needed, the relevant ISO committee(s). The result of the review may be to confirm the IWA for a further three-year period, to withdraw the IWA or to submit it for further processing as another ISO deliverable in accordance with Section 1 of the ISO/IEC Directives.

- An IWA may be further processed to become a Publicly Available Specification, a Technical Specification or an International Standard, according to the market requirement.
- An IWA may exist for a maximum of six years following which it shall either be withdrawn or be converted into another ISO deliverable".
- 613 Wherever feasible, revision procedures should take into account the ISEAL Alliance (2014) Code
- of Good Practice Setting Social and Environmental Standards V6.0. This recommends that the
- revised draft undergoes at least one round of public consultation and one round of consultation
- by members of the ISO IWA 19. Additional rounds of consultation may be organised upon needs.
- Following each round of consultation, the Coordinating Organisation should revise the draft of the
- 618 Guidance Principles to reflect suggested changes and established consensus. The final approval of
- revised Guidance Principles should be with the members of the ISO IWA 19.
- As part of the overall revision process, comments are welcomed on the Guidance Principles at any
- time throughout the year. Comments will be incorporated into the next scheduled review process.
- Please submit comments by email to the SRI Roundtable at sri@wrforum.org.

6.5 Geographic or metal-specific adaptations of the Guidance Principles

In certain situations, the Guidance Principles may not be suitable to a specific geographic and/or socio-economic context or to a specific type of metal. Before taking a decision on adaptation, it is advised to base it on a needs assessment at country level which may be developed by a third party.

- Potential parties leading geographic or metal specific adaptations are the national standardization bodies, national metal associations or industrial associations.
- To strengthen relevance and alignment with the original Guidance Principles, the party proposing
- 630 the adaptation is advised to seek feedback from the Coordinating Organisation, provided the
- 631 Coordinating Organisation has been setup, and other national or international relevant
- stakeholders about proposed change based on the results of the needs assessment.
- The party proposing the revision should draft a revised version of the Guidance Principles, in line
- 634 with the suggested changes. The adapted Guidance Principles should undergo at least one round
- of consultation by the Members of the ISO IWA 19, following ISEAL Standard-setting Code.
- 636 Additional rounds of consultation may be organised upon needs. Following each round of
- consultation, the Coordinating Organisation should revise the adapted Guidance Principles to
- reflect suggested changes and established consensus. The final approval of the adapted Guidance
- Principles should be with the Members of the ISO IWA 19.
- The process for geographic or metal-specific adaptations of the Guidance Principles is detailed in
- Annex D: Process for the geographic and metal-specific adaptations of the Guidance Principles.

¹⁷ In this case, the SNV - Swiss Association for Standardization.

¹⁸ In this case, ISO IWA 19 - Guidance Principles for the Sustainable Management of Secondary Metals.

OTZ / DIDITOGICADILY	642	7 Bibl	iogra	phy
----------------------	-----	--------	-------	-----

