



International
Labour
Organization



▶ **Traditional Occupations
of Indigenous and Tribal Peoples
in Labour Statistics**



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in Labour Statistics**

International Labour Organization, Geneva

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▶ Contents

▶ Acknowledgements	viii
▶ Abbreviations and Acronyms	ix
▶ Introduction	1
▶ Why do we need statistics on traditional occupations?	5
2.1. Traditional occupations and livelihoods	6
2.2. Traditional occupations, biodiversity and climate change	7
2.3. Invisibility of traditional occupations in official statistics	9
▶ Identification of indigenous and tribal peoples and making them visible in statistics	13
3.1. Which groups should be considered as indigenous and tribal peoples?	14
3.2. Question design to identify indigenous and tribal peoples in censuses, surveys and administrative data collections	16
3.2.1. Overview of existing approaches	17
3.2.2. A question on ethnicity or ethnic identity	18
3.2.3. Specific questions on identification as belonging to an indigenous or tribal people	19
3.2.4. Questions that identify specific indigenous or tribal groups	20
3.2.5. Questions on ancestry and race	20
3.2.6. Combining general questions on ethnic characteristics with questions on identification with specific indigenous groups	21
3.3. Improving the identification of indigenous peoples in statistical data sources	22
▶ The concept of traditional occupations	25
4.1. What are “traditional occupations/livelihood activities” of indigenous peoples?	26
4.2. The types of work performed in traditional occupations – similarities, differences and specialization	28
4.3. Indigenous peoples’ perspectives on their traditional occupations	30
4.4. Traditional occupations and indigenous knowledge	36

▶ Measurement of work in official statistics	43
5.1. The concept and statistical measurement of work	44
5.2. Own-use production work	45
5.3. Volunteer work	49
5.4. Jobs, work activities and economic units	50
5.5. Labour force status, status in employment and status at work	50
5.6. Traditional occupations and formalization of the economy	53
5.6.1. Statistical standards related to the informal economy	53
5.6.2. The informal sector	54
5.6.3. Informal employment	56
▶ Concepts and classification of occupation and industry in official statistics	59
6.1. Concepts of occupation and industry	60
6.2. International Standard Industrial Classification of All Economic Activities, (ISIC)	60
6.3. International Standard Classification of Occupations (ISCO-08) and related national classifications	64
6.4. Collection, coding and dissemination of data on occupation and industry	66
6.5. Traditional occupations in occupational classification systems	68
6.5.1. Traditional occupations in ISCO	68
6.5.2. Occupations related to indigenous peoples in national occupation classifications	69
6.5.3. Occupations where knowledge of traditional culture and practices may influence the way the work is performed	72
6.5.4. ISCO-08 groups that could potentially be added to the list of traditional occupations	75
6.6. Potential statistical definition and indicators of traditional occupations	81
6.6.1. Proposed statistical definition of traditional occupations	81
6.6.2. Proposed statistical indicators for traditional occupations	82
▶ Data sources	89
7.1. Labour force surveys	90
7.2. Surveys targeting indigenous peoples	91
7.3. Time-use surveys	92
7.4. Population censuses	92
7.5. Economic data collections	92
7.6. Administrative records	93

► Experimental estimates	95
8.1. Selection and analysis of microdata sets	96
8.2. Ecuador	97
8.3. Nepal	101
8.4. Lao People's Democratic Republic	108
8.5. What does the microdata analysis tell us?	113
► Conclusions, future work and next steps	117
9.1. Conclusions	118
9.1.1. Visibility of indigenous and tribal peoples in official statistics	118
9.1.2. Definition and measurement of traditional occupations	119
9.1.3. Existing and potential data sources	120
9.2. Future work and next steps	121
9.2.1. Broad streams of activity to promote the measurement of the practice of traditional occupations	122
9.2.2. Specific actions to promote the development of statistics on traditional occupations	123
► References	125
► Annexes	129
Annex 1. ISCO-08 groups to be used for operational measurement of traditional occupations when information on the use of indigenous knowledge at work is not directly available	130
Annex 2. Ethnic groups considered indigenous in Nepal	132

► Boxes

Box 1. Aichi Biodiversity Target 18	9
Box 2. Convention on Biological Diversity, Article 8(j)	36
Box 3. UN Declaration on the Rights of Indigenous Peoples (UNDRIP), Article 31	37
Box 4. Insights from the Indigenous Navigator on challenges to the practice of traditional healing and use of traditional medicines	39
Box 5. Subsistence foodstuff producers	47
Box 6. International Classification of Status at Work (ICSaW-18)	53
Box 7. Model question to collect occupation data	67
Box 8. Model question to collect industry data	67
Box 9. Extract from Kenya National Occupation Classification Standard (KNOCS 2000)	70
Box 10. Indigenous health workers in Australia and New Zealand	71

► Tables

Table 1. The most important traditional occupations performed by indigenous women and men, based on the Indigenous Navigator	33
Table 2. International Classification of Status in Employment according to type of authority (ICSE-18-A)	51
Table 3. International Classification of Status in Employment according to type of economic risk (ICSE-18-R)	52
Table 4. ISIC Rev.4 – Broad structure	61
Table 5. Broad sector concordance with ISIC	62
Table 6. ISIC Rev.4, Division 01 - Crop and animal production, hunting and related service activities	63
Table 7. Mapping of ISCO-08 major groups to skill levels	65
Table 8. ISCO groups for which traditional knowledge may influence performance of tasks	74
Table 9. Persons employed in traditional and non-traditional occupations by sex and indigenous status, Ecuador 2021	98
Table 10. Indigenous persons employed in traditional and non-traditional occupations by economic activity, Ecuador 2021	100
Table 11. Persons employed in traditional and non-traditional occupations by sex and indigenous status, Nepal 2017-18	103
Table 12. Indigenous persons employed in traditional and non-traditional occupations by economic activity, Nepal 2017-18	104
Table 13. Non-indigenous persons employed in traditional and non-traditional occupations by economic activity, Nepal 2017-18	105
Table 14. Skilled agricultural, forestry and fishery workers by indigenous status and occupation, Nepal 2017-18	105
Table 15. Indigenous persons employed in traditional and non-traditional occupations by economic activity, Lao PDR 2017	110
Table 16. Non-indigenous persons employed in traditional and non-traditional occupations by economic activity, Lao PDR 2017	111

► Figures

Figure 1. Share of indigenous and non-indigenous employment in traditional and other occupations, Ecuador 2021	98
Figure 2. Share of indigenous persons employed in traditional occupations by age group, Ecuador 2021	99
Figure 3. Indigenous employment in traditional and other occupations by status in employment, Ecuador 2021 (%)	100
Figure 4. Share of employment of indigenous and non-indigenous persons by economic activity, Ecuador 2021 (%)	101
Figure 5. Share of indigenous employment in traditional and other occupations, Nepal 2017-18	102
Figure 6. Share of indigenous and non-indigenous employment in traditional occupations by sex, Nepal 2017-18	102
Figure 7. Share of employed indigenous and non-indigenous persons in traditional occupations by age group, Nepal 2017-18 (%)	103
Figure 8. Share of employment of indigenous and non-indigenous persons by economic activity, Nepal 2017-18 (%)	104
Figure 9. Skilled agricultural, forestry and fishery workers – status in employment, Nepal 2017-18	106
Figure 10. Indigenous agricultural, forestry and fishery labourers: frequency and share of employees, Nepal 2017-18	106
Figure 11. Indigenous employment in traditional and other occupations by status in employment, Nepal 2017-18 (%)	107
Figure 12. Non-indigenous employment in traditional and other occupations by status in employment, Nepal 2017-18 (%)	107
Figure 13. Own-use foodstuff production and labour force status, indigenous persons aged 15 and over, Nepal 2017-18 (thousands)	107
Figure 14. Share of indigenous and non-indigenous employment in traditional and other occupations, Lao PDR 2017.	109
Figure 15. Share of indigenous and non-indigenous employment in traditional occupations by sex, Lao PDR 2017	109
Figure 16. Share of employed indigenous and non-indigenous persons in traditional occupations by age group, Lao PDR 2017 (%)	110
Figure 17. Share of employment of indigenous and non-indigenous persons by economic activity, Lao PDR 2017 (%)	111
Figure 18. Indigenous employment in traditional and other occupations by status in employment, Lao PDR 2017 (%)	112
Figure 19. Indigenous skilled agricultural forestry and fishery workers & Indigenous agricultural forestry and fishery workers - status in employment, Lao PDR 2017	112

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► Abbreviations and Acronyms

ABS	Australian Bureau of Statistics
AIPP	Asia Indigenous Peoples Pact
ANZSCO	Australian and New Zealand Standard Classification of Occupations
CEACR	(ILO) Committee of Experts on the Application of Conventions and Recommendations
CBD	Convention on Biological Diversity
CBNRM	community-based natural resource management
COVID-19	disease caused by severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2)
DEMOSTAF	Demography Statistics for Africa
DHS	Demographic and Health Survey
FAO	Food and Agriculture Organization of the United Nations
FILAC	Fund for the Development of the Indigenous Peoples of Latin America and the Caribbean
FPP	Forest Peoples Programme
IBGE	<i>Instituto Brasileiro de Geografia e Estatística</i> (Brazilian Institute of Geography and Statistics)
ICLS	International Conference of Labour Statisticians
ICSaW	International Classification of Status at Work
ICSE	International Classification of Status in Employment
ICSE-18-A	International Classification of Status in Employment according to type of authority
ICSE-18-R	International Classification of Status in Employment according to type of economic risk
ILO	International Labour Organization
ISCO	International Standard Classification of Occupations
ISIC	International Standard Industrial Classification of All Economic Activities
IWGIA	International Work Group for Indigenous Affairs
KNOCS	Kenya National Occupation Classification Standard
LFS	labour force survey
MRG	Minority Rights Group International
n.d.	no date
OECD	Organisation for Economic Co-operation and Development
OHCHR	Office of the United Nations High Commissioner for Human Rights
SNA	System of National Accounts
Stats NZ	Statistics New Zealand
TUS	time-use survey
UN	United Nations
UNDRIP	United Nations Declaration on the Rights of Indigenous Peoples
UNSD	United Nations Statistics Division



1

Introduction

►► The objective of this technical paper is to facilitate reflection on possibilities for capturing the practice of the traditional occupations of indigenous and tribal peoples in labour statistics as a means to understand and monitor related trends and build evidence for public policymaking.

The right of indigenous and tribal peoples to practise their traditional activities and occupations is internationally recognized. The United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP), adopted by the United Nations (UN) General Assembly in 2007, proclaims the right of indigenous peoples to engage freely in all their traditional and other economic activities (Article 20). The ILO Indigenous and Tribal Peoples Convention, 1989 (No. 169), provides that “[h]andicrafts, rural and community-based industries, and subsistence economy and traditional activities of the peoples concerned, such as hunting, fishing, trapping and gathering, shall be recognised as important factors in the maintenance of their cultures and in their economic self-reliance and development”. The ILO Discrimination (Employment and Occupation) Convention, 1958 (No. 111), requires States to adopt and pursue a national equality policy to eliminate discrimination in employment and occupation, including discrimination faced by indigenous and tribal peoples as regards the exercise of their traditional occupations (CEACR (ILO), *Giving globalization a human face*, 2012 General Survey on the fundamental Conventions, [para. 752](#)).

Over recent years, the enjoyment by indigenous and tribal peoples of their right to engage in traditional occupations has gained increased attention, particularly in the context of discussion of policies for inclusive and sustainable development, protection of biodiversity and customary sustainable use of biological diversity, as well as combating climate change. The objective of this technical paper is to facilitate reflection on possibilities for capturing the practice of the traditional occupations of indigenous and tribal peoples in labour statistics as a means to understand and monitor related trends and build evidence for public policymaking.

Aiming to contribute to improved availability of data that meaningfully provide insights into the situation of indigenous and tribal peoples, this paper follows up on [Building an Inclusive, Sustainable and Resilient](#)

[Future with Indigenous Peoples: A Call to Action](#) issued by the UN System Chief Executives Board for Coordination (CEB) in November 2020, which specifically calls on the UN system to strengthen data on indigenous peoples. Building on previous ILO work on traditional occupations, the paper also contributes to the implementation of the ILO’s 2015 strategy for action concerning indigenous and tribal peoples, under which the strengthening of knowledge and data is one of the identified action areas.

In 2019, the ILO published a report with global and regional estimates concerning the population, employment and poverty of indigenous peoples ([Implementing the ILO Indigenous and Tribal Peoples Convention: Towards an Inclusive, Sustainable and Just Future](#)). One of the recommendations of the report was to continue to strengthen the visibility of indigenous peoples in official data and statistics. In this context, the ILO is seeking to assess the extent to which existing labour statistics cover traditional occupations of indigenous and tribal peoples. This effort builds on earlier related publications: *Traditional Occupations of Indigenous and Tribal Peoples: Emerging Trends*, 2000; *Indigenous Peoples and Climate Change: Emerging Research on Traditional Knowledge and Livelihoods*, 2019 (with Oxford University); and exploratory work on traditional occupations in collaboration with the Tebtebba Foundation in 2008.

This paper aims to take this work forward by providing an overview of how traditional occupations are or could possibly be covered better in labour statistics, including options for a statistical definition and statistical indicators. An earlier draft of the paper was discussed in a consultation with indigenous experts in late 2021. The current version has benefited greatly from the insights and observations of these experts. It has been prepared to facilitate further consultations among indigenous peoples’ representatives and experts and among statistical experts from relevant national institutions and UN

system entities. It seeks to provide a basis for further discussion and development of definitive and comprehensive guidance and supporting materials on the collection and compilation of statistics on traditional occupations and the preparation of future reports presenting data on indigenous peoples for use in particular by:

- staff in national statistical offices and other research agencies who wish to compile statistics on indigenous populations and their occupations;
- researchers preparing reports and studies on traditional occupations; and
- representatives of indigenous and tribal peoples who want to understand the information available and help shape the development of information on traditional occupations.

In Chapter 2 we discuss why there is a need to collect statistics on traditional occupations and improve their visibility in official statistics, and to provide information relevant to the livelihoods, identities and cultures of indigenous and tribal peoples themselves, as well as to the wider concerns around protection of the environment, biological diversity and effective climate action through the retention and use of traditional knowledge.

To improve the visibility of statistics about traditional occupations, there is a need not only to identify these occupations in statistical data sources but also to improve the visibility in these sources of individuals who identify as indigenous. In Chapter 3 we discuss some of the issues and challenges around indigenous identification in data sources and the compilation of statistics on indigenous and tribal populations. These include the concept of indigenous and tribal peoples and the differing perceptions about this in different parts of the world, the various approaches to designing questions to identify indigenous and tribal peoples in statistical and administrative data collections, and the difficulties that can be faced in compiling statistics on populations which, in many countries, are very small.

Chapter 4 discusses the concept of traditional occupations that should ideally be measured, and

the relevance of the practice of these occupations to the retention of traditional skills and knowledge that are passed on from generation to generation, yet are constantly evolving in response to technological developments and environmental change.

In Chapters 5 and 6 we go on to explain how the notion of traditional occupations relates to the concepts and classification systems currently measured in official labour statistics. Chapter 5 also discusses the statistical concepts of the informal sector, informal employment and own-use production work, and how these concepts relate to traditional occupations. Chapter 6 focuses on the identification of traditional occupations in the classification systems used in official statistics for occupation and economic activity. It proposes options for a statistical definition and indicators of traditional occupations based on these classification systems. It also acknowledges the limitations of measuring the practice of traditional occupations based on classification systems alone. This should be seen as a useful proxy measure, when it is not possible to directly measure the extent to which indigenous workers use their traditional knowledge in the practice of their jobs and work activities.

In Chapters 7 and 8 we focus on some of the practical issues involved in the compilation and collection of statistics on traditional occupations. Chapter 7 discusses the strengths, weaknesses and limitations for this purpose of various types of statistical data source, including household surveys and censuses, economic data collections and administrative records. Chapter 8 presents the results of analysis of selected national survey microdata sets held by the ILO Department of Statistics with the aim of assessing the feasibility and usefulness of the statistical definition of traditional occupations and indicators proposed in Chapter 6. Experimental estimates are provided based on recent labour force survey data from Ecuador, Nepal and the Lao People’s Democratic Republic.

Chapter 9 provides a summary of findings and conclusions. It identifies potential future work with a view to identifying the way forward to capture the practice of traditional occupations in official labour statistics.



2

Why do we need statistics
on traditional occupations?

►► If compiled on a long-term basis, statistics on traditional occupations could provide important information on the extent to which the practice of traditional occupations is in decline or increasing, and an assessment of the extent of the potential loss of traditional indigenous knowledge which underpins these occupations.

The activities that indigenous and tribal peoples have traditionally undertaken to provide for their subsistence needs are considered central to their cultures, food systems, livelihoods and to their very identity as distinct peoples. The exercise of these traditional occupations is rooted in an intimate knowledge of the land, environment and natural resources, as well as in the cultural practices used to manage and make use of the resources available. The underlying knowledge and practices are passed from generation to generation while continuing to be adapted over time to reflect changes in circumstances, needs, available technologies and resources, as well as changes in the environment itself.

Traditional occupations are considered as assets for developing economic activities beyond covering subsistence needs. Improving statistics on traditional occupations would provide important insights into trends which in turn are directly related to sustainable livelihoods, food security, local economic development, protection of the environment and biological diversity, as well as effective climate action. Statistical data on the practice of traditional occupations in market activities could help demonstrate the value of maintaining and extending indigenous knowledge, and highlight the importance of this knowledge and these occupations for the livelihoods of indigenous peoples in the market economy. If compiled on a long-term basis, statistics on traditional occupations could provide important information on the extent to which the practice of traditional occupations is in decline or increasing, and an assessment of the extent of the potential loss of traditional indigenous knowledge which underpins these occupations.

2.1. Traditional occupations and livelihoods

Alongside the importance of traditional occupations for retaining traditional indigenous knowledge and cultures, attention to these occupations is relevant in the context of supporting indigenous peoples' livelihoods and addressing the inequalities and marginalization experienced by many indigenous peoples, in the face of increasing urbanization, climate change, and the rapid social and economic transformation taking place in many regions of the world.

“Traditional economies of indigenous peoples were characterized by a relatively equal distribution of wealth and strong social norms of sharing whatever surplus the society produced. Today, however, these norms are breaking down, and as individual families acquire more wealth and power, reliance on the community is reduced. Reduced access to land, differential access to education, urbanization and the privatization of commonly held resources are all factors that are weakening the strong reciprocal ties and mechanisms for mutual aid that were essential to the survival of indigenous groups.”

(ILO 2000).

Traditional occupations can be an asset for indigenous communities to develop income-generating activities and to provide a diverse base for family consumption and income (ILO 2000, 5), contributing to eliminating socio-economic gaps and allowing them to assert their right to guide economic development decisions in a manner compatible with

their aspirations and ways of life. The transition of indigenous peoples and their occupations from subsistence activities to market-oriented production is frequently not an easy process, however, and does not always lead to a positive or equitable outcome for them. Activities of indigenous peoples, such as shifting cultivation, fishing and pastoralism, are often not recognized by governments, which regard these sustainable practices as outdated and antithetical to 'development'. This has led to discrimination against such occupations and their subsequent marginalization, resulting in significant loss of income and traditional knowledge. In the worst case, the practices of shifting cultivation have been banned in most countries in Asia resulting in food insecurity and loss of biodiversity, traditional knowledge and customary forest governance (AIPP 2010, 8), with consequent impacts on the well-being and health of indigenous peoples.

In order to gain access to markets, indigenous farmers may frequently be required to adopt modern agricultural practices. This may involve overuse of chemicals and overexploitation of resources, which undermine traditional sustainable agricultural methods. The growth in contract farming, which provides agricultural producers with a guaranteed market and price for their crops or livestock, may mitigate prevalent market failures and reduce the risks faced by smallholder farmers. However, owing to the weak position of farmers in the contractual arrangements, contract farming does not always lead to an improved economic situation for farm households or for the communities in which they operate. This may put them in a situation of dependence on large corporations that control prices and impose production methods that do not respect the environment and ignore traditional indigenous knowledge (Meemken and Bellemare 2020; Rehber 2019; AIPP 2010).