- 643 **African Development Bank (2001).** Environmental and Social Assessment Procedures for African
- 644 Development Bank's Public Sector Operations. Available at:
- 645 www.afdb.org/fileadmin/uploads/afdb/Documents/Policy-
- 646 <u>Documents/ENVIRONMENTAL%20AND%20SOCIAL%20ASSESSMENT%20PROCEDURES.pdf</u>
- **ASI (2014).** Aluminium Stewardship Initiative Performance and Chain of Custody Standards.
- 648 Available at: www.aluminium-stewardship.org/asi-standards/
- 649 **ASM International (1992).** ASM Materials Engineering Dictionary. United States.
- 650 **Basel Convention.** Basel Convention on the Control of Transboundary Movements of Hazardous
- 651 *Wastes and their Disposal.* Available at:
- 652 <u>www.basel.int/Portals/4/Basel%20Convention/docs/text/BaselConventionText-</u>
- 653 <u>e.pdfwww.basel.int/Portals/4/Basel%20Convention/docs/text/BaselConventionText-e.pdf</u>
- 654 **Basel Convention (2004).** Basel Convention Technical Guidelines on the environmentally sound
- 655 recycling/reclamation of metals and metal compounds (R4). Available at:
- 656 <u>www.basel.int/Portals/4/Basel%20Convention/docs/pub/techguid/r4-e.pdf</u>
- 657 **CBD (1992).** Convention on Biological Diversity. Available at: www.cbd.int/convention/
- 658 **CENELEC (2014).** EN 50625-1, Collection, logistics & Treatment requirements for WEEE Part 1:
- 659 General treatment requirements. European Committee for Electrotechnical Standardization.
- 660 Available at:
- 661 <u>www.ceced.eu/site-ceced/policy-areas/Environment/E-Waste/Recycling-Standards.html</u>
- 662 **EC (2008).** Directive 2008/98/EC on waste (Waste Framework Directive)
- 663 **EPA (1997b).** Terms or Environment: Glossary, Abbreviations and Acronyms. United States
- 664 Environmental Protection Agency. Available at:
- 665 www.nepis.epa.gov/Exe/ZyPDF.cgi/4000081B.PDF?Dockey=4000081B.PDF
- 666 **EPA (1997a).** *Measuring Recycling: A Guidance for State and Local Governments Glossary.* United
- 667 States Environmental Protection Agency. Available at:
- 668 www.ofmpub.epa.gov/sor internet/registry/termreg/searchandretrieve/glossariesandkeywor
- dlists/search.do?details=&glossaryName=Recycling%20-%20State%20and%20Local
- 670 **EPA (2008).** *Natural Landscaping Glossary.* United States Environmental Protection Agency.
- 671 Available at: www.archive.epa.gov/greenacres/web/html/index-4.html
- **European Commission (2002).** Directive 2002/96/EC of the European Parliament and of the
- 673 Council of 27 January 2003 on waste electrical and electronic equipment (WEEE). Available at:
- 674 www.eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32002L0096
- **European Commission (2010)**. Critical Raw Materials for the EU Report of the Ad-hoc Working
- 676 *Group on defining critical raw materials.* Available at:
- 677 www.ec.europa.eu/DocsRoom/documents/5662/attachments/1/translations/en/renditions/n
- 678 <u>ative</u>
- 679 **European Commission (2013).** Report on Critical Raw Materials for the EU. Available at:
- 680 <u>www.ec.europa.eu/enterprise/policies/raw-materials/files/docs/crm-critical-material-</u>
- 681 <u>profiles en.pdf</u>
- **European Parliament (2008).** Directive 2008/98/EC of the European Parliament and of the
- 683 Council of 19 November 2008 on waste and repealing certain Directive. Available at: www.eur-
- lex.europa.eu/LexUriServ/LexUriServ.do?uri=0J:L:2008:312:0003:0030:en:PDF