Although traditional occupations have not historically been highly specialized, in many indigenous societies there are important differences in the roles traditionally performed by men and women. There is evidence that gender dimensions of traditional occupations may be impacted by transitions to commercial production and there is also strong interest in gaining a better understanding of gender-based divisions of labour and changes over time.

The COVID-19 pandemic has exacerbated the unfavourable living conditions and vulnerabilities experienced by indigenous peoples (IWGIA and

(ILO 2020). The pandemic has also reemphasized the importance of traditional occupations and knowledge for securing livelihoods, resilience, and traditional health practices. Previous experiences of crises and epidemics arriving from outside, traditional solidarity, and traditional food production systems have helped indigenous communities to face the challenges imposed by disrupted food supply chains, loss of employment and return of community members from cities to rural areas (FAO 2020; IWGIA and ILO 2020; Chakma 2020). Indigenous communities in both Asia and Latin America have undertaken self-imposed lockdowns or village closures based on traditional practices, even in the face of resistance from local authorities (IWGIA and ILO 2020; UN 2020). In North America, herbalist students from the Sitting Bull College at the Standing Rock Sioux Reserve in North Dakota, United States, developed and published a guide to herbal medicines for collective protection and healing during COVID-19, based on their knowledge of traditional medicinal plants (Rivera 2020).

It is true that many non-indigenous communities have shown resilience and solidarity in the face of the challenges experienced during the pandemic. However, traditional knowledge and traditions have had a major impact on the way indigenous communities have coped with these challenges. The continuing practice of traditional occupations is critical to ensure that this knowledge is passed on, maintained, and developed.

2.2. Traditional occupations, biodiversity and climate change

There is increasing recognition of the relevance of the practice of traditional occupations to environmental protection, food security, biodiversity and mitigating climate change. Numerous examples can be found in academic literature and in the news media of cases where traditional indigenous forestry and agricultural practices have been used to resolve or mitigate the impact of problems caused by climate change, over-production, and over-use of pesticides and fertilizers. Examples include regenerative farming and reintroduction of native species to reduce soil erosion, resulting in increased biodiversity and natural control of pests in grazing lands. In this context, there is increasing concern

about the need to maintain the cultural identity of indigenous peoples and to retain their traditional knowledge through continuing practice of their traditional occupations.

Traditional occupations, and particularly traditional agricultural practices, can also contribute to the achievement of Sustainable Development Goal (SDG) 2, which aims at ending hunger, achieving food security and improved nutrition, and promoting sustainable agriculture. Indigenous peoples' food systems are recognized for providing nourishment and healthy diets, while helping to preserve global biodiversity (FAO 2021). In particular, SDG target 2.3 aims at doubling the agricultural productivity and incomes of small-scale food producers by 2030, in particular women, indigenous peoples, pastoralists and fishers (UN, n.d.). Traditional knowledge and traditional occupations can have an important role in enabling the achievement of this goal for indigenous peoples, and labour statistics on traditional occupations could contribute to the discussion on indicators for the labour productivity and income of indigenous peoples, which are key to monitoring target 2.3.

In some countries, recent policies have encouraged traditional occupations, through community-based natural resource management (CBNRM) schemes and payment for environmental services such as traditional burning practices, hydrology management, forest and wildlife management. Such schemes are seen as a means of improving [natural resource management](#) while empowering indigenous people and local communities, and have achieved varying degrees of success in meeting these objectives (Zander et al. 2013; Rodríguez-Robayo et al. 2015; Future Generations 2008; Dressler et al. 2010).

Forest and forestry-related activities are of particularly high relevance for mitigating climate change and preserving biodiversity. They are among the main traditional occupations and sources of livelihoods for many indigenous peoples. While forest occupations are also practised by non-indigenous people, indigenous knowledge can make a difference to the way indigenous peoples practise these occupations and be of high value to society as a whole. This includes indigenous knowledge about the different types of forest use such as production of wood fuel, timber, and about non-wood forest products such as berries, mushrooms and medicinal plants. A study released recently shows that the indigenous peoples of Latin America are

by far the best guardians of the region's forests, with deforestation rates up to 50 per cent lower in their territories than elsewhere, highlighting the relevance of traditional occupations and indigenous knowledge to mitigating climate change (FAO and FILAC 2021).

The importance of retaining traditional knowledge through the practice of traditional occupations has been formally acknowledged at the Conference of the Parties to the Convention on Biological Diversity (CBD). In 2012 it adopted four indicators related to the knowledge, innovations and practices of indigenous peoples and local communities, including "trends in the practice of traditional occupations", which was seen as a useful proxy for the retention of traditional knowledge. These indicators are part of the indicator framework for the Strategic Plan for Biodiversity 2011–2020 and relate to Target 18 of the Aichi Biodiversity Targets (UNEP 2012), which have been linked to the SDGs and their targets.

Despite the recognition of the importance of developing indicators on traditional occupations, significant obstacles remain. In 2016, the decision of the 13th meeting of the CBD Conference of the Parties included specific operational indicators for all of these indicators except for "trends in the practice of traditional occupations". The 2020 CBD report on progress towards Aichi Biodiversity Target 18 on traditional knowledge and customary sustainable use of biodiversity notes that:

Significant challenges remain in measuring progress at the national level, as very few Parties have addressed all elements of the global Aichi Biodiversity Target 18 in designing their related national target(s). Further to this, Parties have not adopted nationally specific indicators related to the four indicators adopted for traditional knowledge, in order to measure progress on the elements of Aichi Biodiversity Target 18 at the national level.

Labour statistics on traditional occupations could potentially contribute to current negotiations relating to traditional knowledge, customary sustainable use and related indicators, in the context of the [Post-2020 Global Biodiversity Framework](#), which aims to galvanize urgent and transformative action to contribute to the objectives of the CBD. The draft document includes a proposed Target 9, which is to "ensure benefits, including nutrition, food security, medicines, and livelihoods for people especially

for the most vulnerable through sustainable management of wild terrestrial, freshwater and marine species and protecting customary sustainable use by indigenous peoples and local communities" (CBD 2021). The draft document also sets out the need to increase "understanding, awareness and appreciation of the values of biodiversity, including the associated knowledge, values and approaches used by indigenous peoples and local communities" (CBD 2021).

2.3. Invisibility of traditional occupations in official statistics

Reflecting these concerns and issues, there is a need for information that will facilitate a better understanding of the livelihoods and activities of indigenous peoples, both in their traditional occupations and in the wider economy. This type of information has long been needed to support public policy-making on social protection, support for income generation and entrepreneurship, education, and vocational training in relation to these groups, taking into account their specific circumstances. As indicated above, there is now increasing recognition of the value of information on the practice of traditional occupations to support policy development and evaluation with respect to climate change, biodiversity and food security.

The identification and coverage of traditional occupations in labour statistics can potentially play an important role in meeting these information needs and in monitoring changes over time. Reliable statistics on traditional occupations would help researchers, policymakers, and the indigenous and tribal peoples themselves develop a better understanding of the work and livelihood activities of indigenous peoples. The statistics would improve the visibility of these activities and provide objective information on their value for society as a whole, and thereby inform the development of appropriate policies

in support of indigenous peoples' livelihoods and local economies.

With respect to environmental issues, statistics on traditional occupations could support the promotion of green jobs, assist in leveraging indigenous peoples' contributions to the protection of biodiversity and climate change mitigation, and contribute to monitoring global indicators and targets on biodiversity.

► Box 1. Aichi Biodiversity Target 18

By 2020, the traditional knowledge, innovations and practices of indigenous and local communities relevant for the conservation and sustainable use of biodiversity, and their customary use of biological resources, have secured respect, subject to national legislation and relevant international obligations, and are fully integrated and reflected in the implementation of the Convention with the full and effective participation of indigenous and local communities, at all relevant levels.

1. Trends in linguistic diversity and numbers of speakers of indigenous languages;
2. Trends in land-use change and land tenure in the traditional territories of indigenous and local communities;
3. Trends in the practice of traditional occupations;
4. Trends in which traditional knowledge and practices are respected through their full integration and through safeguards and the full and effective participation of indigenous and local communities in the national implementation of the Strategic Plan.

(UNEP 2013)

► Despite the increasing recognition of these important information needs, comprehensive official statistics on traditional occupations are rarely available.

As referred to in the UN 2009 report *State of the World's Indigenous Peoples*, the status of and trends in the practice of traditional occupations are an indicator that:

...tries to capture the continuity and change in indigenous peoples' relationships and access to ecosystem resources and services over time. When combined with information about changes in land-use patterns, including percentage of lands and resources under local control as well as demographic changes, this indicator can begin to measure changes in the livelihoods of indigenous peoples.

Joji Cariño in UN 2009

Despite the increasing recognition of these important information needs, comprehensive official statistics on traditional occupations are rarely available. This is in part due to the continuing poor visibility of indigenous and tribal peoples in official statistics, although progress in indigenous identification has been made in recent years in some parts of the world. Even when indigenous and tribal peoples are identifiable in statistical sources, it is rarely possible to produce statistics on the practice of their traditional occupations. One of the main reasons for this is that there is no agreed definition of traditional occupations for statistical purposes.

In the concluding chapter of the above-mentioned UN 2009 report, Mililani Trask noted that the lack of data represented a considerable obstacle to the development and implementation of sound policies on indigenous issues in the areas of economic and social development, culture, education, the environment, health and human rights. Where disaggregated data on indigenous peoples are available,

they have not only made it possible to verify the inequalities faced by these populations but have also facilitated the ability of some States to implement poverty reduction strategies that positively impact on their situation (UN 2009).

In a 2011 study, national census questionnaires were examined for data on indigenous populations, but only 43 (23.1 per cent) of the 184 countries and areas in the study had attempted to collect statistical information on some or all of the indigenous groups living within their borders. Most of the countries collecting relevant data were in the Americas and Oceania (Peters 2011). Data on indigenous status are more frequently found in population censuses than in household surveys. There is an evident gap in longitudinal records, at least in vital statistics and health information (Del Popolo and Schkolnik 2013). However, an increasing number of countries are now including indigenous status – or at least ethnicity – in their census and household surveys, recognizing that the collection of such data is crucial for effective policymaking. In Latin America, for example, only two censuses included self-identification criteria in the 1990 round, but by the 2010 round such criteria were present in 21 of them (UN ECLAC 2016). However, in 2019 the ILO was able to gather country-level data for only 58 of the 90 countries where indigenous peoples are considered to live (ILO 2019a).

Frequent, detailed, harmonized statistics are needed to draw the attention of policymakers in governments and corporations to the very existence of indigenous peoples – and to inform them of the value of their activities as a contribution to the economy, to social well-being, to promoting biodiversity and to mitigating climate change.





3

Identification of indigenous and tribal peoples and making them visible in statistics

“The question of which groups are considered to be indigenous and tribal peoples and how they are identified in official statistics has a direct impact on the possibility of making indigenous and tribal peoples’ traditional occupations visible in labour statistics. In other words, when available statistical instruments do not allow for the collection of data disaggregated by indigenous identity or ethnicity, it will not be possible to capture the exercise of traditional occupations by indigenous women and men in the data resulting from the use of these instruments.¹”

3.1. Which groups should be considered as indigenous and tribal peoples?

National efforts to identify groups that are considered as indigenous and tribal peoples for the purpose of making them visible in statistical data would ideally involve statistical experts, representatives of the indigenous and tribal groups concerned, as well as relevant expert bodies such as, for example, national human rights commissions. In this regard, it should be noted that there is no single common definition of indigenous and tribal peoples and there is widespread recognition that such a single definition would not be desirable given the large diversity of groups and realities across regions. However, discussions and decisions on this matter can draw on the standards and work of the UN system and other international bodies.

The working definition of “indigenous communities, peoples and nations” offered in the Study on the Problem of Discrimination against Indigenous Populations, submitted by the UN Special Rapporteur José Martínez Cobo as long ago as 1981, provides some useful guidance as to the populations we might wish to measure, but also has limitations.

Indigenous communities, peoples and nations are those which, having a historical continuity with pre-invasion and pre-colonial societies that developed on their territories, consider themselves distinct from other sectors of the societies now prevailing on those territories, or parts of them. They form at present

non-dominant sectors of society and are determined to preserve, develop and transmit to future generations their ancestral territories, and their ethnic identity, as the basis of their continued existence as peoples, in accordance with their own cultural patterns, social institutions and legal system.

This first part of this working definition restricts the concept to groups which were present in a country or territory prior to colonization and which are no longer the dominant group in society. By stressing both ancestry and ethnic identity through historical continuity of their culture, it implies that individuals with indigenous ancestry who no longer have a connection with their historical culture should not be included among indigenous populations. Various factors relevant to the notion of historical continuity are identified including:

- occupation of ancestral lands;
- common ancestry with the original occupants of these lands;
- culture in general, or in specific manifestations (such as religion, living under a tribal system, membership of an indigenous community, dress, means of livelihood, lifestyle, etc.);
- language;
- residence in certain regions of the world;
- other relevant factors.

With respect to the identification of individual indigenous persons, the working definition stresses self-identification as well as recognition by the community:

An indigenous person is one who belongs to these indigenous populations through self-identification as indigenous (group consciousness) and is recognized and accepted by these populations as one of its members (acceptance by the group).

Article 1 of the Indigenous and Tribal Peoples Convention, 1989 (No. 169), contains a statement of coverage rather than a definition, by stating that the Convention applies to:

(a) tribal peoples in independent countries whose social, cultural and economic conditions distinguish them from other sections of the national community and whose status is regulated wholly or partially by their own customs or traditions or by special laws or regulations; (b) peoples in independent countries who are regarded as indigenous on account of their descent from the populations which inhabited the country, or a geographical region to which the country belongs, at the time of conquest or colonization or the establishment of present state boundaries and who irrespective of their legal status, retain some or all of their own social, economic, cultural and political institutions.

This same article stresses that self-identification as indigenous or tribal shall be regarded as a fundamental criterion for determining the groups to which the provisions of this Convention apply. The element of self-identification is also emphasized in Article 33 of UNDRIP, which underlines the fact that indigenous peoples themselves should define their own identity as indigenous:

- (1) Indigenous peoples have the right to determine their own identity or membership in accordance with their customs and traditions. This does not impair the right of indigenous individuals to obtain citizenship of the States in which they live.
- (2) Indigenous peoples have the right to determine the structures and to select the membership of their institutions in accordance with their own procedures.

This all implies that two criteria should be met to determine whether an individual belongs to a particular indigenous or tribal group: ancestry or descent from that group and self-identification as being a member of that group.

While the identification and recognition of indigenous and tribal peoples is more advanced in the Americas, Oceania and Europe, this is not yet generally the case in Africa and Asia. This also explains the fact that disaggregated statistical data are not available in most of the countries in the latter two regions.

A better understanding of the notion of indigenous peoples is starting to emerge in Africa, reflecting the specific circumstances of the region. This is reflected in the 2003 report – endorsed by the Heads of State

of the African Union (AU) in 2005 – of the Working Group on Indigenous Populations/Communities of the African Commission on Human and Peoples’ Rights (ACHPR), which emphasizes that the concept of indigenous must be understood in a wider context than only the colonial experience and that a strict definition of indigenous peoples is neither necessary nor desirable. It notes that:

Almost all African states host a rich variety of different ethnic groups, some of which are dominant and some of which are in subordinate positions. All of these groups are indigenous to Africa. However, some are in a structurally subordinate position to the dominating groups and the State, leading to marginalisation and discrimination.

It considers that it is more relevant and constructive to try to outline the major characteristics that can help identify who the indigenous peoples and communities in Africa are. The ACHPR website summarizes the “modern analytical understanding of the term ‘indigenous peoples’, with its focus ... on marginalisation, discrimination, cultural difference and self-identification”, adopted by the ACHPR and endorsed by the AU Heads of States and Government as follows:

“In post-colonial Africa, the term ‘indigenous peoples’ does not mean:

- first habitants in a country or on the continent;
- natives as understood in the Americas or Australia,

It rather refers to those communities in Africa:

- whose cultures and ways of life differ considerably from the dominant society, and whose cultures are under threat, in some cases to the point of extinction;
- the survival of their particular way of life depends on access and rights to their traditional lands and the natural resources thereon;
- who suffer from discrimination as they are regarded as less developed and less advanced than other more dominant sectors of society;
- who live in inaccessible regions, often geographically isolated, and suffer from various forms of marginalization, both politically and socially;

¹ In addition to challenges related to identifying groups that should be considered as indigenous and tribal peoples in the context of statistics and finding suitable data collection methods, statistical agencies face a range of other issues and challenges regarding disaggregation by ethnicity in general and indigenous status, in particular sampling errors for small populations from sample surveys, under-enumeration due to remoteness and other factors, and members of indigenous peoples being reluctant to self-identify.

- who are subjected to domination and exploitation within national political and economic structures that are commonly designed to reflect the interests and activities of the national majority; and
- who identify themselves as indigenous;

Therefore, this human rights based meaning of the term 'indigenous peoples' should not be confused with its etymological or generic one, presented in most dictionaries as meaning 'originating from', and which comes to the minds of most people in Africa when they hear the word indigenous peoples."

ACHPR 2021.

In Asia, States have similarly been reluctant to identify or recognize groups that fall within the scope of international concern for indigenous peoples. Nevertheless, in some countries these groups have received targeted attention in national laws and policies (ILO 2019, 47), being referred to in a range of different ways.

Efforts to compile data on groups considered as falling within the international concern for indigenous and tribal peoples have relied on pragmatic approaches. For example, a 2011 study by the World Bank identified indigenous peoples for inclusion in its global data and indicators as follows:

"Indigenous Peoples may be referred to in different countries by such terms as 'indigenous ethnic minorities,' 'aboriginals,' 'hill tribes,' 'minority nationalities,' 'scheduled tribes,' or 'tribal groups' [...]. Against this backdrop, this study does not put forth a rule of what does or does not constitute indigenous—that would contribute little and only invite controversy over perceived errors of inclusion or omission. For global data, it includes indicators for any people whom any government or recognized organization (including self-identified indigenous organizations such as the International Work Group for Indigenous Affairs) has described as indigenous. For the countries studied in Asia and Africa, it uses terminology and population breakdowns typical in those countries. Thus, in China, Lao People's Democratic Republic, and Vietnam, it uses "ethnic minority"; in India, "Scheduled Tribes"."

World Bank 2011, 2

The ILO report on implementing the Indigenous and Tribal Peoples Convention, 1989 (No. 169), took a similar approach to that taken by the World Bank, in that it did not claim to assign indigenous or tribal status to any groups at the country level. Instead, it relied on existing government recognition of indigenous or tribal groups, particularly by countries that had ratified Convention No. 169 or No. 107, or those identified as such by the International Work Group for Indigenous Affairs (IWGIA) and other expert sources. Based on demographic data on indigenous peoples gathered for 58 of the 90 countries where they are considered to live, this report estimated that the global indigenous population stood at 476.6 million, representing 6.2 per cent of the world population as a whole (ILO 2019).

The current version of the UN Principles and Recommendations for Population and Housing Censuses does not define the concept of indigenous peoples as distinct from other ethnic minorities, or provide but notes that:

"Generally, indigenous peoples of a particular country are social groups with an identity that is distinct from the social and cultural identity of the dominant society in that country"

UN 2017, 205

3.2. Question design to identify indigenous and tribal peoples in censuses, surveys and administrative data collections

Once it is established that one or more relevant groups exist in a particular country and a decision is taken that disaggregated data should be collected, produced and made available, the challenge for statisticians is to develop an efficient, cost-effective and culturally appropriate method of identifying individuals who belong to these groups in censuses, surveys and administrative data collections.

►► Ideally, any methods used to identify indigenous peoples in data collections should embrace elements of ancestry or descent as well as self-identification by the individual as belonging to one or more specific indigenous or tribal groups relevant in the national context.

The UN Census Recommendations state that questions on indigenous identity should abide by the principle of self-identification but do not provide specific advice on question wording. They stress the importance of the use of multiple criteria to accurately capture the identity and socioeconomic conditions of indigenous peoples, and that the indigenous population can be identified in multiple ways, such as through questions on ethnic origin or on indigenous identity, reflecting the diversity of indigenous populations and terminologies in different countries (UN 2017, 205).

Ideally, any methods used to identify indigenous peoples in data collections should embrace elements of ancestry or descent as well as self-identification by the individual as belonging to one or more specific indigenous or tribal groups relevant in the national context. Whatever approach is used it is essential to ensure that:

- thorough testing and adaptation of questions to reflect national circumstances are undertaken in advance of survey or census enumeration;
- consultations take place with the indigenous peoples in the country.