- 685 **FLO (2013).** Fairtrade Standard for Gold and Associated Precious Metals for Artisanal and Small
- 686 Scale Mining. Fairtrade Labelling Organisations (FLO).
- 687 <u>www.fairtrade.net/fileadmin/user_upload/content/2009/standards/documents/2015-04-</u>
- 688 <u>15 EN Gold-and-Precious Metals.pdf</u>
- 689 **FSC (2015).** FSC International Standard FSC Principles And Criteria For Forest Stewardship. Forest
- 690 Stewardship Council. Available at: www.ic.fsc.org/preview.fsc-principles-and-criteria-for-forest-
- 691 <u>stewardship-fsc-std-01-001-v5-2-enwebversion.a-4846.pdf</u>
- **Gunn, G. (2014).** *Critical Metals Handbook.* ISBN 978-0-470-67171-9. Available at:
- 693 <u>www.eu.wiley.com/WileyCDA/WileyTitle/productCd-0470671718.html</u>
- 694 **HSE (2016).** *Vulnerable workers.* Available at: <u>www.hse.gov.uk/vulnerable-workers/</u>
- 695 **ILO (1981).** *C155- Occupational Safety and Health Convention*. International Labour
- 696 Organization. Available at:
- 697 www.ilo.org/dyn/normlex/en/f?p=NORMLEXPUB:12100:0::NO::p12100 instrument id:312300
- 698 **ILO (2012).** *The global impact of e-waste: addressing the challenge. Geneva: ILO;2012.* Available at:
- 699 <u>www.ilo.org/wcmsp5/groups/public/@ed_dialogue/@sector/documents/publication/wcms_1</u>
- 700 96105.pdf
- 701 **ILO (2014).** Men and Women in the Informal Economy: A Statistical Picture. International Labour
- 702 Organization. Available at: www.ilo.org/wcmsp5/groups/public/---dgreports/---
- 703 <u>stat/documents/publication/wcms 234413.pdf</u>
- 704 **ISEAL Alliance (2011).** Stepwise approaches as a strategy for scaling up. Available at:
- 705 www.isealalliance.org/sites/default/files/Stepwise Approaches Background Report April2011.
- 706 <u>pdf</u>
- 707 **ISEAL Alliance (2012).** Assuring Compliance with Social and Environmental Standards. Code of
- 708 Good Practice. ISEAL Alliance, London, UK.
- 709 www.isealalliance.org/sites/default/files/private/ISEAL%20Assurance%20Code%20Version%
- 710 <u>201.0.pdf</u>
- 711 **ISEAL Alliance (2013)**. A Shared Approach to Estimating Living Wages Short description of the
- 712 *agreed methodology.*
- 713 www.isealalliance.org/sites/default/files/Descripton%20of%20Living%20Wage%20Methodol
- 714 ogv%2020131124.pdf
- 715 **ISEAL Alliance (2014a).** Assessing the Impacts of Social and Environmental Standards Systems.
- 716 ISEAL Code of Good Practice. Version 2.0 ISEAL Alliance, London, UK.
- 717 www.isealalliance.org/sites/default/files/ISEAL%20Impacts%20Code%20v2%20Dec%202014
- 718 <u>.pdf</u>
- 719 **ISEAL Alliance (2014b).** Setting Social and Environmental Standards ISEAL Code of Good
- 720 Practice, Version 6.0. ISEAL Alliance, London, UK.
- 721 <u>www.isealalliance.org/sites/default/files/ISEAL%20Standard%20Setting%20Code%20v6%20</u>
- 722 Dec%202014.pdf
- 723 **ISEAL Alliance (2015).** Sustainability Claims Good Practice Guide. Sustainability Standards
- 724 System Guide to Developing and Managing Environmental, Social and/or Economic Claims.
- 725 Version 1.0 May 2015, ISEAL Alliance, London, UK.
- 726 <u>www.isealalliance.org/sites/default/files/ISEAL Claims Good Practice Guide v1 FINAL.pdf</u>
- 727 **ISO (2000).** ISO 14020:2000, Environmental labels and declarations -- General principles
- **ISO (2003).** *ISO 15190:2003: Medical Laboratories Requirements for Safety Section 3.14.*

- 729 **ISO (2004).** *ISO/IEC 17000:2004. Conformity assessment -- Vocabulary and general principles.*
- 730 **ISO (2006).** ISO 14025:2006, Environmental labels and declarations -- Type III environmental
- 731 *declarations -- Principles and procedures*
- 732 **ISO (2006).** ISO 14040:2006, Environmental management -- Life cycle assessment -- Principles and
- 733 framework
- **ISO (2008).** *ISO 15270:2008: Plastics Guidelines for the recovery and recycling of plastics waste -*
- 735 Section 3.20.
- 736 **ISO (2009).** *ISO 31000:2009: Risk Management.*
- 737 **ISO (2010).** *ISO 26000:2010, Guidance on social responsibility*
- 738 ISO (2011). ISO 21070:2011: Ships and marine technology -Marine environment protection -
- 739 *Management and handling of shipboard garbage Section 3.1.4.*
- 740 **ISO (2013).** *ISO 14067:2013, Greenhouse gases -- Carbon footprint of products -- Requirements and*
- 741 guidelines for quantification and communication
- 742 ISO (2014). ISO 14046: 2014, Environmental management Water footprint -- Principles,
- 743 requirements and guidelines.
- 744 **ISO (2015).** *ISO* 13065:2015: Sustainability criteria for bioenergy.
- 745 IUCN (2008) IUCN Red List of Threatened Species. International Union for the Conservation of
- 746 Nature. Gland, Switzerland. www.iucnredlist.org/
- 747 Magalini F., Kuehr R. and Cornelis P.B. (2015) eWaste en América Latina Análisis estadístico y
- 748 recomendaciones de política pública. GSMA, United Nations. Available at
- 749 http://www.gsma.com/latinamerica/wp-content/uploads/2015/11/gsma-unu-ewaste2015-
- 750 spa.pdf
- 751 **McLaughlin, S. (1990).** *Skill training for the informal sector: analysing the success and limitations*
- of support programmes. In: Turnham, D., et al. (Eds.) The informal sector revisited. Seminar on the
- 753 informal sector revisited. Paris 7-9 September 1988. OECD, Paris.
- 754 Millennium Ecosystem Assessment (2003).
- 755 www.millenniumassessment.org/en/index.html
- 756 Müller S., Wäger P.A., Widmer R., and Williams I.D. (2015). A geological reconnaissance of
- 757 electrical and electronic waste as a source for rare earth metals Waste Management. Waste
- 758 Management (in press).
- 759 **OECD (2001).** Extended Producer Responsibility: A Guidance Manual for Governments.
- 760 Organisation for Economic Cooperation and Development. March, Paris, 18p. www.oecd-
- 761 <u>ilibrary.org/environment/extended-producer-responsibility 9789264189867-en</u>
- 762 **OECD (2011).** Case Study on Critical Metals in Mobile Phones (Final Report). Organisation for
- 763 Economic Cooperation and Development.
- 764 www.oecd.org/env/waste/Case%20Study%20on%20Critical%20Metals%20in%20Mobile%20
- 765 Phones.pdf
- **OECD (2016).** Due Diligence Guidance for Responsible Supply Chains of Minerals from Conflict-
- 767 Affected and High-Risk Areas. OECD; 2013. Available at:
- 768 www.oecd-ilibrary.org/governance/oecd-due-diligence-guidance-for-responsible-supply-
- 769 chains-of-minerals-from-conflict-affected-and-high-risk-areas 9789264185050-en