3.2.1. Overview of existing approaches

Among the countries that do gather data on indigenous populations, the methodology and terminology used vary (UN 2019). This partly reflects the different situations and perceptions concerning indigenous peoples in different countries. For example, terms

like "indigenous", "aboriginal" and "ethnic" may be understood differently in different countries and may not be well understood by some indigenous peoples. In some countries, indigenous peoples may consider that the term "ethnic" refers to different groups who have migrated to the country rather than to them. The most appropriate approach and questions used will to an extent depend on the number and nature of the ethnic groups that need to be identified in the country.

In order to better understand the approaches taken in different data sources to gather information on indigenous peoples, we have reviewed the questions used in a number of countries in census and other survey questionnaires (e.g. demographic and health, household, labour force and intercensal surveys) to identify indigenous and tribal peoples. We have reviewed survey questionnaires from over 50 countries², based on the list of countries for which data were gathered for the report *Implementing the ILO Indigenous and Tribal Peoples Convention No. 169 (ILO 2019, 142–145)*.³

Examples from these questionnaires are presented in the next sections in an illustrative manner.

Five broad approaches to the identification of indigenous peoples in censuses and surveys can be discerned:

- a question on ethnicity or ethnic identity;
- a specific question on identification as belonging to an indigenous or tribal people, in general;
- questions that identify one or more specific tribal groups;

² Angola, Argentina, Australia, Bangladesh, Belize, Plurinational State of Bolivia, Brazil, Burkina Faso, Cambodia, Cameroon, Canada, Chad, Chile, China, Colombia, Congo, Democratic Republic of the Congo, Costa Rica, Dominica, Ecuador, El Salvador, Ethiopia, Fiji, Gabon, Guatemala, Honduras, India, Indonesia, Kenya, Lao People's Democratic Republic, Mali, Mexico, Mongolia, Morocco, Namibia, Nepal, New Caledonia, New Zealand, Nicaragua, Niger, Nigeria, Pakistan, Panama, Paraguay, Peru, Philippines, Russian Federation, Senegal, South Africa, Suriname, Uganda, United States of America, Uruguay, Bolivarian Republic of Venezuela, Viet Nam.

³ Questionnaires were not available for countries that conduct register-based population censuses.

Five broad approaches to the identification of indigenous peoples in censuses and surveys can be discerned: a question on ethnicity or ethnic identity; a specific question on identification as belonging to an indigenous or tribal people, in general; questions that identify one or more specific tribal groups; approaches that combine a general question on ethnicity or indigenous status with a second question on identification with a specific indigenous group; questions on ancestry and race.

- approaches that combine a general question on ethnicity or indigenous status with a second question on identification with a specific indigenous group;
- questions on ancestry and race.

In some countries a similar or identical approach to the identification of indigenous peoples is used in both administrative data collections and official censuses and surveys. This allows the calculation of rates, where the official population estimates are used as the denominator, in statistics on, for example, fertility, mortality, health, crime and various other topics.

3.2.2. A question on ethnicity or ethnic identity

A general question on ethnicity is a commonly-used method to collect statistics on indigenous peoples.

For example, in the 2007 census in Fiji, the following question was asked: “What is this person’s ethnic group?” The following groups were listed: “Fijian, Indian, Chinese/Part Chinese, European, Part European, Rotuman, Banaban, I-Kiribati, Ni-Vanuatu, Papua New Guinean, Samoan, Solomon, Tongan, Tuvaluan, Other (specify)” ([World Bank Microdata Library](#)).

The most numerous indigenous people, Fijian, is listed first, and represents the majority of the population, followed by the second largest ethnic group, Indian. The other people indigenous to Fiji – Rotuman, indigenous to a small outlying island – is also listed. Several groups that are indigenous to other Melanesian and Polynesian islands are also listed, many of whose ancestors were forcibly

transported to Fiji by the colonial authorities. In the context of Fiji, this would appear to be an adequate method for identifying the relevant populations.

However, even when questions are well designed, various difficulties with questions on ethnicity may be encountered. It is noted in a statement from the government statistician on the website of the Fiji Bureau of Statistics that there was no reliable collection of data on ethnicity in the 2017 census, although a question on ethnicity was posed. The statement notes that “many enumerators failed to verbally ask for the respondent’s ethnic background. Instead, the data was collected based on the enumerator’s observed assumption of the respondent’s ethnicity”. It is also noted that many enumerators assumed the entire household’s ethnicity based on one household member and that many respondents refused to disclose their ethnic background ([Fiji Bureau of Statistics 2018](#)).

In some other national contexts, a general question on ethnicity may not necessarily reveal those who identify with ethnic groups that are considered to be indigenous peoples. In the Mali 2020 census of populations and dwellings, respondents were asked: “What is the ethnicity/nationality of (name)?” ([DEMOSTAF 2019](#)). Eighteen ethnicities were given as examples, as well as a space for others:

- Bambara
- Malinké
- Peul/Foulfoulbé
- Sonrai/Djerma
- Sarakolé/Soninké
- Kassonké
- Sénoufo

- Dogón
- Maure
- Tamacheq
- Bobo
- Dafing
- Minianka
- Haoussa
- Samogo
- Bozo
- Árabe
- Mossi
- Otro grupo étnico

A similar approach is taken in many other African countries. The difficulty with this approach for the identification of indigenous peoples is that it assumes everyone identifies with a specific single ethnic group from which they are descendants. In practice, and depending to an extent on the national context, anyone who is aware of an ancestral connection with one of the groups listed is likely to select that group, whether or not they identify themselves in everyday life as a member of that group.

In the Mali example, several of the minority groups, such as the Tuareg, Moors, Songhay and Peuls ([IWGIA 2020c, 115](#); [MRG 2019](#)) that fall within the concept of indigenous peoples considered relevant in Africa are not listed. Nevertheless, there is space to write in the names of these groups. However, since the Malian State does not recognise the existence of “indigenous peoples” as defined by UNDRIP and Convention No. 169 on its territory ([IWGIA 2020c, 115](#)), it may not have been the intention in designing the questionnaire to collect information about identification with a particular ethnic or indigenous group.

3.2.3. Specific questions on identification as belonging to an indigenous or tribal people

Questions that ask whether an individual belongs to an indigenous or tribal people tend to combine elements of ancestry and self-identification, in the sense that belonging to such a people implies ancestry. This type of question is widely used in Latin

America. However, the effectiveness of asking a question of this type will depend on whether the members of specific groups understand that the words such as “indigenous” used in the question refer to them. Such questions may or may not capture data about the different indigenous peoples that may exist within a country, depending on national circumstances.

In the 2005 census of population and dwellings in Nicaragua, respondents were first asked:

6. Do you consider yourself to belong to an indigenous people or ethnic group?

1. Yes. 2. No (skip to question 9)

This was followed by a question on the specific group or groups and whether or not respondents speak the language of the group to which they belong ([ECLAC, n.d.](#)):

7. To which of the following indigenous peoples or ethnic groups do you belong [...]?

- Rama
- Garífuna
- Mayangna-Sumu
- Miskitu
- Ulwa
- Creole (Kriol)
- Caribbean Coast Mestizo
- Xiu-Sutiava (go to question 9)
- Naho-Nicarao (go to question 9)
- Chorotega-Nahua-Mange (go to question 9)
- Cacaopera-Matagalpa (go to question 9)
- Other (go to question 9)
- Don't know (go to question 9)

8. Do you speak the language(s) of the indigenous people or ethnic group to which you belong?

1. Yes. 2. No

In the 2017 census of population and housing in Chile, respondents were asked a similar question on identification with an indigenous people:

Do you consider yourself to be part of an indigenous people?

Those who answered “yes” were asked to identify which people(s), from a list of nine with a write-in space for others ([ECLAC, n.d.](#)).

The wording of the questions in both Nicaragua and Chile focuses on whether the person considers herself or himself to be part of a people and therefore encourages the respondent to think more about identification with a group than about ancestry.

3.2.4. Questions that identify specific indigenous or tribal groups

In **Australia**, the same standard question (with minor variations depending on the setting and mode of collection) is used in all statistical and administrative data collections that include indigenous status, including the five-yearly census of population and housing ([ABS 2014](#)):

1. [Are you] [Is the person] [Is (name)] of Aboriginal or Torres Strait Islander origin?

(For persons of both Aboriginal and Torres Strait Islander origin, mark both 'Yes' boxes.)

- No
- Yes, Aboriginal
- Yes, Torres Strait Islander

This allows identification of the two recognized groups of indigenous peoples in Australia but does not identify specific peoples within the aboriginal population. A census question on "main language other than English spoken at home" does identify those who speak their indigenous languages ([ABS 2015](#)). The use of the word "origin" lies somewhere between the notions of descent and identification, but it can be argued that those who respond "yes" do so because they identify as such. However, an increase in the propensity to identify as indigenous in response to this question that cannot be explained by demographic factors alone has been observed since the 2006 census. This may in part be explained by the likelihood that some Australians are increasingly interpreting the term "origin" to refer to descent or ancestry. However, there are several other factors that also contribute to this increase ([ABS 2018](#)).

The standard Australian question on indigenous status does not identify Australian South Sea Islanders, who are not indigenous in the sense

of having been in Australia prior to European colonization but who are the descendants of those forcibly transported from Pacific Islands during the nineteenth and early twentieth centuries to work as agricultural labourers. However, this group can be identified through a question on ancestry that has been included in every census since 2001 and lists "Australian South Sea Islander" as an example ([ABS 2015](#)).

In **India**, a somewhat different approach is taken that also uses terminology used in the country. For example, a question was asked in the [2011 census](#) on whether the person belonged to a scheduled tribe or scheduled caste. If the answer was "yes", the enumerator had to transcribe a code from a list supplied. The extent to which this is based on the enumerator's perception of the respondent's self-identification is not clear.

3.2.5. Questions on ancestry and race

In **South Africa**, in the 2016 general household survey, a single question listed the country's four main racial groups which are likely to be well understood by South Africans. A space for "other" could allow the identification of specific indigenous peoples, but these would mostly be covered by "Black African".

What population group does belong to?

1. Black African
2. Coloured
3. Indian/Asian
4. White
5. Other (specify in box below)
6. Refuse

A question on the most frequently spoken language in and outside the household was also included and may help to identify specific ethnic groups ([World Bank Microdata Library](#)).

In the **United States**, the 2020 American community survey asked a question on each person's race which includes a category for American Indian/Alaska Native. Respondents were then invited to write the name(s) of their enrolled or principal

tribe. A separate category was provided for Native Hawaiian ([United States Census Bureau 2020](#)).

What is Person X's race?

- White – Print, for example, German, Irish, English, Italian, Lebanese, Egyptian, etc.
- Black or African American – Print, for example, African American, Jamaican, Haitian, Nigerian, Ethiopian, Somali, etc.
- American Indian or Alaska Native – Print name of enrolled or principal tribe(s), for example, Navajo Nation, Blackfoot Tribe, Mayan, Aztec, Native Village of Barrow Inupiat Traditional Government, Nome Eskimo Community, etc.
- Chinese
- Filipino
- Asian Indian
- Other Asian – Print, for example, Pakistani, Cambodian, Hmong, etc.
- Vietnamese
- Korean
- Japanese
- Native Hawaiian
- Samoan
- Chamorro
- Other Pacific Islander – Print, for example, Tongan, Fijian, Marshallese, etc.
- Some other race – Print race or origin.

3.2.6. Combining general questions on ethnic characteristics with questions on identification with specific indigenous groups

Approaches that combine a general question on ethnicity, race or ancestry with further questions on identification with a specific indigenous group are quite frequently asked, especially in the Americas. In the New Zealand 2018 census, respondents were first asked which ethnic group they belonged to. All respondents were then asked whether they were a descendant of a Māori, and then if they were, whether they knew the name of their iwi (tribe) ([Stats NZ 2018](#)):

7. Which ethnic group do you belong to? (Mark the space or spaces that apply to you)

- New Zealand European
- Māori
- Samoan
- Cook Islands Māori
- Tongan
- Niuean
- Chinese
- Indian
- Other (e.g. Dutch, Japanese, Tokelauan. Please state: blank space to write-in).

11. Are you descendant from a Māori (that is, did you have a Māori birth parent, grandparent or great-grandparent, etc.)?

Yes (go to 12).

Don't know (go to 12).

No (go to 14)

12. Do you know the name of your iwi (tribe or tribes)? (a guide with a list of iwis was provided to the census enumerator)

Yes (go to 13).

No (go to 14)

13. Give the name and region of your tribe

(there are 4 blank spaces for iwi and regions)

This allows the compilation of three different measures based on ethnic identity, Māori descent and iwi affiliation.

In the 2013 census in Honduras, respondents were asked first about self-identification with an ethnic or racial group, and if indigenous, black or mestizo, to which people they belong ([ECLAC, n.d.](#)).5. **How do you self-identify (name)?**

- Indigenous?
- Afro-Honduran?
- Black?
- Mestizo? (skip to question 7)
- White? (skip to question 7)
- Other? Please specify. 6 (skip to question 7)

6. To which people do you belong (name)?

- Maya-Chortí.....1.
- Lenca.....2.
- Miskito.....3.
- Nahua.....4.
- Pech.....5.
- Tolupán.....6.
- Twahnka.....7.
- Garífuna.....8.
- Black English-speaking.....9.
- Other (please specify)
- In the 2010 census in Brazil, respondents were first asked about their race or skin colour:

Your colour or race is:

- 1- White
- 2- Black
- 3- Yellow
- 4- Brown
- 5- Indigenous. (go to question 6.08)

Those who responded 1 to 4 but who inhabit a titled indigenous land were then asked question 6.07:

Do you consider yourself indigenous?

Those who identified as indigenous were then asked question 6.08 :

What is your ethnicity or to which indigenous people do you belong? (write-in space)

This question was followed by questions that asked whether one or more indigenous languages, as well as Portuguese, are spoken at home (ECLAC, n.d.). The 2020 census test questionnaire followed a very similar model, with two important innovations. Firstly, an indigenous person could indicate that she or he is part of up to two indigenous peoples, groups or ethnicities. Secondly, *quilombola* communities (descendants from enslaved Africans that formed independent communities) were also enumerated for the first time (IBGE, n.d.). In Brazilian legislation, the Convention No. 169 is applied to them by considering that the term tribal peoples covers *quilombola* communities.

These types of question would seem to provide comprehensive measurement of indigenous peoples, provided that indigenous persons recognize the terms used in the initial question as referring to them.

3.3. Improving the identification of indigenous peoples in statistical data sources

In the Americas and Oceania, questions that target indigenous peoples generally or specifically, as well as questions that combine general questions on ethnic characteristics with follow-up questions targeting indigenous peoples, have been shown to be effective in identifying indigenous peoples in these regions, especially if they focus on self-identification. However, this is not universal. There may be a need for further testing in some countries and for sharing of information on experiences within and beyond regions. Surveys other than the census have also started to include these types of questions and there is scope for further statistical development in this respect, notwithstanding the limitations imposed by sample sizes and design.

In Africa and Asia, where terms like “indigenous” or “indigenous peoples” are not frequently used and are sometimes also rejected, the approaches that have worked in other regions which use such terms may not be effective. In several countries, survey questions on ethnicity remain more generally sensitive. Questions that ask about ethnicity without focusing on identity may also not be ideal for the identification of those who consider themselves to be members of indigenous and tribal peoples. In Africa, statistical agencies could be encouraged to test questions related to ethnicity to determine the extent to which they can identify tribal groups that fall within the concept of indigenous peoples as described by the ACHPR and endorsed by the AU Heads of State. Survey programmes coordinated by international agencies, such as the Multiple Indicator Cluster Surveys (MICS), could also be encouraged to follow this approach. Such questions should focus on ethnic or tribal identity, rather than a broad or vague concept of descent or ancestry.

Without the need to mention words like “indigenous”, questions such as the ones used in Chile

and Nicaragua – for example, “Do you consider yourself to belong to any of the following ethnic or tribal groups?” – might be effective in Africa and have been used in some countries in Asia. This could be followed by an inclusive list of all tribal groups from which the respondent can select one or more. Alternatively, such a list could be limited only to groups of particular concern or interest as

disadvantaged groups in society, including those considered to be indigenous peoples in the sense understood by UNDRIP. This type of approach could also be effective in Europe and other regions where there is a need to identify specific ethnic groups of social concern, even though few groups in these regions identify themselves as indigenous.

4

The concept of traditional occupations



4.1. What are “traditional occupations/livelihood activities” of indigenous peoples?

The term “traditional occupations” refers broadly in the academic literature to the activities that indigenous and tribal peoples have traditionally undertaken to provide for their subsistence needs and livelihoods. The practice of these occupations relies on intimate knowledge of ancestral lands, the environment and natural resources and on skills passed on from generation to generation.

As noted in the introduction to the ILO report *Traditional Occupations of Indigenous Peoples: Emerging Trends*:

“... a discussion of traditional occupations of indigenous and tribal peoples necessarily raises many complex and inter-woven issues related to economic development, social organization, spiritual values and political struggles. (...) Indigenous economies, as the reader will discover here, tend to be based on the values of ‘use as needed and protect the rest’. That is to say, that family and community consumption and resource-use are guided by the principle that the earth generously provides what is needed, but to take more than what is needed is taboo, essentially because it is unsustainable”

ILO 2000, 3

The knowledge and skills used in traditional occupations are not static, however. Traditional methods of gaining livelihoods have always adapted to changed circumstances, resources, and technology, both before and after modern colonization. It is just as true today as it was at the turn of the twenty-first century that:

“... for any discussion of the importance of maintaining traditional occupations to be useful, it must focus not on preserving, in a museum-like fashion, specific trades and practices that have themselves changed significantly over time, but on the ability of indigenous peoples to define and pursue their own vision of ‘economic development’, based on the adaptability and innovativeness of their cultures, their traditional knowledge and values and their ancestral lands and resources”

(ILO 2000, 4).

In modern times, these adaptations include increasing participation in the market economy, and to a lesser extent in labour market activities funded by governments and non-profit institutions related, for example, to environmental management or to cultural practices.

In his article about the occupations of the indigenous peoples of the Chittagong Hill Tracts, Raja Devasish Roy uses the term “traditional occupations” to mean:

“those occupations that have been followed by successive generations of indigenous peoples and their communities, and are rooted in customs and practices that were established prior to the colonization of the region in the nineteenth century. This includes traditional occupational practices, which were largely subsistence-oriented before, but now are wholly or partly market-oriented.”

ILO 2000, 80

Roy uses the term “non-traditional occupations” to refer to those occupations that are not based on customs and practices that pre-date the colonization of the region.

In discussing the situation of the Saami society in the Nordic countries, Rune Sverre Fjellheim finds problems with the term “traditional occupation” itself, in that:

“it refers to something with a specific historical context and meaning. It includes an occupation that has been conducted in more or less the same manner since the beginning of time, consisting of cultural elements specific to the group of people involved in the occupation; but it precludes a process of innovation, change and adaptation which is essential for any society to remain vital, dynamic and relevant to its members.”

ILO 2000, 146.

It is important to be clear that this unchanging fixed notion of traditional occupations does not reflect the reality of the traditional livelihoods of indigenous peoples and is not the concept that we should be aiming to identify and measure in labour statistics. This is especially the case during the current period of exceptional technological development, social change and disruption to environmental conditions, that have a disproportionate impact on the lives and livelihoods of indigenous

►► Indigenous women and men are also frequently engaged in other unpaid forms of work including volunteer work, production of services for own or family use (care work, meal preparation, domestic cleaning, etc.) and unpaid trainee work. [...] The concept of traditional occupations should therefore also embrace activities in these forms of unpaid work, but may need to be measured in statistics less frequently than own-use production of goods and production for the market.

peoples all around the world, not least on the Saami and others in the Arctic. Many indigenous peoples practising their traditional occupations today do not work in the same way as even their grandparents, owing to evolution in technology and the changing environment. Climate change, loss of biodiversity, deforestation, and loss of access to their traditional lands are forcing agricultural practices among indigenous peoples to evolve.