- 770 **OECD (2016)** Due Diligence Guidance for Responsible Supply Chains of Minerals from Conflict-
- 771 Affected and High-Risk Areas. Third Edition. OECD Publishing, Paris, France
- 772 <u>www.oecd.org/corporate/mne/GuidanceEdition2.pdf</u>
- 773 PACE (2011). PACE Guidelines and Glossary of Terms. Partnership for Action on Computing
- 774 Equipment.
- 775 www.basel.int/Implementation/TechnicalAssistance/Partnerships/PACE/PACEGuidelinesandG
- 776 <u>lossaryofTerms/tabid/3247/Default.aspx</u>
- 777 **PACE** (2013) PACE Guidance Document. Available at:
- 778 <u>www.basel.int/Implementation/TechnicalAssistance/Partnerships/PACE/PACEGuidanceDocum</u>
- 779 <u>ent/tabid/3246/Default.aspx</u>
- **PDAC (2009).** *e3 Plus: A Framework for Responsible Exploration Principles and Guidance notes.*
- 781 Prospectors & Developers Association of Canada. Available at: www.pdac.ca/docs/default-
- 782 <u>source/e3-plus---principles/glossary.pdf?sfvrsn=6</u>
- 783 Ramsar Convention on Wetlands of International Importance. Available at: www.ramsar.org
- 784 **RJC (2012).** Responsible Jewellery Council Chain of Custody Standard. Available at:
- 785 <u>www.responsiblejewellery.com/Chain of custody-certification/</u>
- 786 **RJC (2013).** Responsible Jewellery Council Code of Practices. Available at:
- 787 <u>www.responsiblejewellery.com/files/RJC Code of Practices 2013 eng.pdf</u>
- 788 **Robinson, B. (2009).** *E-waste: An assessment of global production and environmental impacts.*
- 789 Science of the Total Environment 408 (2009) 183–191
- 790 SRI (2015). Social Criteria for the Sustainable Management of Secondary Metals. Sustainable
- 791 Recycling Industries. Available at: www.sustainable-recycling.org/sustainable-recycling/wp-
- 792 content/uploads/2015/09/Sureda 2015 SRI.pdf
- 793 **Swiss Government (2011).** Federal Act on the Control of the Trade in Precious Metals and Precious
- 794 Metal Articles. 941.31. Swiss Government. Available at: www.admin.ch/opc/en/classified-
- 795 <u>compilation/19330048/</u>
- 796 The Free Dictionary, 2016. Retailer. Available at: www.thefreedictionary.com/retailer
- 797 **The Global Development Research Center (2013).** Concept of Informal Sector. Available at:
- 798 www.gdrc.org/informal/1-is concept.html
- 799 **The World Bank Group (2013).** Website: Workers in the Informal Economy. Available at:
- 800 <u>www.go.worldbank.org/1PVGLNWYC0</u> [Accessed on 21 December 2015]
- 801 The World Bank Group (2015). Website: Informal Labour Markets in Transition Economies –
- 802 Concept of Informal Sector. Available at:
- 803 <u>www.lnweb90.worldbank.org/eca/eca.nsf/1f3aa35cab9dea4f85256a77004e4ef4/2e4ede5437</u>
- 804 <u>87a0c085256a940073f4e4</u> [Accessed on 16 December 2015]
- 805 Transparency International (2015). Corruption Index. Available at: cpi.transparency.org
- 806 **UNEP (2013a).** *Minamata Convention on Mercury. Text and Annexes.* Available at:
- 807 <u>www.mercuryconvention.org/Portals/11/documents/Booklets/Minamata%20Convention%20</u>
- 808 on%20Mercury booklet English.pdf
- 809 **UNEP (2013b).** Environmental Risks and Challenges of Anthropogenic Metals Flows and Cycles, A
- 810 Report of the Working Group on the Global Metal Flows to the International Resource Panel. United
- 811 Nations Environment Programme. Available at:
- 812 www.publicationslist.org/data/patrick.waeger/ref-116/Environmental Challenges Metals-
- 813 Full%20Report.pdf

- **UNESCO (1972).** Convention Concerning the Protection of the World Cultural and Natural Heritage.
- Paris, France. Available at: www.whc.unesco.org/archive/convention-en.pdf
- **United Nations (2007).** *Declaration on the Rights of Indigenous People.* Available at:
- 817 <u>www.ohchr.org/EN/Issues/IPeoples/Pages/Declaration.aspx</u>
- 818 **United Nations (2011).** *Guiding Principles on Business and Human Rights.* Available at:
- 819 <u>www.ohchr.org/Documents/Publications/GuidingPrinciplesBusinessHR_EN.pdf</u>
- 820 **US Government Publishing Office (2012).** Code of Federal Regulation. Title 40- Protection of
- 821 Environment. Available at: <a href="https://www.gpo.gov/fdsys/pkg/CFR-2012-title40-vol26/xml/CFR-2
- 822 <u>title40-vol26-part240.xml</u>
- 823 US FTC (2012). Green Guide for the Use of Environmental Marketing Claims. Federal Trade
- 824 Commission of the United States of America. Available at:
- 825 www.ftc.gov/sites/default/files/attachments/press-releases/ftc-issues-revised-green-
- 826 guides/greenguides.pdf
- Wäger P.A., Lang D., Wittmer D., Bleischwitz R., and Hagelüken C. (2012). Towards a more
- 828 sustainable use of scarce metals. A review of intervention options along the metals life
- 829 cycle. GAIA 21: 4. 300-309

Annex A: 'Worst Practices' of Secondary Metals Recovery and Steps to Better Practices

1. Aim of the Fact Sheets

The following fact sheets provide a summary of identified *Worst Practices* linked to the recovery of secondary metals. They serve as reference and set the baseline from which to develop steps to better practices and towards increasingly replacing those *Worst Practices* listed.

2. Conditions and reasons for Worst Practices

Those undesirable practices are typically taking place in economic environments and political climates that show an absence of control mechanisms (such as the legislative enforcement of minimum processing standards to ensure the protection of both human health and environmental systems integrity). Individuals as well as local communities might be forced to engage in *Worst Practices* in subsistence activities and unofficial business activities linked to secondary metals recovery due to lack of other local income opportunities and despite their often tangible negative human health impacts. Poor education and lack of training also contribute to engaging in risky practices without sufficient protection for the workers or the receiving environment¹⁹.

3. Target Audience

The fact sheets are designed as a stand-alone information resource to guide economic operators, users and other stakeholders who wish to get full insight into the nature and complexity of the problems (both from a human health and environmental perspective) associated with *Worst Practices* of secondary metals recovery. This is done with a view to improve the processes and process steps where possible but also (where required) to encourage measures to eliminate, reduce or mitigate resulting environmental, health and safety impacts in case they cannot be prevented.

4. Generic Structure of the Fact Sheets

The fact sheets are structured to describe *Worst Practices* including the related processes involved in accordance to defined process steps (where possible). Each *Worst Practice* fact sheet contains a table where the following groups of impacts are described in alignment with the first four Principles addressed by the Guidance Principles namely:

- Safe, healthy and equitable working conditions
- Community relations and resilience²⁰
- Environment and natural resources
- Recovery of secondary metals

Under the section of "Better Practices" an attempt is made to point out (where possible) at alternatives and improvements that should be undertaken. Finally, all fact sheets provide a summary of all references used.

_

¹⁹ While prevalence can be observed in the developing and emerging economies, all *Worst Practices* described are by no means limited to the latter. Also such operations can also be occasionally found in otherwise "formal sector" e.g. if control mechanisms are not in place. Despite cultural preferences of certain practices and related "technical process steps" these fact sheets are therefore globally applicable.

²⁰ The impacts linked to this principle is reported in the fact sheets together with the safe, health and equitable working conditions due to the strong inter-relationship and impact overlap between those two.

5. Criteria Used to identify Worst Practices

The criteria upon which *Worst Practices* were selected and described in this document are as follows:

- They are applied to recover secondary metals from any waste that contains metals (including but not limited to electronic waste).
- They are globally wide-spread (mostly amongst economic operators involved in subsistence activities and unofficial business activities) often in emerging and developing economies.
- They are known for their severe (typically multiple) negative impacts with regards to the environment, workers/community health and safety and quality and quantity of recovered secondary metal.

6. Worst practices in secondary metal recovery

Fact sheets were developed for the following commonly observed practices of most concern according to the criteria defined in this Annex. The designation of the *Worst Practice* is aligned to the processes covered by the Guidance Principles namely *Collection, Preparation, Metallurgical Processing* and *Disposal* (See Figure 1):

Process	Worst Practice Identifed	
Collection	Bad collection	
Preparation	Crude dismantling/Coarse shredding	
Metallurgical processing	Amalgamation	
	Chemical leaching	
	Cooking	
	Uncontrolled open burning	
Disposal	Uncontrolled open dumping	

The *Worst Practices* documented in the relevant fact sheets can all release (in one or even multiple pathways) hazardous substances as highlighted in the *Figure 5*.