For all of these reasons, it would not be appropriate to limit the concept of traditional occupations to subsistence activity and other non-market activities. Participation of indigenous and tribal peoples in labour market activities that draw on traditional indigenous knowledge has the potential to provide indigenous and tribal peoples with a reliable income, to reduce their social marginalization while retaining their cultural identity, and to leverage their traditional knowledge and skills to support the environment, promote biodiversity and mitigate the effects of climate change.

One interesting example is the cooperatives formed by indigenous peoples to manage the Sundarbans⁴ in Bangladesh, in which indigenous knowledge and practices are shared, simultaneously fostering the sustainable use of biodiversity resources and the socioeconomic development of the region (Titumir and Afrin 2017). Another example is found in northern Thailand, where Karen youth have been allying rotational farming practices with a community social enterprise approach to improve livelihoods and guarantee the transmission of traditional knowledge (Trakansuphakon, n.d.).

These examples highlight the importance of sharing information between communities on success stories in the commercialization of traditional occupations. This is especially relevant considering the concerns within indigenous communities that some young people are not interested in the practice of traditional occupations as they see no future in it. Demonstrating to young people that there is a future in traditional occupations may help both appreciation and transmission of indigenous knowledge. Statistical data on the practice of traditional occupations in market activities could help demonstrate the value of maintaining and extending indigenous knowledge.

The separate identification in official statistics of subsistence foodstuff production will, of course, continue to be relevant and necessary. Statistics on subsistence foodstuff production are needed, for example, to assess the extent to which indigenous peoples are dependent on these activities for their survival, or the extent to which they are directly exposed to the negative impacts of climate change, land use policies, and environmental degradation. Equally importantly, the practice of traditional occupations for the non-market production of food and other items continues to be one of the principal ways in which traditional knowledge and skills are retained, adapted to reflect changing circumstances and passed on to others. Any concept of traditional occupations for statistical measurement purposes must, therefore, embrace both production of goods for own use and production for the market.

Indigenous women and men are also frequently engaged in other unpaid forms of work including volunteer work, production of services for own or

⁴ The Sundarbans, in Bangladesh, is the largest mangrove forest in the world (Titumir and Afrin 2017).

family use (care work, meal preparation, domestic cleaning, etc.) and unpaid trainee work. Women are in many cases more frequently engaged in some of these unpaid forms of work than men. Exclusion of these forms of work from the measurement of traditional occupations could result in underestimation of the participation of women in traditional occupations and in their contribution to the retention of indigenous knowledge. The concept of traditional occupations should therefore also embrace activities in these forms of unpaid work, but may need to be measured in statistics less frequently than own-use production of goods and production for the market.

Issues around the collection and compilation of statistics on traditional occupations in various forms of unpaid work are discussed in more depth in section 6.6.2 below.

4.2. The types of work performed in traditional occupations – similarities, differences and specialization

In contrast to the often highly specialized divisions of labour found in modern labour markets, traditional occupations were practised historically as a series of activities (farming, hunting, fishing, gathering and craft production) that together met the subsistence needs of the community (ILO 2000). However, it is usually the specific types of activity such as herding, fishing, basketry and so forth, rather than the full range of activities undertaken by an individual to meet the subsistence needs of the family and community, that are generally considered as traditional occupations both by indigenous peoples themselves and by those who write about them in the academic literature.

This is rather different from the approach generally taken in occupational classification systems used for the wider labour market, which define occupations based on the full range of tasks typically performed by workers for a single enterprise, household or other type of economic entity. Such classification systems are used widely for purposes such as the compilation of statistics, the provision of employment services and career guidance, and are discussed in more detail below in Chapter 6.

While not usually highly specialized in the sense that different individuals have highly differentiated roles, many indigenous peoples have developed highly specialized traditional occupations in the sense that they are adapted to the conditions of their traditional territories and depend on access to land, territories and natural resources (AIPP 2010). In some cases, traditional occupations – such as traditional blacksmithing and various other types of traditional crafts, as well as occupations such as travelling storytellers and musicians – are highly specialized within a community (Onokerhoraye 1977, 59; ILO 2000).

In some cases, indigenous peoples themselves are identified in terms of perceptions of their traditional occupations. Abdi Umar notes that in Kenya there are two main groups who identify themselves as indigenous peoples, namely pastoralists and hunter-gatherers. He notes that hunter-gatherers in Kenya are now relatively few in number, totalling less than 100,000. They are mainly found in the remaining forested areas in the Central and Western Highlands of Kenya. According to Umar, “[t]heir importance, in terms of a discussion of traditional occupations, lies in the unique lifestyle and heritage that they represent, their finely honed skills and detailed traditional knowledge for managing forest and wildlife resources” (ILO 2000, 44). Pastoralists on the other hand still number several million in the arid lowlands of Kenya and continue to make a significant contribution to livestock production in Kenya (Nyariki and Amwata 2019; MacGregor and Hesse 2013).

Using traditional occupations as the defining characteristic of an indigenous or tribal group, however, is to view them from the perspective of an outsider from a non-indigenous or dominant group. To a significant degree, this can mask their true identities through taking inadequate account of language, traditions, arts and other cultural characteristics, as well as the importance of access to traditional lands. It also ignores the reality in many cases that other occupational activities may be practised alongside what is perceived as the main occupation.

In Kenya there are three main surviving groups of hunter-gatherers and multiple groups of pastoralists, whose languages, traditional lands, and cultural traditions are all different (Umar in ILO 2000; [Minority Rights Group International 2019](#)). In the Nordic countries, the characterization of the Saami people as reindeer herders resulted in denial

of their right to ancestral lands and their right to organize their own society. Today the Saami culture is defined through language, traditions, arts and occupations which distinguish the Saami from others (Rune Sverre Fjellheim in ILO 2000).

Traditional occupations are also frequently differentiated by gender. Among indigenous communities in North America:

“[m]en and women enjoyed considerable personal autonomy and both performed functions vital to the survival of their communities. The men were responsible for providing food, shelter and clothing. Women were responsible for the domestic sphere and were viewed as both life-givers and the caretakers of life. As a result, women were responsible for the early socialization of children.”

Aboriginal Justice Implementation Commission 1999

In pastoral communities in Kenya and other parts of East Africa, there is similar but not identical gender differentiation:

“Men are responsible for herding the livestock, while women are in charge of the family’s food supply. Women are responsible for milking, milk processing, collecting domestic water, cooking and preparing food, building the enclosures, huts and fences at each encampment, collecting wild fruits and firewood and making utensils and leatherwork.”

ILO 2000, 47

Equally, there may be occupational differentiation by age reflecting the different physical capacities, experience and knowledge of people at different ages. Once again in Kenya, Umar reports that:

“Young girls assist their mothers, and also graze sheep and goats near the household. Young boys set up the outpost satellite camps for the dry herds (called *fora* by the Boran, and *jile* by Somali). Old men make rulings over access to land and other resources, and conduct negotiations with neighbouring communities.”

ILO 2000, 47

In *Status and Trends on Traditional Occupations: Outcomes of a Rapid Assessment*, a study conducted by the Forest Peoples Programme (FPP) in 2016, it was found that in nearly all of the case studies the majority of traditional occupations were practised by both men and women, although some traditional occupations were exclusively practised by women or men in certain countries. Weaving, for instance, was traditionally the main occupation of women in the Tangkhul Naga community of north-east India. Weaving was also a women’s activity among the Karen in Thailand (FPP 2016).

If the traditional occupations of indigenous peoples are defined by focusing only on the activities related to the main source or sources of their livelihood, the full diversity and range of occupational activities that take place in a particular group are likely to be overlooked. Since women are more likely to be involved in a diverse range of activities than men, it is more likely that women’s traditional roles will be overlooked. As Fjellheim notes: “If only some occupations are defined as ‘traditional’ - and thereby valued - there is a risk that one gets a misleading picture of the nature of the society as a whole” (ILO 2000, 146).

In the case of the Saami, in addition to the iconic reindeer herding, important traditional occupations also include fishing, handicrafts, hunting-gathering, and small-scale farming. Historically, these activities were just as important to Saami livelihoods and culture as reindeer herding (Fjellheim in ILO 2000). Similarly, characterizing a group as hunter-gatherers overlooks the skills and traditional crafts involved in the manufacture of tools, construction materials, clothing, and other items. It also overlooks the skills involved in the processing of food. Since in many groups most of these latter activities are performed mainly by women, basing the occupation only on the perceived main sources of livelihoods would tend to overlook the gender distinctions within a particular group and ignore the reality that, in hunter-gatherer societies, hunting is typically done mainly by men and gathering is mainly done by women. It would also mask potential similarities and differences between different groups, such as hunter-gatherers and pastoralists living in adjacent or overlapping geographical areas, who might make tools, clothing and craft items and process food using similar materials and methods. If we want to identify the knowledge and skills that will help indigenous peoples to adapt their traditional

occupations to labour market activities beyond subsistence, it is important to consider the full range of occupational activities traditionally undertaken by indigenous women and men.

In some cases, the shift from subsistence to market-oriented activity may also have an impact on traditional gender roles. In the FPP study, the survey results from Nepal showed that women were more interested in traditional farming, and that concerning animal husbandry (indigenous breeds) women traditionally played the key role in decision-making. However, as more commercial approaches were adopted, men were more frequently in charge. Representatives of indigenous peoples have also reported that some tasks previously done by men were increasingly being performed by women as men go out to look for paid jobs.

The importance of capturing information about the various groups of activities traditionally practised to meet the subsistence needs of indigenous communities is generally reflected in the ways traditional occupations are identified and grouped in the academic literature. Typically, main sources of livelihood such as growing crops, hunting and trapping, or raising animals, are separately identified as traditional occupations, alongside activities such as different types of craft production, practice of traditional medicine and health care, and cultural activities such as music and dance. Some traditional occupations are characterized as main occupations, and others as supplementary occupations. Certain occupations require very specific skills and may be practised by a small number of people, while some are only seasonal (Roy in ILO 2000; FPP 2016).

Following this model, Roy identified 11 major traditional occupations in the Chittagong Hill Tracts:

(1) Swidden cultivation

Also known as 'jum', 'slash-and-burn' or 'shifting' cultivation, this is a type of rotational cultivation in which the vegetation on the swidden field is cut and dried when the weather is cool and dry, then set afire [and] subsequently planted in the wet season. The land is never hoed, ploughed or fertilized.

(2) Hunting and trapping

(3) Gathering wild plants for food and medicine

(4) Fishing

(5) Animal rearing

(6) Basketry

Done by both men and women [,] with the more artistically designed baskets that were used for storing valuables or for carrying wedding gifts usually made by expert craftspeople, mostly men.

(7) Weaving

(8) Indigenous medicine

(9) Music

Traditional musicians or minstrels belong to a specialized travelling occupation and follow oral traditions but are dying out. Their epic ballads are one of the major sources of history for the people concerned.

(10) Midwifery

(11) Liquor making

Nowadays, liquor-making is done both for home consumption and for sale, and usually involves women more than men. It is legal for indigenous people in the CHT to brew their own liquor for home consumption, but a license is required in the case of sale.

Roy notes that, in the Chittagong Hill Tracts, indigenous medicine is usually administered by men as part of a specialist occupation, while traditional midwifery has always been restricted to women, not usually as a full-time occupation (ILO 2000). These and the other specialized occupations listed, such as music, would generally be done for pay in cash or kind and would therefore be considered as employment according to the current standards for labour statistics. The other activities would be considered as own-use production work unless the main intended purpose of the activity is to produce goods or services for the market. Roy notes that one of the most significant changes is the increasingly market-oriented nature of these activities, where formerly they have been mainly subsistence-oriented, but that the essential elements of these occupations are based on traditional practice.

4.3. Indigenous peoples' perspectives on their traditional occupations

When traditional occupations are identified from the perspective of indigenous peoples themselves, similar occupations and groups are defined, although a wider range of activities tends to be identified. These include, for example, preparation and

storage of food, caring for children, and teaching and transmission of traditional knowledge. The 2016 FPP report, referred to above, provides useful insights from this perspective, as does the information collected through the Indigenous Navigator, a framework and set of tools that enable indigenous peoples to monitor their rights and development.

This rapid assessment was undertaken by the FPP in 2016 for the purpose of a submission to the CBD Secretariat on the indicator "status and trends in the practice of traditional occupations." A survey form (rapid assessment), with semi-standardized questions, was sent out to 20 indigenous and local community experts. The form was completed and returned by 17 respondents, who provided information from 13 countries. The objective was that this small set of data should represent a starting point for a larger investigation. The definition of traditional occupations to be used in the study was provided to the respondents at the beginning of the survey:

The International Technical Workshop on Indicators Relevant for Indigenous Peoples, held in Baguio City, Philippines, from 17 to 19 November 2008, decided that the indicators on traditional occupations should focus on 'occupations where knowledge of traditional culture and practices may influence the way the work is performed'

The study identified a great diversity in traditional occupations, reflecting the diversity of cultures and traditions, as well as natural environments and climates, where indigenous peoples live and practise their activities. At the same time, there was also a remarkable level of similarity and overlap in practices. The following groups of occupations were identified:

- hunting;
- fishing;
- collecting wood;
- gathering non-timber forest products (e.g. wild plants, medicinal herbs, fruits, nuts, mushrooms);
- agriculture (e.g. home gardening, shifting cultivation, terrace farming, rotational farming, recovery of native plants);
- aquaculture (e.g. paddy, fish culture in irrigated fields);

- livestock (e.g. cattle rearing, cattle herding, small stock production, animal husbandry, reindeer herding, traditional beekeeping);
- traditional medicine (e.g. traditional healer, midwife);
- preparing and storing foods/dishes;
- traditional craft/skills for utensils or household equipment and construction (e.g. weaving, basketry, mat making, carving/woodcraft and carpentry, black pottery, blacksmithing, boat or canoe building);
- spiritual and ceremonial knowledge (e.g. keepers of ceremony, fortune tellers, astrologists);
- traditional art, drama, music (e.g. orators, singers, drama, music players, art and craft);
- teaching and transmission of traditional knowledge;
- other types of occupations including specific expertise by indigenous land and sea managers which is shown by evidence to result in sustainable healthy communities (Australia), activists and defenders and lawyers (Ecuador and Peru), and gold collection from sand for local marketing (Nepal) – highlighting the relevance of the application of traditional knowledge in employment in the market economy.

On the basis of the results of the study, it was found that "traditional occupations clearly exist within holistic indigenous management and use systems, where various activities are practised alongside each other, and different resources are being used concurrently." It was reported that:

"... all traditional occupations, major or minor, are combined with other daily or seasonal activities. Even when certain occupations are seen as a 'main activity', for instance, production and sale of crafts or agriculture (Ecuador), they are still combined with other activities, like ceremonies, irrigation, etc. Most of the indigenous Karen in Thailand and highland Burma continue to frequently practi[s]e rotational farming, which is the main activity, but it is always integrated with other activities, in particular terrace paddy fields, husbandry, hunting and gathering."

The Indigenous Navigator is an equally rich source of information about indigenous occupations from the perspective of indigenous peoples themselves. It was designed in accordance with the Office of the United Nations High Commissioner for Human Rights (OHCHR) guidelines on the measurement and implementation of human rights indicators (OHCHR 2012) and encompasses more than 150 indicators (IWGIA 2020) grouped into 13 thematic domains, one of which is “employment and occupation”. The indicators selected for the framework are not only directly related to UNDRIP but also to UN human rights instruments,⁵ as well as to standards established by the ILO, such as the Indigenous and Tribal Peoples Convention, 1989 (No. 169) (IWGIA and ILO 2021).

The Indigenous Navigator framework includes three types of indicators (Indigenous Navigator, n.d.):

3. **Structural indicators:** reflecting a country’s legal and policy framework;
4. **Process indicators:** measuring the State’s ongoing efforts to implement human rights commitments (e.g. programmes, budget allocation);
5. **Outcome indicators:** measuring the actual enjoyment of human rights by indigenous peoples.

The data on occupations were mainly provided in relation to the outcome indicators, focusing on indigenous peoples’ voices and their experiences. The data were collected through responses to “community questionnaires”, which were answered via collective assessments and data collection on the ground by the communities themselves. When possible, they are disaggregated by sex. The collection of data was conducted using various methods, sometimes in combination, including household surveys, individual surveys, focus groups, communal assemblies, and consultation with community authorities. Data were collected in the 11 countries⁶ where communities have relied on the Indigenous Navigator. Over 200 communities were involved in the data gathering and analysis, amounting to approximately 270,000 people (IWGIA 2020).

The data collected through the Indigenous Navigator do not, therefore, represent official statistical data that could, for example, be used to estimate the number of people who practise traditional occupations. Rather, they provide indigenous peoples’ perceptions and experiences concerning the framework’s indicators. These data provide valuable examples of the range of traditional occupations performed by indigenous peoples. Respondents were asked to list up to five of the most important traditional occupations performed by women and the five most important traditional occupations performed by men in their people or community.

⁵ Namely, the International Covenant on Civil and Political Rights (ICCPR), the International Covenant on Economic, Social and Cultural Rights (ICESCR), the Universal Declaration of Human Rights (UDHR), the Convention on the Rights of the Child (CRC), the Convention on the Elimination of All Forms of Discrimination against Women (CEDAW), the International Convention on the Elimination of All Forms of Racial Discrimination (ICERD) and the Convention against Torture (CAT).

⁶ Bangladesh, Bolivia, Cambodia, Cameroon, Colombia, Kenya, Nepal, Peru, Philippines, Suriname and Tanzania.

► **Table 1. The most important traditional occupations performed by indigenous women and men, based on the Indigenous Navigator**

Growing crops <ul style="list-style-type: none"> ▶ Practising jhum cultivation ▶ Gardening ▶ Planting ▶ Coffee cultivation ▶ Land fertilization ▶ Ploughing the land ▶ Soil preparation, sowing, harvesting ▶ Rotational farming ▶ Sowing ▶ Platano cultivation ▶ Maintaining drought canals and irrigating 	Raising and herding animals <ul style="list-style-type: none"> ▶ Grazing cattle ▶ Herding ▶ Shepherding ▶ Poultry ▶ Breeding of travelling llamas in the valley ▶ Milking cows ▶ Adding herds/raiding livestock from other communities
Hunting and fishing <ul style="list-style-type: none"> ▶ Collecting non-timber forest products ▶ Collecting firewood ▶ Fetching water ▶ Honey harvesting 	Gathering and collecting <ul style="list-style-type: none"> ▶ Collecting coal ▶ Small-scale gold mining (from the river bank)
Handicrafts to make tools, household items and clothing <ul style="list-style-type: none"> ▶ Knitting tulle or nettle fabric ▶ Sewing traditional indigenous clothes ▶ Weaving ▶ Spinning sheep and llama wool for weaving beds and aguayos (traditional textiles) ▶ Embroidering 	Construction <ul style="list-style-type: none"> ▶ Carpentry ▶ Construction of manyattas ▶ Construction of Maasai houses ▶ Boatbuilding
Commercial activities <ul style="list-style-type: none"> ▶ Selling home-made products ▶ Selling food ▶ Commerce ▶ Small business 	Processing and preparing food and drink <ul style="list-style-type: none"> ▶ Processing cassava ▶ Preparation of traditional food ▶ Making kasiri ▶ Food processing ▶ Making masato ▶ Home-made wine making ▶ Dry fish processing ▶ Processing of chuño (a freeze-dried potato product) ▶ Making cheese ▶ Making yeast
Care work <ul style="list-style-type: none"> ▶ Housekeeping ▶ Childcare 	Health services <ul style="list-style-type: none"> ▶ Traditional medicine ▶ Traditional healing practices ▶ Making herbal medicine ▶ Midwifery
Cultural activities <ul style="list-style-type: none"> ▶ Performing traditional ceremonies ▶ Organizing community meetings ▶ Traditional leadership and management 	Other activities <ul style="list-style-type: none"> ▶ Day labour ▶ Chopping wood ▶ Boating ▶ Working as community security guards ▶ Securing the family unit ▶ Working in the garment industry

Respondents were given a definition of traditional occupations and instructions as follows, with a similar set of instructions for men:

Traditional occupations or livelihoods are the economic and productive activities that have been practi[s]ed by successive generations within your people or community. These can be both subsistence or market-oriented. Traditional occupations comprise, for example, small-scale farmers, weavers, ceramists, artisans, healers, midwives, hunters, fishermen, cattle herders and many others.

You are asked to identify up to five traditional occupations performed by women in your people or community. These need not to be full-time occupations but can be occupations that women perform in combination with other activities. Methodologically, it is important to discuss with a broad sample of women in order to identify these main occupations. You are asked to enter the name of these occupations in the textboxes, in the order of importance as identified by the women. If there is less variety in your people/community's traditional occupations, you simply enter fewer than five.

► **Indigenous Navigator. n.d. Question guide – community questionnaire.**

Across all the regions from which the data were collected, the activities identified by respondents as being the most important traditional occupations performed by indigenous women and men can be divided into the categories presented in Table 1 below, with selected examples listed. These categories reflect, to a certain extent, the manner in which occupations are organized according to skill specialization in the International Standard Classification of Occupations (ISCO-08), while also taking into consideration the groups used by the FPP. This may help assess the extent to which the occupations listed are covered adequately in classification systems based on ISCO-08.

In two publications that report on the data captured in the Indigenous Navigator, the occupations were arranged into five broad groups: handicrafts, agriculture, care activities, services, and other traditional occupations (IWGIA; ILO 2020 and 2021). The scope of “care activities” in these groups is wider than “care work” in the groups listed above, as the term

“care activities” was used to characterize both direct and indirect care activities (including cooking and cleaning), as defined in “care work and care jobs for the future of decent work” (ILO 2018). Analysis of the responses using these groups revealed some interesting findings concerning gender roles. Agriculture was reported most frequently as one of the main traditional occupations performed by women as well as by men, although the proportions for men were generally higher. In some countries only agricultural activities were identified as important occupations for men. Handicrafts were much more commonly mentioned for women than men. It was concluded that the responses demonstrate that indigenous women performed a more diverse array of activities than men, while the large majority of indigenous men worked only in agricultural activities (IWGIA; ILO 2021).

It was noted that this diversification of women's work and tasks, including the responsibility for raising children, translated into an excessive workload for indigenous women which might hamper their chances of taking up leadership positions in the community or in indigenous organizations. It was indicated in several interviews that care work was often not adequately valued and did not leave women with any time to participate in other activities. While this may also be true for many non-indigenous women, it is nevertheless an important finding, especially when we consider that childcare is likely to be one of the ways in which traditional indigenous knowledge is transmitted to children.

The occupations and activities identified in the Indigenous Navigator show that the respondents, as well as the groups they consulted with, had varying perceptions of what an occupation is—even though they were provided with a relatively detailed explanation. Some of the activities reported, such as planting, ploughing the land and chopping wood would generally be considered by occupational analysts and occupation classification systems as specific tasks performed in one or more occupations, rather than as separate occupations in their own right. On the other hand, some items listed are a series of activities, such as soil preparation, sowing and harvesting, or they are broader occupational concepts, such as rotational farming, *platano* cultivation or shepherding, which are more consistent with the notion of an occupation generally used in occupation classifications. Several of the activities listed can be equated to occupations in the market

economy such as cheesemaker, childcare worker, boatbuilder, embroiderer, weaver, poultry farmer, and so forth, as well as to activities forming part of production for household use.

For the purposes of this paper, it is not particularly problematic that traditional activities/occupations are identified with different degrees of specificity, although it is important that this aspect is understood. Some of the activities listed might be performed in more than one occupation as defined in occupational classification systems. For example, chopping wood would be one of several tasks performed by workers classified in ISCO-08 unit groups 9215 (Forestry labourers) and 9624 (Water and firewood collectors). “Planting” is specifically mentioned among the tasks performed in as many as 13 different ISCO-08 unit groups. These activities could not therefore be assigned to a single ISCO group. Importantly for our purposes, the information available allows us to identify which occupations and groups in ISCO or in a national occupation classification might relate to a traditional occupation, and to assess the suitability of the classification for measuring and compiling data on traditional occupations, which we will cover in section 6.5.

The activities identified as traditional occupations in the Indigenous Navigator provide a useful insight into the range of activities considered by indigenous peoples to be their traditional occupations. While it is not a fully comprehensive list, as responses were provided from only 11 countries, the respondents nevertheless represent more than 200 communities and some 270,000 people in several regions of the world.

Several of the activities/occupations identified from the perspective of indigenous peoples themselves would not generally appear as examples of traditional occupations in the academic literature. In a few cases, this may be the result of different understandings of the concept of an occupation, or of what “traditional” means in this context. For example, “day labour” refers to the nature and duration of an employment relationship rather than the type of work performed. Moreover, working as a day labourer would not necessarily require the use of any kind of traditional knowledge. Similarly, operating a small business relates more to the type of employment relationship than to an occupation. Whether or not *traditional knowledge* was required to operate a small business would depend on the

nature of the goods or services produced. However, activities such as “selling home-made products” and “selling food” are likely to have been taking place for many generations and may be increasing as indigenous communities become more involved in the market economy. Selling many traditional products may also require knowledge of the production methods, uses and cultural significance of the items sold.

Activities such as childcare, housekeeping, and provision of security are perhaps overlooked in the academic literature, because these are activities that are not necessarily strongly differentiated from activities in the non-indigenous population. It is also possible that in some studies there tends to be a focus on the main sources of livelihood and on the goods produced, which may differentiate one group from another, rather than on services provided which might highlight similarities. Housekeeping and provision of care take place in almost all households, whether or not they are indigenous. However, in indigenous households these are activities in which indigenous identities may be established, and in which traditional culture and knowledge may be passed on to children. Childcare and the provision of security would certainly have taken place before colonization and it is entirely valid to consider them as traditional occupations. It is interesting to note that neither care work nor provision of security are covered in the groups of traditional occupations used by the FPP, although the FPP groups do include “teaching and transmission of traditional knowledge”.

However, further consideration needs to be given to how far it is practical or useful to consider that any person who identifies as indigenous and is employed as a childcare worker or as a security guard (or who performs these activities in an unpaid form of work) is practising a traditional occupation. Similarly, it would not be appropriate to consider that any indigenous person working in sales, for example as a shop sales assistant or as a shopkeeper, is practising a traditional occupation. For the purposes of measuring the practice of traditional occupations, the important issue is likely to be related to whether the activity involves the use or retention of traditional knowledge and skills. We will discuss the relationship between traditional occupations and traditional knowledge in more depth in the next section.

4.4. Traditional occupations and indigenous knowledge

Traditional indigenous knowledge and traditional occupations are closely interrelated and dependent on each other. While there is no internationally accepted formal definition of traditional or indigenous knowledge, the various definitions and descriptions used in different contexts have much in common. In its glossary of statistical terms, the UNESCO Institute of Statistics (UIS) states that traditional knowledge refers to:

[k]nowledge, innovations and practices of indigenous and local communities around the world. Developed from experience gained over the centuries and adapted to the local culture and environment, traditional knowledge is transmitted orally from generation to generation. It tends to be collectively owned and takes the form of stories, songs, folklore, proverbs, cultural values, beliefs, rituals, community laws, local language and agricultural practices, including the development of plant species and animal breeds. Traditional knowledge is mainly of a practical nature, particularly in such fields as agriculture, fisheries, health, horticulture,

forestry and environmental management in general.

<http://uis.unesco.org/en/glossary-term/traditional-knowledge>

► Box 2. Convention on Biological Diversity, Article 8(j)

Each Contracting Party shall, as far as possible and as appropriate: ...

Subject to national legislation, respect, preserve and maintain knowledge, innovations and practices of indigenous and local communities embodying traditional lifestyles relevant for the conservation and sustainable use of biological diversity and promote their wider application with the approval and involvement of the holders of such knowledge, innovations and practices and encourage the equitable sharing of the benefits arising from the utilization of such knowledge, innovations and practices;

This comprehensive definition is derived from information provided by the Secretariat of the Convention on Biological Diversity (SCBD) in its press kit for the ninth meeting (2008) of the Conference of the Parties (COP 9) to the Convention in a document describing the importance of Article 8(j) of the Convention (SCBD 2007). This article links the central ideas of “knowledge, innovations and practices of indigenous and local communities” to their relevance for conservation and sustainable use of biodiversity, and the need for wider application with the approval and involvement of indigenous and tribal peoples

Indigenous knowledge thus embraces knowledge of indigenous languages, and the cultural, spiritual and religious traditions, customs and ceremonies of a people or community, as well as knowledge of their traditional lands and environment and the plants and animals that can be found there. This includes the constantly evolving information, skills, practices, science and technology passed from generation to generation within an indigenous or tribal group. required for and gained through the practice of traditional occupations and livelihoods that are (or were) essential to meet subsistence needs. While the term “traditional knowledge” has been widely used, we have in most cases preferred the term “indigenous knowledge” in this paper as it more adequately reflects its ongoing and evolving nature. The depth and scope of indigenous knowledge gained in this way is well illustrated in the case of pastoralists. The following observation about pastoralists in Kenya is no doubt applicable to many pastoralist communities around the world:

Pastoralist use of rangeland is based on elaborate traditional knowledge of environmental variables, such as rainfall patterns, soil systems, animal characteristics and breeds, and types of vegetation and their potential in different seasons. The pastoral communities bring this knowledge to bear on their herding and animal husbandry. All pastoralist herders are expert plant taxonomists, and have names for a bewildering variety of grasses, shrubs, herbs and woods (...) with this detailed biological knowledge of palatable plants, poisonous plants, annual grasses and perennial shrubs, goes an intimate knowledge of the pasturing areas.

Umar in ILO 2000, 48–49

► Box 3. UN Declaration on the Rights of Indigenous Peoples (UNDRIP), Article 31

1. Indigenous peoples have the right to maintain, control, protect and develop their cultural heritage, traditional knowledge and traditional cultural expressions, as well as the manifestations of their sciences, technologies and cultures, including human and genetic resources, seeds, medicines, knowledge of the properties of fauna and flora, oral traditions, literatures, designs, sports and traditional games and visual and performing arts. They also have the

right to maintain, control, protect and develop their intellectual property over such cultural heritage, traditional knowledge, and traditional cultural expressions.

2. In conjunction with indigenous peoples, States shall take effective measures to recognize and protect the exercise of these rights.

Traditional knowledge of the environment is no less important among forest peoples, whether they are hunter-gatherers or practise rotational farming (or both).⁷ However, many indigenous peoples have lost or are losing access to their traditional lands, through physical displacement, changed land use policies and deforestation. Without access to and control over their traditional lands, indigenous peoples will find it increasingly difficult to retain and pass on their traditional knowledge to future generations.

There is an increasing appreciation of the value of indigenous knowledge amongst academics and scientists, especially those focusing on biodiversity, climate change, and the development of new medicines. The use of indigenous knowledge in occupational activities beyond traditional subsistence activities, therefore, has the potential to improve the livelihoods of indigenous peoples and to reduce the extent of their marginalization in many of the countries where they live. This applies especially to the use and development of indigenous knowledge in scientific research related to biodiversity and climate change, in environmental management, in the development of medicines, and in the development of sustainable agricultural practices, but is also the case for activities such as the production and sale of traditional craft items and ecotourism.

However, there are also concerns about the expropriation of indigenous knowledge, for example by companies that have patented traditional medicines without granting due recognition to the indigenous communities whose knowledge systems went into identifying the active ingredients as useful for particular ailments (UN 2009, 69). Reflecting these concerns, the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP), adopted by the UN General Assembly on 13 September 2007, asserts the right of indigenous peoples to maintain, control, protect and develop their traditional knowledge and their intellectual property over that knowledge.

In addressing the intellectual property issues concerning traditional knowledge, the World Intellectual Property Organization (WIPO) distinguishes between traditional knowledge and *traditional cultural expressions*, because “from an [intellectual property] standpoint, a different set of policy questions arises and distinct legal tools are likely to apply for their protection”. WIPO stresses that no single definition would do justice fully to the diverse forms of knowledge and expressions held and created by indigenous peoples, and that there is not yet any formal definition of these terms (WIPO 2020). It describes traditional knowledge as:

⁷ See, for example, Sharma et al. 2020.

... a living body of knowledge that is developed, sustained and passed on from generation to generation within a community, often forming part of its cultural or spiritual identity. In a few words, [traditional knowledge] is understood as:

- knowledge, know-how, skills, innovations or practices;
- that are passed between generations;
- in a traditional context; and
- that form part of the traditional lifestyle of indigenous and local communities who act as their guardian or custodian.

(WIPO 2020).

Traditional cultural expressions are described as “the forms in which traditional culture is expressed”. Examples of traditional cultural expressions include “dances, songs, handicraft, designs, ceremonies, tales, or many other artistic or cultural expressions” (WIPO 2020).

WIPO’s descriptions of traditional knowledge and traditional cultural expressions are helpful in clarifying the scope and range of indigenous knowledge that might be relevant for the identification of traditional occupations. Whilst the distinction between traditional knowledge and traditional cultural expressions may be useful for the purpose of protecting indigenous intellectual property, for many other purposes it will be preferable to consider cultural expressions as an integral part of indigenous knowledge. If we wish to use indigenous knowledge to help define and identify traditional occupations, it would not be helpful to exclude the expression of that knowledge through culture. For example, if some or all of the livelihood and income of a person who identifies as indigenous is derived from the performance of traditional dance or music, or from the sale of works of art or handicrafts that express indigenous culture, it would not be appropriate to exclude these activities from the measurement of traditional occupations.

Despite the recognition of the value of indigenous knowledge and the efforts that are being made to protect the intellectual property of indigenous

peoples, large amounts of traditional indigenous knowledge are at risk of being lost. This can stem from the loss of indigenous plant species or from changes in the practice of traditional occupations. In Viet Nam and other Asian countries, indigenous plant species are disappearing along with the traditional knowledge related to them because of government prohibition of rotational farming, the introduction of new high-yield crop varieties, and deforestation (Truong in AIPP 2010). A similar challenge has also been reported in Sri Lanka, where traditional healers of snakebites are reported to face obstacles to continuing their practice, such as the destruction of medicinal plants due to the expansion of commercial plantations and restrictions on entering forest areas. To preserve and transmit their knowledge, a group has developed a bio-cultural protocol covering the intergenerational heritage, traditional medicinal knowledge, their acquaintance with serpents and other animals, and extraordinary treatment methods and varieties of medicine ([Association of Traditional Healers for Treatment of Venom Bites and Nirmanee Development Foundation, n.d.](#)).

There are widespread concerns that, as herbal plants are gradually dying out, knowledge of their use for medicinal purposes is no longer handed down to the next generation (for example, Truong in AIPP 2010). Box 4 below describes in detail some of the challenges and changes to traditional healing practices and the use of traditional medicines, as described by Indigenous Navigator respondents.⁸

It is ironic that, while practitioners and researchers in modern medicine are increasingly recognizing the value of indigenous knowledge of healing methods and medicines, the growing use of modern medicine by indigenous peoples and also the loss of access to traditional medicinal plants are leading to the loss of this knowledge and a reduction in the practice of traditional healing. From the occupational perspective, however, there should not necessarily be a strict delineation between traditional healing methods and the practice of modern medicine based on the modern scientific method. Many health professionals incorporate elements of traditional healing and medicines within a practice based primarily on modern medical science. Indigenous persons working in these professions are able to

► Box 4. Insights from the Indigenous Navigator on challenges to the practice of traditional healing and use of traditional medicines

Another reason for the loss of traditional knowledge is related to a reported lack of interest from younger generations in learning traditional healing practices, as well as to the inadequate transfer of knowledge. The report of an Asian respondent provides a picture of the breadth of changes in traditional healing practices and the difficulties for the intergenerational transfer of traditional knowledge:

“Home birthing is banned by the local government and many women do not want to go to the hospital because they are not comfortable there. Due to the abandonment of the traditional agroforestry practice of sulagad where medicinal plants can be found and/or cultivated, and the deforestation of large swathes of the ancestral domain, some traditional medicines are hard to collect and that means the knowledge of identifying, preparing and applying these is also getting lost as the practitioners also die out.”

Respondents also referred to a lack of trust in traditional practices and medicines. Some explained that this can be a consequence of cultural change as well as of external influences. Two respondents from Latin America and one from Africa mentioned that the work of evangelization is perceived as having negatively affected peoples’ trust in traditional healing practices.

Having good access to public health has also been pointed out as a factor for change, as many people have more trust in allopathic treatment or see it as faster and more convenient. One respondent in Asia and one in Latin America reported that, in cases where the importance of traditional healing practices has remained the same, indigenous peoples depend on them as no public health facilities are available in their village.

According to Indigenous Navigator respondents, the preference for using traditional

medicine and healing practices may also depend on the illness being treated. Respondents reported using traditional medicine to treat colds, children’s illnesses, headaches, bone fractures, abdominal pains, fever, low vitality, smallpox, cholera and leprosy.

The Indigenous Navigator provides some valuable insights into the changes in the healing practices taking place in many indigenous communities and their impact. Between 2017 and 2019, respondents in 11 countries were asked if the importance of traditional healing practices and medicines had changed over the last 20 years in their people or community. The ILO’s analysis of the responses to the Indigenous Navigator community questionnaire showed that, while only a very small number of respondents affirmed that traditional healing methods were no longer important, in the majority of cases the importance of traditional healing practices and medicines was reported to have diminished. The majority of respondents indicated that the loss of indigenous knowledge or medicines was the main reason for changes in traditional healing medicines and practices. Several respondents indicated that communities faced restrictions in accessing forests and collecting non-timber products, which hampered their access to traditional medicine. Furthermore, deforestation, including through illegal exploitation of forests, severely impacted access to traditional medicine. In the words of a respondent from Asia:

“The indigenous communities (...) have diverse knowledge on ethnomedicinal plants as well as the background of using these plants to their primary health care. Nowadays traditional healers’ migration to the other jobs and mass deforestation causes the decline of these practices.”

⁸ For more details on the Indigenous Navigator’s methodology and coverage, please refer to section 4.3 and to IWGIA and ILO 2021.

incorporate their traditional knowledge in their practice – provided this knowledge has indeed been passed on to them. This applies to many spheres of activity, beyond medicine and healthcare, not least with respect to environmental protection, promoting biodiversity and mitigating climate change.

To assess the extent to which traditional knowledge is indeed passed on and used by indigenous peoples, information is needed about the retention of traditional knowledge, skills and cultural practice and the ways in which these are applied in the activities of indigenous persons in a wide range of occupations and activities. This type of information can and should be collected in both quantitative and qualitative research. This is feasible in special purpose surveys such as those targeting indigenous populations, or those concerned specifically with issues around biodiversity. An interesting example is the Vitality Index of Traditional Environmental Knowledge (VITEK), a quantitative methodology for measuring trends in the retention or loss of traditional knowledge about the natural world and representing the trend pattern in a statistical form for comparative purposes. The method gives priority to research on the state of knowledge and practical skills that are directly involved in the sustainable use of biodiversity. The VITEK assessment involves measuring the differences in knowledge and practices between people of different generations. The results of the tests are used to calculate the vitality measure, which can then be used to

compare the status and trends of traditional environmental knowledge across communities, regions and countries (Zent and Maffi 2008).

It would not generally be feasible, however, to collect information about traditional knowledge independently of the practice of traditional occupations on a regular basis in mainstream labour statistics. Subject to certain constraints such as those imposed by sample size, data sources such as labour force surveys and censuses can nevertheless provide information about the occupations in which indigenous persons are engaged in paid employment, in subsistence foodstuff production and, to a lesser extent, in own-use production of other goods and services.

As we have seen, the use, development and transfer of indigenous knowledge have always been central to the practice of traditional occupations and to maintaining and improving the livelihoods of indigenous peoples. If statistics on traditional occupations are to inform us about their continuing impact on the livelihoods of indigenous peoples, they should focus not only on the economic and cultural activities that indigenous peoples have traditionally undertaken, but also on other occupations in which indigenous persons are using their traditional knowledge, for example in life sciences, climate research and tourism. The challenge is to determine which occupations should be included and how they can be identified in official statistics.

►► If statistics on traditional occupations are to inform us about their continuing impact on the livelihoods of indigenous peoples, they should focus not only on the economic and cultural activities that indigenous peoples have traditionally undertaken, but also on other occupations in which indigenous persons are using their traditional knowledge, for example in life sciences, climate research and tourism.



5

Measurement of work in official statistics



In previous chapters, we have discussed the need to collect statistics on traditional occupations, as well as their importance for maintaining and developing traditional knowledge and skills. We will now examine how work is measured in official labour statistics and how concepts such as own-use production work, informal economy, and classifications of work and labour force status relate to traditional occupations. This and the next chapter aim to provide an overview of the statistical measurement of work and subsequently identify the points of entry to measure traditional occupations in official labour statistics.