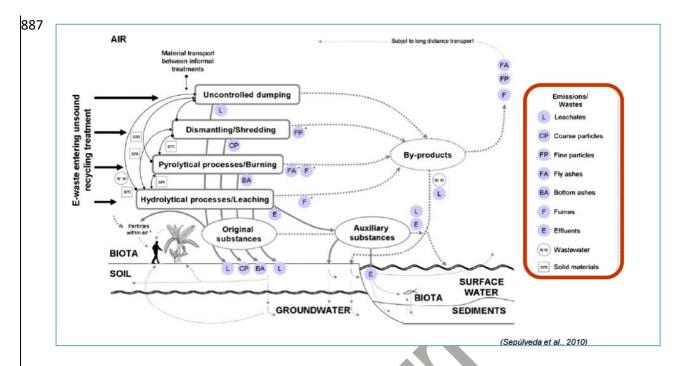


Figure 5: A summary of environmental pathways of substances released²¹

[The development of the fact sheets per *Worst Practices* identified is work in progress. Fact sheets will be published as stand alone document upon publicaction of the Guidance Principles]



888

889

Annex B: Responsibilities of the Coordinating Organisation

- The specific activities of the Coordinating Organisation would include the following:
 - Promote the vision, aim and awareness of the Guidance Principles;
 - Support the implementation of the Guidance Principles by target economic operators, governments and others;
 - Facilitate support to the different economic operators (especially those involved in Subsistence Activities) to perform self-assessments, due diligence reports, EPR reports and monitoring activities;
 - Facilitate transparency, accessibility and balanced decision-making in any decision related to the Principles (e.g. see Section 6.2);
 - Engage in partnerships with other key initiatives, in particular to support the integration of the Guidance Principles by sustainability standards and/or certification systems;
 - Support the development assurance mechanisms and facilitate the availability of tools and information needed for effective implementation of the Guidance Principles by standard organisations and assurance providers (e.g. auditors);
 - Facilitate the piloting of the Guidance Principles in developing and emerging economies and, hence, the building bridges and the progressive integration of workers involved in Subsistence Activities (SA) towards the formal sector of the secondary metals value chain, improved working conditions, etc. in the suggested three component stepping stone approach for improvements;
 - Provide support to compliant economic operators with communication and claims information;
 - Provide legal information and support to economic operators (e.g. relevant waste laws and regulations in the country of operations);
 - Coordinate financial support opportunities, training and capacity building from governments, NGOs and partner enterprises;
 - Evaluate samples of assessments, self-assessments, due diligence reports, EPR reports, monitoring by governments and NGOs, as well as corrective actions by economic operators;
 - Monitor samples of claims used in relation to the Guidance Principles and undertake action as appropriate in case of misuse or misrepresentation;
 - Support the review of the Guidance Principles after 3 years (see Section 6.4) by collecting feedback and resourcing the revision processes;
 - Publicly release annual reports on the implementation of the Guidance Principles, including rates of uptake by stakeholder group, progresses towards full compliance by economic operators involved in Subsistence Activities (SA) and economic operators involved in Unofficial Business Activities (UBA) and Official Business Activities (OBA);
 - Facilitate a complaint resolution mechanism (see Section 6.2) e.g. in cases of conflicts of interest throughout the implementation of Guidance Principles, particularly in the assurance process.

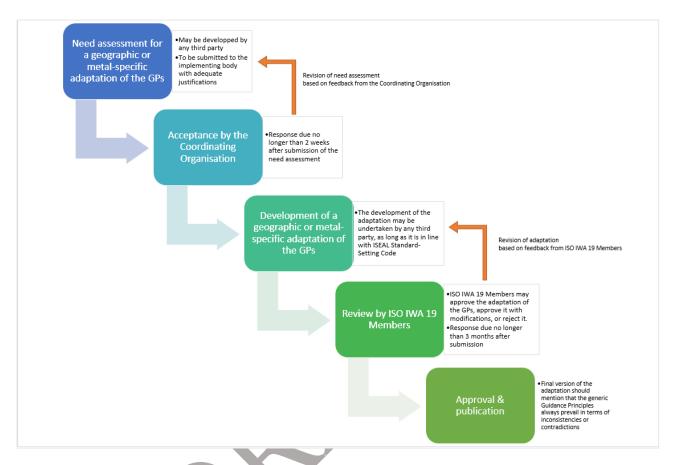


Annex D: Process for the geographic and metal-specific adaptations of the Guidance Principles

934

932

933



935

Figure 6: Process for the geographic or metal-specific adaptation of the Guidance Principles