5.1. The concept and statistical measurement of work

Before focusing in detail on the concepts of occupation and economic activity (or industry) and how these concepts are measured and classified in official labour statistics, it is important to consider what it is that labour statistics measure, the conceptual frameworks which underpin the statistical measurement of work, and how these statistics and frameworks relate to the traditional occupations and activities of indigenous peoples.

Labour statistics have historically been concerned mainly with the labour market, focusing strongly on the measurement of employment (for pay or profit) and unemployment. This is not well suited to the measurement of occupations that mainly provide for subsistence needs (i.e. relating to the production of goods and the provision of services for one's own consumption or consumption by members of one's own family), which represent at the very least an important component of the practice of traditional occupations.

Until 2013, production of goods for own consumption was, in principle, counted as employment, although frequently undercounted. Unpaid provision of services for consumption by members of one's own household or by family members living in other households was excluded from employment. This aligned the measurement of employment with the production boundary in the System of National Accounts (SNA), which includes own-use production of goods but excludes own-use production of services.

As a result, subsistence activities in traditional occupations were divided into two parts: (1) the production of goods; and (2) the provision of services. Activities in the provision of services, which are more frequently performed by women than by men, were thus not counted in mainstream labour statistics, and frequently undervalued. Moreover, by treating unpaid non-market production of goods as employment, those workers who were engaged solely in subsistence activities to produce food and other goods were counted as employed and could not therefore be counted as unemployed, even if they were actively seeking and available for a job in paid employment. This resulted in relatively low unemployment rates in the developing world compared to the developed world.

The adoption in 2013 of the Resolution concerning statistics of work, employment and labour underutilization by the 19th International Conference of Labour Statisticians (ICLS) addressed these problems in a number of ways. It introduced the first international statistical definition of the concept of "work" as "any activity performed by persons of any sex and age to produce goods or to provide services for use by others or for own use" irrespective of its formal or informal character or the legality of the activity. This concept of work excludes activities that do not involve producing goods or services (e.g. begging and stealing), self-care (e.g. personal grooming and hygiene), and activities that cannot be performed by another person on one's own behalf (e.g. sleeping, learning and activities for own recreation) but includes all other forms of work, whatever the setting.

By identifying five distinct and mutually exclusive forms of work for separate measurement, the 19th ICLS Resolution clarified and extended the scope of official labour statistics and restricted the concept of employment to work performed for others in exchange for pay or profit, thus excluding all subsistence activities from employment. These forms of work are distinguished on the basis of the intended destination of the production (for own final use; or for use by others, i.e. other economic units) and the nature of the transaction (i.e. monetary or non-monetary transactions, and transfers), as follows:

- own-use production work comprising production of goods and services for own final use;

►► Traditional occupations may be practised in any [...] forms of work and individuals may engage in one or more forms of work in parallel or consecutively. For example, persons may be employed, be volunteering, doing unpaid trainee work and/or producing for own use, in any combination.

- employment work comprising work performed for others in exchange for pay or profit;
- unpaid trainee work comprising work performed for others without pay to acquire workplace experience or skills;
- volunteer work comprising non-compulsory work performed for others without pay;
- other work activities (not defined in the resolution).¹

Traditional occupations may be practised in any of these forms of work and individuals may engage in one or more forms of work in parallel or consecutively. For example, persons may be employed, be volunteering, doing unpaid trainee work and/or producing for own use, in any combination. An indigenous person may thus participate in traditional occupations during a given period such as a week or a month in own-use production work, employment work, unpaid and volunteer work. Equally, she or he may participate in a traditional occupation in some of these forms of work and in a non-traditional occupation in others. This is highly relevant for the provision of statistics on traditional occupations, since all subsistence activities are now included in the same form of work (own-use production work) while the practice of traditional occupations for pay or profit continues to be counted as employment.

5.2. Own-use production work

As already noted above, the notion of traditional occupations derives from the activities that indigenous and tribal peoples have traditionally undertaken to

provide for their subsistence needs and livelihoods (i.e. for own final use), although measurement of the practice of traditional occupations should not be limited to subsistence and other non-market activities. It is therefore worth considering the concept of own-use production work defined by the 19th ICLS a little more closely so as to assess its relevance for measurement and identification of traditional occupations. For example, should any person who identifies as indigenous and performs own-use production work be considered to be practising a traditional occupation?

According to the 19th ICLS, "[p]ersons in own-use production work are defined as all those of working age who, during a short reference period, performed any activity to produce goods or provide services for own final use" (ILO 2013b). "Any activity" refers to work performed in the various activities to produce goods or services for a cumulative total of at least one hour. The following examples are listed in the resolution to clarify the scope and the nature of the work:

- **production of "goods"**
 - producing and/or processing for storage agricultural, fishing, hunting and gathering products;
 - collecting and/or processing for storage mining and forestry products, including firewood and other fuels;
 - fetching water from natural and other sources;
 - manufacturing household goods (such as furniture, textiles, clothing, footwear, pottery or other durables, including boats and canoes);

¹ These "other work activities" include such activities as unpaid community service and unpaid work by prisoners, when ordered by a court or similar authority, and unpaid military or alternative civilian service, which may be treated as a distinct form of work for measurement (such as compulsory work performed without pay for others).

- ▶ building, or effecting major repairs to, one's own dwelling, farm buildings, etc.
- ▶ **provision of "services"**
 - ▶ household accounting and management, purchasing and/or transporting goods;
 - ▶ preparing and/or serving meals, household waste disposal and recycling;
 - ▶ cleaning, decorating and maintaining one's own dwelling or premises, durables and other goods, and gardening;
 - ▶ childcare and instruction, transporting and caring for elderly, dependent or other household members and domestic animals or pets, etc. (ILO 2013b).

While some of these activities could be undertaken as part of a traditional occupation, they may all also take place as part of the everyday work activities of non-indigenous populations. Indeed, many of the activities listed under "provision of services" are activities that most adults undertake on a more or less daily basis. Activities such as household accounting and management, and purchasing goods, might not generally be considered relevant to the measurement of traditional occupations. However, completely excluding the provision of services from the measurement of traditional activities would exclude important activities in which traditional knowledge and skills are retained and passed on, such as childcare and instruction, and preparation of food.

The ILO report to the 19th ICLS presenting the Resolution concerning statistics of work, employment and labour underutilization (ILO 2013a) provides some useful insights into the nature of own-use production work. It notes that "prior to the spread of markets for goods and services, households mainly produced their own food, shelter and other necessities, caring for the household members, premises and durables." Of course, this applies to non-indigenous groups as well as to indigenous peoples. This report goes on to state that "as these products have become increasingly available through markets, the prevalence of production for

own final use has steadily declined." This may well have led to a decline in the practice of traditional occupations and may continue to do so. However, the transition of production of goods and services from own-use production to production that is mainly for the market should not necessarily imply a decline in traditional occupations. If the activity continues to draw on traditional knowledge and skills, adapted if necessary to reflect contemporary conditions, this transition may result in strengthening the practice of traditional knowledge and skills.

This report also notes that own-use production work:

nonetheless remains widespread in countries at different levels of development. Such production, as in subsistence agriculture, continues to be central to survival in impoverished and remote areas throughout the world and is also a common strategy for supplementing household income, as in the case of kitchen gardens in many urban and rural areas alike. [...] among higher income groups, it predominantly covers unpaid household services, do-it-yourself work, crafts, backyard gardening and suchlike

ILO 2013a

It should be clear from all of the above that participation in own-use production work could not, of itself, be used a proxy indicator for the practice of traditional occupations. It would not provide a complete picture, as it would exclude activities performed in employment, unpaid trainee work and volunteer work. To determine whether a work activity in own-use production constitutes the practice of a traditional occupation, information about at least the nature of the work performed (i.e. occupation) would be needed to make a full assessment.

In the case of the provision of services, information about whether traditional knowledge is used or passed on might also be needed. Otherwise, virtually all persons who identify as indigenous would be considered to be practising a traditional occupation, since almost all women and a large number of men provide some services for consumption by members of their own household, such as caring for children, domestic cleaning and preparation of meals. This would require the inclusion of questions in surveys

that measure own-use provision of services and of additional questions to determine whether or not traditional knowledge was being used or passed on to others during the performance of these activities.

The 19th ICLS Resolution does provide for the production of separate statistics for the own-use production of goods and own-use provision of services. This is necessary at least to allow the measurement of labour inputs in accordance with the production boundary of the SNA, which includes own-use production of goods but excludes own-use production of services. Countries in which own-use production of goods is an important component of national accounts should therefore be able to produce separate statistics on own-use producers of goods.

Participation in own-use production of goods might be sufficient to provide a reasonable partial measure of the practice of traditional occupations in own-use production work, as these activities would typically include the production of food, clothing, and traditional craft items. This would depend on national circumstances, as activities such as building and repair of one's own dwelling might not involve traditional construction methods or knowledge if, for example, undertaken in urban settings that do not use traditional construction techniques. There may also be a need, in some countries, to assess the extent to which traditional knowledge continues to be used and passed on through subsistence activities in agriculture. In all cases it would, of course, be necessary to confirm that the work is performed by individuals who identify as belonging to an indigenous or tribal people. The impact of not including own-use provision of services would also need to be assessed.

Participation in subsistence agriculture or "foodstuff production", either as a main source of livelihood or as a strategy for supplementing household income, may also be a useful indicator of the practice of traditional occupations. Reflecting the importance of measuring subsistence agriculture separately from other own-use production work, the 19th ICLS identifies subsistence foodstuff producers as an important subgroup of persons in own-use production work. They are defined so as to include all those who performed work in order to produce

foodstuffs from agriculture, fishing, hunting or gathering that contribute to the livelihood of the household or family, but to exclude those who engaged in such production as recreational or leisure activities.

► Box 5. Subsistence foodstuff producers

Subsistence foodstuff producers constitute an important subgroup of persons in own-use production work. They are defined as all those who performed work activities such as producing and/or processing for storage agricultural, fishing, hunting and gathering products in order to produce foodstuff[s] from agriculture, fishing, hunting or gathering that contribute to the livelihood of the household or family. Excluded are persons who engaged in such production as recreational or leisure activities. (ILO, Glossary of Statistical Terms).

The resolution recommends that, "for purposes of monitoring conditions of labour market performance as related to insufficient access to, or integration in, markets, or to other factors of production, statistics of this group should be identified and reported separately to serve policy needs...". The recommended indicators, where relevant, include headcounts and rates of subsistence foodstuff producers, with rates computed in relation to the working-age population. It also recommends that a national data collection strategy should be established that allows for statistics on subsistence foodstuff producers to be reported on a sub-annual basis (i.e. with the same frequency as the main aggregates of employment, the labour force and labour underutilization). (ILO 2013b, para. 56)

In assessing the relevance of own-use production work to the measurement of traditional occupations it is also important to consider what is intended by the term "produce goods for own final use". The ILO report to the 19th ICLS states as follows:

Own final use covers production that is intended for final consumption by the producer, by members of his or her household or by family members living in other households. This last group is included to capture the range of productive activities carried out without pay on a regular or occasional basis by persons to assist family members. This includes farming activities organized on a family basis where members living in different households pool their labour and resources to produce foodstuffs and other goods which are distributed among family members for their own final use, as well as work carried out without pay to assist family members, such as fetching water for elderly relatives, maintenance and repair of their household premises or goods, shopping, preparing meals or providing care for relatives.

ILO 2013a

This broadly defined concept of “own final use” is fully reflected in the final version of the resolution and is sufficiently flexible to encompass sharing between non-nuclear family groups that may commonly be found in many indigenous and tribal communities. It may even be broad enough to encompass situations where goods and services are shared within an indigenous or tribal community whose members may not be all closely related. This depends on the notion of “family” that prevails in a particular society. In order to accommodate different national circumstances, the resolution does not specify a definition of the notion of family; however, unpaid non-compulsory work for the benefit of the community in general, or for members of other households who are not immediate family, would generally be treated in labour statistics as volunteer work.

It is also useful to note that own-use production work does not entirely exclude the sale or barter of a surplus of goods on the market. “For own final use” is interpreted as the *main* intended destination of the output, established in reference to the specific goods produced or services provided, as self-declared (i.e. mainly for own final use). In the case of agricultural, fishing, hunting or gathering goods intended mainly for own consumption, a part or surplus may nevertheless be sold or bartered (ILO 2013b). Individuals practising traditional occupations who sell a surplus of their products on the market may therefore be included in own-use production

work, and not therefore in employment, as the main purpose of the production of an agricultural product is for own use.

The ILO model questionnaires for labour force surveys provide separate modules to determine whether work done in farming or rearing animals, fishing, or other types of activity should be identified as employment or own-use production work. This is based on whether the main intended use of the products from the work is for sale (employment) or own/family use (own-use production work) and allows the identification of subsistence foodstuff producers.

An additional module in the ILO model questionnaires allows the identification of those engaged in own-use production of goods other than farming or fishing and of the hours worked in these activities. The categories proposed in the module include:

- gathering food;
- hunting;
- preservation of foodstuffs;
- construction of own household/buildings;
- manufacture of goods for household or family use;
- fetching water;
- gathering firewood or other natural products.

This module is optional for use in contexts where comprehensive measures of participation and time spent in own-use production of goods are sought. It is likely to be included in surveys less frequently than modules on employment and subsistence foodstuff production. Countries are, of course, at liberty to adapt the set of categories to reflect national relevance (ILO 2020a).

To summarize, participation in own-use production work cannot on its own be used to identify the practice of a traditional occupation. Own-use provision of services is something that almost everyone does on a daily basis. Information about the nature of the work performed and/or the extent to which traditional knowledge and skills are used or passed on, and the time spent on these activities, would be needed to make a proper assessment. This type of information will not regularly be available in labour

statistics and would need to be collected in special purpose surveys such as time-use surveys or those targeting indigenous and tribal occupations.

However, information about own-use production of goods and/or subsistence foodstuff production may be available in countries where these activities make a significant contribution to national income or the livelihoods of their population. Information about the participation of indigenous and tribal peoples in these activities, especially in subsistence foodstuff production, would obviously be valuable in its own right. It would provide insights into the extent of their integration into the market economy, as well as into their social and economic situation.

In many national contexts, statistics on the participation of indigenous and tribal peoples in own-use production of goods or in subsistence foodstuff production could also provide a reasonable proxy measure of the practice of traditional occupations in own-use production work. This would be an incomplete measure of the practice of traditional occupations, as it would exclude activities in employment (for pay or profit) and other forms of work. However, excluding own-use production work from the measurement of traditional occupations (and basing the measurement only on employment) would result in significant underestimation of the practice of traditional occupations in many countries.

5.3. Volunteer work

While unpaid work for one’s own family is own-use production work, and not necessarily voluntary, non-compulsory unpaid work for the community is considered to be volunteer work. Among many indigenous peoples the boundary between own-use production and volunteer work may be difficult to draw, however, given the nature of family ties between households within small communities, where everyone is in some way related, and the existence of non-nuclear family structures in some cases.

Volunteers are defined for statistical purposes as “all [persons] of working age who, during a short reference period, performed any unpaid, non-compulsory activity to produce goods or provide services for others”. While “unpaid” is interpreted as the absence of remuneration in cash or in kind for work done or hours worked, it is important to note that volunteer workers may receive some small form of support or stipend in cash, when below one third

of local market wages (e.g. for out-of-pocket expenses or to cover living expenses incurred for the activity), or in kind. Volunteer work can be divided into two types: organization-based volunteering, and direct volunteering. “Organization-based volunteering” refers to work performed through or for organizations, including self-help, mutual aid, or community-based groups of which the volunteer is a member, as well as through more formally established organizations. “Direct” volunteering refers to work performed for households other than the household of the volunteer or of related family members (ILO 2013b).

There is increasing recognition of the importance of collective actions, and of non-monetary contributions towards the conservation and sustainable use of biodiversity. The UN General Assembly resolution on volunteering for the 2030 Agenda for Sustainable Development (UN 2019) encourages countries to “invest in voluntary efforts ... to support and integrate volunteerism into national strategies and to measure its impact on the implementation of the 2030 Agenda for Sustainable Development”.

Much of the unpaid work traditionally performed for the community in many indigenous societies would be considered as volunteer work according to the above definitions. Statistics on volunteer work may therefore be highly relevant for the identification of the practice of traditional occupations as well as offering valuable information on the number and characteristics of the persons willingly working without pay to support others. Statistics on volunteer work performed by indigenous peoples, including in their traditional occupations, would allow identification of the range of service needs met through their unpaid work, and provide an important input to estimating the total value of their contribution to the economy.

Historically, time-use surveys have tended to be the primary source of statistics on volunteer work. Recently, however, an increasing number of countries collect data on volunteering through modules attached to other household surveys, mainly labour force surveys, using the approach recommended in the *ILO Manual on the Measurement of Volunteer Work* (ILO 2011). The ILO has developed a sample add-on module for the collection of data on volunteer work and currently recommends that countries should apply the module at least once every three to four years (ILO 2020d).

5.4. Jobs, work activities and economic units

Statistical units are the entities from which or about which statistics are collected, compiled or reported. For compiling and reporting labour statistics on the various forms of work, three important basic units are persons, jobs or work activities, and time units. Persons are the basic unit for producing statistics on the population engaged in each form of work, whereas jobs or work activities are the basic unit for reporting statistics on occupation. Time units are used for producing statistics of volume of work in reference to each form of work or to any combination thereof. These units may be short, such as minutes or hours, or long such as half-days, days, weeks or months (ILO 2013b).

A job or *work activity* is defined as a set of tasks and duties performed, or meant to be performed, by one person for a single economic unit. The term *job* is used in reference to employment. This statistical unit, when relating to own-use production work, unpaid trainee work and volunteer work is referred to as *work activity*.

Persons may have one or several jobs during a given reference period. In statistics on employment, the *main job* is that with the longest hours usually worked. In the absence of information regarding hours usually worked, other information such as income from each job may be used as a proxy for identifying the main job (20th ICLS Resolution concerning statistics on work relationships; ILO 2018). This is highly relevant for the measurement of traditional occupations, as they may frequently be performed in jobs that are not a person's main or even second job. However, many household surveys measuring employment only cover a main job, or possibly main plus second job.

In principle, separate work activities are defined when a person is engaged in both own-use production of goods and own-use provision of services for the same household. This allows the identification of work activities within and beyond the SNA production boundary and may also facilitate the production of statistics relevant to issues such as gender segregation in own-use production of goods and services. An indigenous woman who grows fruit and vegetables to provide for her family (production of goods) and also prepares meals and provides care for her children (provision of services) would

thus be defined as having two work activities for the same economic unit, which in this case would be a household producing goods for own final use.

In addition, activity clusters referring to subsets of work activities are a useful unit for analysis of the participation of persons in forms of work other than employment, although the concept of activity cluster is not formally defined in the current international standards for labour statistics. In this way "growing vegetables", "preparing meals" and "caring for children" could each be seen as separate activity clusters. In principle, this could be a useful concept for the provision of information about traditional occupations. The concept of activity cluster is possibly more closely aligned with indigenous peoples' self-perception of their traditional occupations than the concept of job/work activity defined by the ICLS.

As we have seen, jobs and work activities are defined in relation to economic units. In labour statistics these are the entities (enterprises, establishments, households) in which or for which the work is performed. These are defined in accordance with the institutional units used in economic statistics as defined in the SNA, including:

- market units (i.e. corporations, unincorporated household market enterprises);
- non-market units (i.e. government and non-profit institutions serving households);
- households that produce goods or services for own final use.

Employment, volunteer work and unpaid trainee work may take place in any of these types of economic unit, whereas own-use production work can only take place in households that produce goods or services for own final use.

5.5. Labour force status, status in employment and status at work

To make sense of labour statistics, it is important to understand the classification systems that are used to classify people of working age and their jobs and work activities according to status. These are:

- the classification of labour force status;
- the classification of the main form of work;

► the International Classification of Status in Employment (ICSE-18); and

► the International Classification of Status at Work (ICSaW-18).

The classification of labour force status was adopted in 2013 as part of the 19th ICLS Resolution concerning statistics of employment, underemployment and labour underutilization (ILO 2013b). According to this resolution, persons of working age may be classified according to their labour force status in a short reference period as:

- a. in employment;
- b. in unemployment; or
- c. outside the labour force.

The sum of persons in employment and in unemployment comprises the *labour force*.

The concept of unemployment refers to a total absence of work for pay or profit. Persons in unemployment are defined as "all those of working age who were not in employment, carried out activities to seek employment during a specified recent period and were currently available to take up employment given a job opportunity". Persons are counted as unemployed if they satisfy these criteria, even if they were engaged in other unpaid forms of work. Indigenous persons may therefore practise a traditional occupation for subsistence and be classified

as unemployed if actively seeking and available for employment.

Persons outside the labour force are those who were in neither employment nor unemployment. This category includes those who are in the *potential labour force*, that is those who:

- a. carried out activities to "seek employment", were not "currently available" but would become available within a short subsequent period established in the light of national circumstances (i.e. unavailable jobseekers); or
- b. did not carry out activities to "seek employment", but wanted employment and were "currently available".

The concept of the potential labour force allows the creation of multiple indicators of labour underutilization which complement the traditional unemployment rate.

The 19th ICLS Resolution states that persons may also be classified according to their main form of work as self-declared over a short or long reference period, as being:

- a. mainly in own-use production work;
- b. mainly in employment;
- c. mainly in unpaid trainee work;
- d. mainly in volunteer work;
- e. mainly in other forms of work;
- f. exclusively in non-productive activities.

► **Table 2. International Classification of Status in Employment according to type of authority (ICSE-18-A)**

INDEPENDENT WORKERS	DEPENDENT WORKERS
<p>A. Employers</p> <p>21. Employers in corporations</p> <p>21. Employers in household market enterprises</p> <p>B. Independent workers without employees</p> <p>21. Owner-operators of corporations without employees</p> <p>22. Own-account workers in household market enterprises without employees</p>	<p>C. Dependent contractors</p> <p>30. Dependent contractors</p> <p>D. Employees</p> <p>41. Permanent employees</p> <p>42. Fixed-term employees</p> <p>43. Short-term and casual employees</p> <p>44. Paid apprentices, trainees and interns</p> <p>E. Contributing family workers</p> <p>51. Contributing family workers</p>

► **Table 3. International Classification of Status in Employment according to type of economic risk (ICSE-18-R)**

WORKERS IN EMPLOYMENT FOR PROFIT	WORKERS IN EMPLOYMENT FOR PAY
<p>F. Independent workers in household market enterprises</p> <p>12. Employers in household market enterprises</p> <p>22. Own-account workers in household market enterprises without employees</p> <p>C. Dependent contractors</p> <p>30. Dependent contractors</p> <p>E. Contributing family workers</p> <p>51. Contributing family workers</p>	<p>G. Owner-operators of corporations</p> <p>11. Employers in corporations</p> <p>21. Owner-operators of corporations without employees</p> <p>D. Employees</p> <p>41. Permanent employees</p> <p>42. Fixed-term employees</p> <p>43. Short-term and casual employees</p> <p>44. Paid apprentices, trainees and interns</p>

While the classification of labour force status is a classification of the working age population (i.e. of persons), the International Classification of Status in Employment (ICSE) is a classification of jobs. It classifies jobs in employment for pay or profit in ten detailed categories based on the type of authority that the worker can exercise, and the type of economic risk that the worker is subject to, in a particular job. These categories may be aggregated according to two alternative classification hierarchies (ILO 2020c).

The first hierarchy, based on the type of authority that the worker can exercise in a particular job, can be used to produce statistics on two broad groups of workers in employment: independent workers and dependent workers.

The second hierarchy, based on the type of economic risk that the worker is subject to in a particular job, produces the dichotomy between workers in employment for profit and workers in employment for pay.

Statistics classified according to ICSE-18 can provide information about the extent to which the members of indigenous and tribal peoples have jobs, including in their traditional occupations, in which they have control over the economic unit in which they work or are dependent on an employer or other entity that exercises control over their work. They can also provide information about their exposure to economic risk and precarious employment situations, for example through being employed on a short-term or casual basis, including as day labourers.

The International Classification of Status at Work (ICSaW-18) extends ICSE-18 to cover all forms of work and provides an organizing framework for statistics classified by status at work from various sources. It is a three-level hierarchical classification which comprises, at its most detailed level, 20 mutually exclusive categories, defined on the basis of the type of authority that the worker is able to exercise and the type of economic risk to which he or she is exposed in a particular job or work activity. The 20 categories are arranged into groups based on the type of authority the worker is able to exercise, thus creating a dichotomy between dependent workers and independent workers covering all forms of work (ILO 2020c).

The detailed structure of ICSaW-18 is shown in Box 6, including names of categories and classification codes. Each detailed status at work category is assigned a two-digit code, in which the first digit represents the broad group and the first and second digits together represent the detailed category. The categories marked with an asterisk* are identical to categories included in ICSE-18.

Statistics classified according to ICSaW-18 can show the extent to which indigenous persons are engaged as dependent or independent workers in any form of work. This is particularly relevant for the measurement of own-use production work in traditional occupations including in subsistence activities, but also in relation to community engagement in volunteer work, either through an organization or informally as direct volunteers.

5.6. Traditional occupations and formalization of the economy

5.6.1. Statistical standards related to the informal economy

In order to situate indigenous peoples' traditional occupations in the context of labour statistics, it is also useful to explore how these occupations would be captured by existing statistical definitions related to informality. Among indigenous peoples, the

focus of current international policy on the need to formalize the informal economy is regarded as dubious at times, as they understand their traditional occupations and activities as informal by default. However, the notion of the informal economy is often misunderstood. Hence there is a need for information to clarify the relationship of traditional occupations with respect to initiatives to formalize the informal economy.

The precise definitions of concepts such as the informal sector and informal employment used in labour statistics may help to clarify some of these concerns. Recent developments in labour statistics have already addressed some of the issues, at least

► Box 6. International Classification of Status at Work (ICSaW-18)

Independent workers

1. Employers
 11. Employers in corporations*
 12. Employers in household market enterprises*
 13. Employers in own-use provision of services
 14. Employers in own-use production of goods
2. Independent workers without employees
 21. Owner-operators of corporations without employees*
 22. Own-account workers in household market enterprises without employees*
 23. Independent workers in own-use provision of services without employees
 24. Independent workers in own-use production of goods without employees
 25. Direct volunteers

Dependent workers

3. Dependent contractors*
 30. Dependent contractors*
4. Employees*
 41. Permanent employees*
 42. Fixed-term employees*
 43. Short-term and casual employees*
 44. Paid apprentices, trainees and interns*
5. Family helpers
 51. Contributing family workers*
 52. Family helpers in own-use provision of services
 53. Family helpers in own-use production of goods
6. Unpaid trainee workers
 60. Unpaid trainee workers
7. Organization-based volunteers
 70. Organization-based volunteers
9. Other unpaid workers
 90. Other unpaid workers

Box 6 International Classification of Status at Work (ICSaW-18)

Among indigenous peoples, the focus of current international policy on the need to formalize the informal economy is regarded as dubious at times, as they understand their traditional occupations and activities as informal by default. However, the notion of the informal economy is often misunderstood.

in part, by differentiating employment from own-use production of goods and own-use provision of services. Consequently, non-market production of both goods and services intended for consumption by household and family members is not included in informal employment.

Ongoing work on the revision of the international standards for statistics on the informal sector and informal employment could provide further clarity by introducing the concept of the own-use production sector. This would be distinct from both the formal and informal sector. The current proposals for a future conceptual framework for statistics on informality envisage three sectors: formal sector, informal sector, and own-use production sector. Traditional indigenous activities in own-use production would fall into the own-use production sector and thus not be considered informal. The use of traditional indigenous skills and knowledge in the market economy, on the other hand, could be in either the formal or informal sectors, depending on the nature of the activity.

The ILO has established a working group for the revision of the standards for statistics on informality to assist it in preparing a draft resolution on this topic for consideration at the 21st ICLS, which is expected to take place in 2023. The work of this group may benefit from input from indigenous perspectives on the relevance of a distinction between the formal sector, informal sector and own-use production sector, especially with respect to the practice of traditional occupations.

The current international statistical standards relating to the informal economy consider informality from the perspective of both the enterprise and the individual worker. As recognized in the 15th ICLS Resolution concerning statistics of employment in

the informal sector (ILO 1993) and the 17th ICLS Guidelines concerning a statistical definition of informal employment (ILO 2003), informality comprises informal enterprises (i.e. the informal sector) and workers in informal employment. This is reflected in the non-statistical concept of the informal economy, which refers to all economic activities carried out by workers and economic units that are – in law or in practice – not covered or insufficiently covered by formal arrangements (ILO 2015, para. 2(a)).

5.6.2. The informal sector

In describing the concept of the informal sector, the 15th ICLS Resolution states that:

The informal sector may be broadly characterized as consisting of units engaged in the production of goods or services with the primary objective of generating employment and incomes to the persons concerned. These units typically operate at a low level of organization, with little or no division between labour and capital as factors of production and on a small scale. Labour relations – where they exist – are based mostly on casual employment, kinship or personal and social relations rather than contractual arrangements with formal guarantees.

Since it restricts the concept of the informal sector to “units engaged in the production of goods or services with the primary objective of generating employment and incomes”, the resolution does not lead to segmentation of the economy or of the employed population according to a formal/informal sector dichotomy. Activities excluded from the scope of the informal sector definition are not

necessarily in the formal sector. Examples of activities that are excluded from both the formal sector and the informal sector include:

- household production of goods exclusively for own final use;
- paid domestic service;
- activities currently falling outside the SNA production boundary, such as domestic or personal services provided by unpaid household members for their own or another household (ILO 2013).

The practice of traditional occupations whose activities do not result in the sale of goods or services on the market, or in the generation of income, is thus not included in either the formal sector or the informal sector. If the practice of traditional occupations does result in the sale of goods or services for the market, or in the generation of income, then employment in these occupations may be in the formal sector or the informal sector depending on the characteristics of the enterprise for which the work is performed.

According to the 15th ICLS, “[f]or statistical purposes, the informal sector is regarded as a group of production units which ... form part of the household sector as household enterprises ...”. In other words, they are a subset of household unincorporated market enterprises. Household unincorporated market enterprises are units engaged in producing goods or services for sale or barter on the market which are not constituted as separate legal entities independently of the households or household members that own them, and for which no complete sets of accounts are available. They include unincorporated partnerships, whose partners may belong to different households. The System of National Accounts 2008 (SNA 2008), para. 4.155, notes that household unincorporated market enterprises:

can be engaged in virtually any kind of productive activity: agriculture, mining, manufacturing, construction, retail distribution or the production of other kinds of services. They can range from single persons working as street traders or shoe cleaners with virtually no capital or premises of their own through to large manufacturing, construction or service enterprises with many employees.

Within the household sector, the informal sector comprises (i) informal own-account enterprises and (ii) enterprises of informal employers. For the purposes of operational measurement, informal own-account enterprises may comprise either all household unincorporated market enterprises, or only those which are not registered under specific forms of national legislation, depending on national circumstances. Enterprises of informal employers may be defined if the size of the enterprise is below a specified level of employment and/or if the enterprise is not registered (ILO 1993). Not being registered is the most fundamental and objective criterion for determining whether an enterprise is part of the informal sector. The criteria based on size and whether or not the enterprise is incorporated are relevant in situations where data on registration are not available.

In common with formal sector household market enterprises, informal sector enterprises have the following characteristics:

- The fixed and other assets used do not belong to the enterprise but to their owners.
- The units cannot engage in transactions or enter into contracts with other units, or incur liabilities, on their own behalf.
- The owners have to raise the necessary finance at their own risk and are personally liable, without limit, for any debts or obligations incurred in the production process.
- Expenditure for production is often indistinguishable from household expenditure.
- Capital goods such as buildings or vehicles may be used indistinguishably for business and household purposes (ILO 1993).

When the liability of the owners for the debts of household enterprises is unlimited, as is the case with all informal sector enterprises, all the assets of the household, including the dwelling itself, are at risk if the enterprise goes bankrupt.

In addition to the above characteristics that expose all owners of household market enterprises to a significant degree of economic risk, informal sector enterprises:

do not keep a complete set of accounts for purposes such as tax declarations on other regulations; and are not registered in a governmentally established system of registration which is used for granting access to benefits and carries obligations.

Registration of an enterprise generally confers benefits such as deductions for value-added tax, establishment of a legal identity for the company, protection of the company name and its intellectual property, and easier access to capital, while also carrying obligations such as keeping a set of accounts according to a specified standard, and paying business tax (ILO 2020). The 15th ICLS Resolution defines the population employed in the informal sector as “all persons who, during a given reference period, were employed ... in at least one informal sector unit ... irrespective of their status in employment and whether it is their main or a secondary job.” Persons employed in the informal sector can thus be owner-operators of the enterprise (i.e. as own-account workers, employers, or dependent contractors), as employees or as contributing family workers.

The relevance of all this for indigenous and tribal peoples is that those who own and operate market enterprises in the informal sector, including enterprises in which traditional occupations are practised, are exposed to a greater degree of economic risk and have fewer legal protections than those who own and operate registered formal sector enterprises. Statistics on informal sector enterprises owned by indigenous people, or on indigenous persons who are own-account workers or employers in informal sector enterprises, can indicate the extent to which indigenous entrepreneurs are exposed to the economic and legal risks and precarity associated with informality compared, for example, to the non-indigenous population. Moreover, since information about informal sector enterprises is rarely available in administrative data sources, such as company registers and tax records, they are less easy to measure in official statistics than formal sector enterprises. The economic and social contribution of informal sector enterprises owned and operated by indigenous entrepreneurs may therefore be frequently undervalued.

Employees and contributing family workers in informal sector enterprises have limited or no social protection in the event, for example, of workplace

injury or loss of employment, and may not benefit from the provisions of labour law enjoyed by formal sector employees concerning working conditions such as pay and working time. Since the enterprises in which they are employed are generally more precarious than formal sector enterprises, the job security of workers in the informal sector is more precarious than that of workers in the formal sector. Statistics on employment of members of indigenous and tribal peoples in the informal sector can therefore provide insights into the quality and security of their employment as well as on their access to social protection compared to the non-indigenous population.

5.6.3. Informal employment

The 17th ICLS Guidelines concerning a statistical definition of informal employment (ILO 2003) recognize that informal employment is not limited to employment in the informal sector but also exists in formal sector enterprises and in households engaged in own-use production (for example in relation to domestic workers). While the concept of “informal sector” refers to production units as observation units, the concept of “informal employment” refers to jobs as observation units. Informal employment comprises the total number of informal jobs whether carried out in formal sector enterprises, informal sector enterprises, or households, during a given reference period. Informal jobs include:

- own-account workers employed in their own informal sector enterprises;
- employers employed in their own informal sector enterprises;
- contributing family workers, irrespective of whether they work in formal or informal sector enterprises;
- employees holding informal jobs in formal sector enterprises, informal sector enterprises, or as paid domestic workers employed by households.²

² The 17th ICLS Guidelines also list “members of informal producers’ cooperatives”, a statistical category that no longer exists according to the standards for labour statistics adopted in 2018 at the 20th ICLS, and “own-account workers engaged in the production of goods exclusively for own final use by their household”. The latter group is no longer included in employment according to the 19th ICLS Resolution concerning statistics of work, employment and labour underutilization.

►► Statistics on persons who identify as indigenous in informal and formal employment, and on persons with informal/formal jobs in traditional occupations, could be used to assess the extent to which indigenous peoples are able to benefit from the social and legal protections associated with formal employment.

Employees are considered to have informal jobs if their employment relationship is, in law or in practice, not subject to national labour legislation, income taxation, social protection or entitlement to certain employment benefits (advance notice of dismissal, severance pay, paid annual or sick leave, etc.) (ILO 2003).

Statistics on persons who identify as indigenous in informal and formal employment, and on persons with informal/formal jobs in traditional occupations, could be used to assess the extent to which indigenous peoples are able to benefit from the social and legal protections associated with formal employment. Once again, comparisons with non-indigenous populations would help reveal the extent to which indigenous peoples are disadvantaged.





6

Concepts and classification of occupation and industry in official statistics

6.1. Concepts of occupation and industry

In official labour statistics, “occupation” refers to the kind of work performed in a job or work activity. The concept of occupation is defined in the International Standard Classification of Occupations (ISCO-08) as a “set of jobs whose main tasks and duties are characterized by a high degree of similarity”. A person may be associated with an occupation through the main job currently held, a second job, a future job, or a job previously held or through a work activity in a form of work other than employment.

ISCO-08 can be used in principle to classify jobs and work activities in all forms of work, including own-use production work. However, it was designed primarily for the purpose of classifying jobs in employment. It does, nevertheless, provide categories for subsistence farmers, fishers, hunters and gatherers. This is partly because at the time the classification was developed, production of goods for subsistence purposes was included in employment, and partly because this important group was not captured or defined in any other international statistical standard. It is not particularly well suited to the classification of work activities in own-use production of services, although it does provide categories for domestic housekeepers, childcare workers, home-based personal care workers, and domestic cleaners and helpers.

The concept of traditional occupations frequently discussed in the literature on indigenous peoples tends to combine elements of the concept of occupation used in labour statistics, with the concept of industry (frequently termed “branch of economic activity”) used widely in both economic and labour statistics. “Industry” refers to the economic activity of the unit (usually the establishment) in which a person works. Classification by industry refers to what the establishment does, not what the individual does when working for that establishment. In large establishments there are typically workers with jobs in many different occupations, but these jobs would all be classified in the same industry. Many occupations are found in several different industries, while others are found mainly in specific industries. In labour and social statistics, including labour force surveys, statistics on industry are compiled with reference to the industry of

the economic unit in which persons have jobs or unpaid work activities.

Statistics on industry are classified according to the latest version of the [International Standard Industrial Classification of All Economic Activities Revision 4 \(ISIC Rev.4\)](#), a related national classification, or a previous version of ISIC. In the next section we describe ISIC and its relevance to the provision of information on traditional occupations.

6.2. International Standard Industrial Classification of All Economic Activities, (ISIC)

ISIC is used to classify statistical units, such as establishments or enterprises, according to the kind of economic activity in which they mainly engage. These economic activities are subdivided into a hierarchical, four-level structure of mutually exclusive categories, facilitating data collection, presentation and analysis at detailed levels of the economy in an internationally comparable, standardized way. The categories at the highest level are called sections, which are alphabetically coded categories intended to facilitate economic analysis. The sections subdivide the entire spectrum of productive activities into broad groupings, such as agriculture, forestry and fishing (section A), manufacturing (section C) and information and communication (section J). The classification is then organized into successively more detailed categories, which are numerically coded: two-digit divisions, three-digit groups and, at the greatest level of detail, four-digit classes. In ISIC Rev.4 there are 21 sections, 88 divisions, 238 groups and 419 classes. Jobs and work activities can be classified by ISIC with reference to the economic unit in which or for which the work is performed.

For the purposes of labour market analysis, the ILO has combined some of the ISIC sections to form a set of broad economic sectors as part of a classification of aggregate economic activity. These broad sectors are useful for the dissemination of data from household surveys when statistics on employment in some ISIC sections may have very high levels of sampling error. Their correspondence with ISIC is shown in Table 5 below (ILO n.d.).

The scope of ISIC has historically been restricted to the classification of units engaged in economic production as defined by the SNA production boundary.

In ISIC Rev.4, there is one exception to this – activities in ISIC class 9820 (Undifferentiated services-producing activities of private households for own use). This type of activity, in combination with class 9810 (Undifferentiated goods-producing activities of private households for own use), is used for measuring subsistence activities of households that cannot otherwise be captured in the classification.

These two categories were created for special purposes, such as labour force surveys, to cover combinations of household activities that would otherwise be difficult or impossible to assign to a single ISIC category. However, these categories cannot be used to identify economic units engaged in subsistence activities as they cover only a subset of all households. Households with clearly identifiable economic activities (whether for the market or for own final

use) are classified in other parts of ISIC, including most households engaged in subsistence farming.

ISIC section A (Agriculture, forestry and fishing) does provide detailed classes such as “raising of cattle and buffaloes” that could be useful to differentiate types of pastoral and agricultural production among traditional occupations. However, it does not separately distinguish market from non-market activities and cannot therefore be used on its own to identify subsistence activity. Since this distinction is an important feature of the SNA, a breakdown of economic activities to identify non-market units is possible using data from sources such as economic censuses and surveys. Such a breakdown could be used to identify units engaged in subsistence agriculture if cross-classified with the ISIC categories.

► Table 4. ISIC Rev.4 – Broad structure

Section	Divisions	Description
A	01–03	Agriculture, forestry and fishing
B	05–09	Mining and quarrying
C	10–33	Manufacturing
D	35	Electricity, gas, steam and air conditioning supply
E	36–39	Water supply; sewerage, waste management and remediation activities
F	41–43	Construction
G	45–47	Wholesale and retail trade; repair of motor vehicles and motorcycles
H	49–53	Transportation and storage
I	55–56	Accommodation and food service activities
J	58–63	Information and communication
K	64–66	Financial and insurance activities
L	68	Real estate activities
M	69–75	Professional, scientific and technical activities

Table 4 (cont'd)

Section	Divisions	Description
N	77-82	Administrative and support service activities
O	84	Public administration and defence; compulsory social security
P	85	Education
Q	86-88	Human health and social work activities
R	90-93	Arts, entertainment and recreation
S	94-96	Other service activities
T	97-98	Activities of households as employers; undifferentiated goods- and services-producing activities of households for own use
U	99	Activities of extraterritorial organizations and bodies

► Table 5. Broad sector concordance with ISIC

Aggregate Economic Activity		Sections ISIC-Rev.4	Sections ISIC-Rev.3	Sections ISIC-Rev.2	
Agriculture		A	A,B	1	
Non Agriculture	Industry	Manufacturing	C	D	3
		Construction	F	F	5
		Mining and quarrying; Electricity, gas and water supply	B, D, E	C, E	2, 4
Non Agriculture	Services	Market Services (Trade; Transportation; Accommodation and food; and Business and administrative services)		G, H, I, J, K	6, 7, 8
		Non-market services (Public administration; Community, Social and other services and activities)		L, M, N, O, P, Q	9
Not elsewhere classified		X	0		

► Table 6. ISIC Rev.4, Division 01 - Crop and animal production, hunting and related service activities

011	Growing of non-perennial crops	
0111	Growing of cereals (except rice), leguminous crops and oil seeds	
0112	Growing of rice	
0113	Growing of vegetables and melons, roots and tubers	
0114	Growing of sugar cane	
0115	Growing of tobacco	
0116	Growing of fibre crops	
0119	Growing of other non-perennial crops	
012	Growing of perennial crops	
0121	Growing of grapes	
0122	Growing of tropical and subtropical fruits	
0123	Growing of citrus fruits	
0124	Growing of pome fruits and stone fruits	
0125	Growing of other tree and bush fruits and nuts	
0126	Growing of oleaginous fruits	
0127	Growing of beverage crops	
0128	Growing of spices, aromatic, drug and pharmaceutical crops	
0129	Growing of other perennial crops	
013	0130	Plant propagation
014	Animal production	
0141	Raising of cattle and buffaloes	
0142	Raising of horses and other equines	
0143	Raising of camels and camelids	
0144	Raising of sheep and goats	
0145	Raising of swine/pigs	
0146	Raising of poultry	
0149	Raising of other animals	
015	0150	Mixed Farming
016	Support activities to agriculture and post-harvest crop activities	
0161	Support activities for crop production	
0162	Support activities for animal production	
0163	Post-harvest crop activities	
0164	Seed processing for propagation	
017	0170	Hunting, trapping and related service activities

To identify market and non-market units in which traditional occupations might be practised, however, information would need to be available about the indigenous status of persons performing the work in the same data source as the relevant characteristics of the economic unit. Most economic data collections include only limited information about the characteristics of persons who operate or work in establishments. However, agricultural censuses may allow the identification of indigenous households, as discussed below in section 4.5.

It is also relevant for the identification of traditional occupations that a separate class is provided for gathering of non-wood forest products in division 02 (Forestry and logging), which includes the following classes:

- 0210 Silviculture and other forestry activities
- 0220 Logging
- 0230 Gathering of non-wood forest products
- 0240 Support services to forestry.

The handicraft activities commonly undertaken in traditional occupations are generally classified in ISIC section C (Manufacturing). Relatively detailed classes are provided for relevant activities, such as 1312 (Weaving of textiles) and 1393 (Manufacture of carpets and rugs). However, the distinction between non-traditional and traditional production methods is not a criterion used to differentiate categories in ISIC. For example, manufacturing units are classified according to the principal kind of economic activity in which they engage, whether or not the work is performed by power-driven machinery or by hand or done in a factory or in a household. It is also relevant to note that ISIC does not distinguish between formal and informal production.

While data on economic activity classified in ISIC cannot alone be used to identify either traditional occupations or subsistence activity, cross-classification of data on occupations classified according to ISCO-08 can in some cases provide a little more detail on the nature of the activities undertaken in traditional occupations, especially with respect to crop and animal production. This could be feasible in labour force surveys and population censuses that also include data on indigenous status, as these collections usually include data on both occupation and industry for the main job, at least for employed persons.

6.3. International Standard Classification of Occupations (ISCO-08) and related national classifications

The International Standard Classification of Occupations (ISCO-08) provides a system for classifying and aggregating occupational information obtained by means of statistical censuses and surveys, as well as from administrative records. It is used for international reporting, comparison and exchange of statistical and administrative data on occupation and as a model for the development of national and regional classifications of occupations. Many national classifications are based on ISCO-08 or on its predecessor, ISCO-88. Some countries have national occupation classifications that are not based on ISCO, but in most cases it is possible to map data from detailed levels of the national classification to a relatively detailed level of ISCO-08. In countries that have not developed their own national classifications, a version of ISCO may be used directly.

National occupation classifications are used for the compilation of statistics from censuses, household surveys, employer surveys and other data sources. They allow detailed observations about jobs to be organized into meaningful and useful groups for analysis. They are also used in administrative and policy-related activities such as matching jobseekers with job vacancies, educational planning, and in the management of employment-related international migration in activities such as the issuance of visas, work permits, etc.

To meet these purposes, national occupation classifications differentiate occupations and arrange them into groups, based on similarities in the type of work performed. In general, similarities in the type of work performed are assessed by considering the similarities in the tasks typically performed by workers in a job or work activity. Occupations are defined and then arranged into groups based on the specialized knowledge and skills needed for performance of these tasks.

ISCO-08 is a four-level, hierarchically structured classification that allows all jobs in the world to be classified into 436 unit groups. These groups form the most detailed level of the classification structure and are aggregated into 130 minor groups,

43 sub-major groups and 10 major groups, on the basis of their similarity in terms of the skill level and skill specialization required for the jobs. This allows the production of relatively detailed internationally comparable data as well as summary information for only ten groups at the highest level of aggregation.

Each group in the classification is designated by a title and code number and is associated with a definition that specifies the scope of the group. The definitions also summarize the main tasks and duties performed in occupations included in the group and provide a list of the occupational groups included or, in the case of unit groups, examples of the occupations.

Skill is defined for the purposes of ISCO-08 as the ability to carry out the tasks and duties of a given job. Two dimensions of skill are used to arrange occupations into groups: skill level and skill specialization.

Skill level is defined as a function of the complexity and range of tasks and duties performed in an occupation. It is measured operationally by considering one or more of:

- the nature of the work performed in an occupation in relation to the characteristic tasks and duties defined for each ISCO-08 skill level (new for ISCO-08);
- the level of formal education defined in terms of the International Standard Classification of Education (ISCED-97) required for competent performance of the tasks and duties involved;
- the amount of informal on-the-job training and/or previous experience in a related

occupation required for competent performance of these tasks and duties.

The concept of skill level is applied mainly at the top (major group) level of the classification, giving more emphasis to the first of these operational measures – the nature of the work performed – than to the formal and informal education and training requirements.

Definitions of each of the four ISCO skill levels are provided so as to clarify the boundaries between each skill level and deal with cases where formal educational requirements may not be the most suitable method of measuring the skill level of a particular occupation. This is particularly relevant for assessing the skill level of traditional occupations, where traditional skills and knowledge are passed on and adapted from generation to generation, rather than being acquired through formal education. Each definition provides examples of:

- the typical or characteristic tasks performed at each skill level;
- the types of skill required (in broad terms);
- the typical occupations classified at that skill level.

The relationship between the ten ISCO-08 major groups and the four skill levels is summarized in Table 2 below. Within major group 1, occupations in sub-major group 14 (Hospitality, retail and other services managers) are at skill level 3. All other occupations in major group 1 are at skill level 4. Within major group 0 (Armed forces occupations), each of the three sub-major groups is at a different skill level.

► **Table 7. Mapping of ISCO-08 major groups to skill levels**

ISCO-08 major groups	Skill level
1 Managers	3 + 4
2 Professionals	4
3 Technicians and Associate Professionals	3
4 Clerical Support Workers	
5 Services and Sales Workers	
6 Skilled Agricultural, Forestry and Fishery Workers	2
7 Craft and Related Trades Workers	
8 Plant and Machine Operators, and Assemblers	
9 Elementary Occupations	1
0 Armed Forces Occupations	1 + 2 + 4

Within each major group, occupations are arranged into unit groups, minor groups and sub-major groups, primarily on the basis of aspects of skill specialization.

Skill specialization is considered in terms of four concepts:

- the field of knowledge required;
- the tools and machinery used;
- the materials worked on or with;
- the kinds of goods and services produced.

6.4. Collection, coding and dissemination of data on occupation and industry¹

In the context of collecting and processing data to be classified by occupation or industry, the term “coding” refers to the process of assigning descriptions or responses to survey questions to a category in a classification scheme. For accurate coding of job descriptions and responses to survey questions on occupation to any level of ISCO and related national classifications, information is needed on:

- the name or title of occupation;
- the main tasks or duties usually performed in the job.

Information about the type of economic activity of the establishment (industry) for which the work is performed and whether or not the main aim of the activity is for own consumption (or for subsistence) may also be of assistance in occupation coding. However, information about the level of skill or qualifications held by an individual is neither necessary nor useful, as the individual holding a particular job may be overqualified or underqualified for that job.

Three types of question have typically been used to collect data on occupations from households or individuals:

- one or two pre-coded questions (closed-ended questions);
- one write-in question to obtain occupation-relevant information about an individual’s job (single open-ended question);

► two or more (write-in) questions, a basic question on the title of the position held, with follow-up on the main tasks of the individual in the job (multiple open-ended questions).

Closed-ended pre-coded questions have limited accuracy as names for groups in occupation classifications frequently do not equate with real world terms to describe jobs. They are also limited to a small number of categories, as it is not reasonable to expect respondents to browse through long lists to find their occupation. They do not therefore meet the needs of most data users. Closed-ended questions with long lists of response options also take up a large amount of space on census and survey forms. The principal advantage of closed-ended questions, and one of the reasons why they are still sometimes used, is that the responses can be processed quickly and at a low cost. If the use of closed-ended questions is unavoidable because of cost limitations, some steps can then be taken to mitigate but not completely eliminate the inevitable data quality problems:

- Separate response categories can be provided for high priority groups.
- Accuracy can be improved through testing and refinement of questions.
- The names of categories from broad classification groups should not usually appear in the questionnaire.

On the other hand, open-ended questions, if designed well, can and do provide sufficient information to assign a four-digit ISCO code in most cases. However, adequate space must be provided on survey forms for a written response of several words. Whether a single question or more than one question is used, the question design should ensure that information is collected about both job title and main tasks or duties performed. Examples of suitably detailed responses should be provided on the questionnaire and included in interviewer training if the data are to be collected by interviewers.

A single question such as “What is your main occupation in this workplace?” or “What kind of work do you do?” may elicit adequate information from some but not all respondents. This type of question may yield responses such as “manager”, “consultant” or “farm work” that cannot be coded accurately to

any level of ISCO. The use of separate questions, or answer fields, on job title and on tasks performed will generally assure that sufficient detail is provided. Asking for two different types of information helps

the respondent to respond fully. An example with a single question and two separate answer fields is provided in Box 7.

► Box 7. Model question to collect occupation data

A7. What kind of work does (name) do in (his/her) main job/business?

(Write the occupation title and main tasks and duties – e.g. [Cattle farmer – breed, raise and sell cattle; Policeman – patrol the streets; Primary school teacher – teach children to read and write])

OCCUPATION TITLE:

MAIN TASKS AND DUTIES:

(Source: ILO model questions on economic characteristics for Population Censuses (Version 1), 2020)

► Box 8. Model question to collect industry data

What is the main activity of the place or business where (name) works?

([e.g. Police Department - public safety; Restaurant - preparing and serving meals; Transport Company - long distance transport of goods])

(Source: ILO model questions on economic characteristics for Population Censuses (Version 1), 2020)

As with occupation, the use of pre-coded response categories for industry is not desirable. When data are collected directly from the public, rather than from the establishment directly, respondents are unlikely to be able to respond correctly to a question that mentions words like “industry” or “sector”. The question asked should focus on the main activity of the establishment they work for and, if possible, it should identify the main products and services produced. Examples should be provided that indicate the level of detail needed.

Information about the name of the business or employer may also be helpful in assigning codes. In some cases, this information may be able to be matched with a pre-coded list of businesses, or a business register developed for the purposes of economic statistics.

The principal difficulty with collecting data on occupation and industry with open-ended questions is that the responses have to be assigned to the

appropriate category in an occupation classification and in an industry classification. This is not a simple process and can be time-consuming and expensive, as the words used by survey respondents to describe their occupations do not always closely respond to categories in an occupation classification system. Responses to questions on occupation (title and tasks), industry and name and address of workplace are relevant to both coding processes. Coding should be done using indexes of occupations and industry whose entries are pre-coded to the relevant classification. This can be done efficiently and consistently using computer-assisted and automatic coding software. Mapping open-ended response data directly to the classification is error-prone and inefficient.

The main aim of the coding process is to determine and record correctly to which of the categories in the respective classifications the jobs belong, at the most detailed level of the classification possible

¹ Detailed information and resources on the questions, data collection methods and processing procedures for statistics on work can be found on the resources page of the ILOSTAT website: <https://ilostat.ilo.org/resources/>.

on the basis of the information provided in the responses. However, some responses may be too vague and imprecise to allow the coder to determine to which detailed category the response should be assigned. These responses should be coded to the level in the classification structure supported by the information contained in them. They should not be forced into any particular detailed category where only a small proportion of the jobs would fall if the responses were adequate. Such responses are assigned the code for the relevant higher category, followed by trailing zeros. These responses can be allocated proportionally to the more detailed categories in a transparent manner, or they can be released in publications labelled as “group name not further defined”.

As a result of the perceived difficulties in assigning household survey data to the most detailed levels of ISCO and ISIC, as well as concerns about high levels of sampling error for small groups, data on occupations and industry are sometimes only coded to or available at an aggregate level of ISCO or ISIC – for example at two-digit or three-digit levels. This creates a problem if data needs to be aggregated from various categories at the four-digit level to compile statistics on traditional occupations. However, the ILO and other international agencies strongly recommend that data be coded to the four-digit level wherever possible, and most national statistical offices now do this. However, some historical datasets are only coded to higher levels.

6.5. Traditional occupations in occupational classification systems

6.5.1. Traditional occupations in ISCO

In order to measure traditional occupations on the basis of official statistical data, the concept of traditional occupations that we want to measure needs to be operationalized by identifying the relevant categories in the classification of occupations used to classify occupational data in the dataset concerned. However, indigenous peoples’ traditional occupations are not generally represented as groups or separately identified as occupations in ISCO-08 and are rarely visible as separate occupations or groups

in national occupation classifications. In ISCO-08, nonetheless, there are several groups that would indicate the practice of a traditional occupation with a reasonable degree of certainty when the work is performed by a person who identifies as indigenous. These include:

- unit group 1113 (Traditional chiefs and heads of villages);
- unit group 3230 (Traditional and complementary medicine associate professionals);
- the four unit groups included in sub-major group 63 (Subsistence farmers, fishers, hunters and gatherers):
 - 6310 Subsistence crop farmers
 - 6320 Subsistence livestock farmers
 - 6330 Subsistence mixed crop and livestock farmers
 - 6340 Subsistence fishers, hunters, trappers and gatherers;
- at least two of the nine unit groups in minor group 731 (Handicraft workers):
 - 7317 Handicraft workers in wood, basketry and related materials
 - 7318 Handicraft workers in textile, leather and related materials (ILO 2012).

If a person who identifies as indigenous works in an occupation in any of these groups, it is reasonable to assume that traditional knowledge, culture, and practices are central to the performance of the tasks. Similar groups are also defined in ISCO-88, the previous version of ISCO which was adopted in 1988:

- minor group 113 (Traditional chiefs and heads of villages);
- minor group 324 (Traditional medicine practitioners and faith healers), and its two unit groups:
 - 3241 Traditional medicine practitioners
 - 3242 Faith healers;
- sub-major group 62 (Subsistence agricultural and fishery workers);
- minor group 733 (Handicraft workers in wood, textile, leather and related materials), and its two unit groups:

7331 Handicraft workers in wood, basketry and related materials

7332 Handicraft workers in textile, leather and related materials (ILO 1990).

Since ISCO-88 identifies these occupational groups at least at the three-digit level of the classification hierarchy, they feature more prominently in ISCO-88 than in ISCO-08. It would be possible to compile statistics for traditional occupations based on these groups when data are coded only to the three-digit level of ISCO-88. This is relevant since some national occupation classifications currently in use are based on ISCO-88 and in some cases the most recent census data may be coded to ISCO-88 or a national classification based on it.

In practice, total employment numbers for groups such as “traditional chiefs and heads of villages” and “traditional medicine practitioners and faith healers” are usually very small. This would make it difficult to disseminate statistics about these groups individually from labour force surveys and other sample surveys, due to high levels of sampling error, regardless of whether they are identifiable at the three-digit or four-digit levels of ISCO.

It should also be noted that ISCO-88 does not subdivide sub-major group 62 (Subsistence agricultural and fishery workers) into more detailed groups, whereas ISCO-08 subdivides the equivalent sub-major group into four minor groups each containing one unit group. In addition, it is relevant to note that in ISCO-08 “faith healer” is included in unit group 3413 (Religious associate professionals).

ISCO-88 also includes a separate unit group (7121 Builders, traditional materials) which would be considered as a traditional occupation if practised by an indigenous person. The scope of this group was extended in ISCO-08 so as not to be restricted to traditional materials. This group was not included in previously discussed lists of traditional occupations based on ISCO-08, but is mentioned below as one of the occupations that could potentially be added to the list of traditional occupations, subject to further discussion.

6.5.2. Occupations related to indigenous peoples in national occupation classifications

Since many national occupation classifications are based closely on ISCO-88 or ISCO-08, the groups mentioned above are frequently reflected in the national classifications. In some cases, more detail is available in the national classification. In other cases, some of the groups listed above are not reflected in the national classification.

The Kenya National Occupation Classification Standard (KNOCS 2000), which is adapted from ISCO-88, provides some interesting examples. This classification lists “farmer, subsistence farming”, “fisherman, subsistence fishing”, “gatherer, food”, and “pastoralist” as examples of occupational titles classified in sub-major group 63 (Subsistence agricultural and fishery workers). However, it does not provide separate categories for these occupations. The reasons for making the distinction between market-oriented and subsistence farming in the KNOCS are explained in the introduction to the classification as follows:

Economic development within the country has not been uniform and this has led to the coexistence of two agricultural sectors. One is characterized by low-skilled subsistence farming (including pastoralists) while the other is market oriented and is highly mechanized. Under Major Group 6 - Skilled Farm, Fishery, Wildlife and Related Workers, KNOCS has made a distinction between the two sectors i.e. 61 and 62 for market-oriented agricultural workers and 63 for subsistence agricultural and fishery workers.

Ministry of Labour and Human Resource Development, Kenya 2003

While this could imply that traditional indigenous and tribal knowledge and skills were not highly valued by the authors of the KNOCS, their relevance is acknowledged although not specifically mentioned in the definition of this sub-major group which states that:

It should be noted that the necessary skills - an understanding of the natural environment and the crops and animals worked with, as well as manual strength and dexterity are usually acquired by working from childhood with other members of the household to produce the necessities for subsisting

(emphasis added) (Ministry of Labour and Human Resource Development, Kenya 2003).

The importance of traditional handicrafts in Kenya is also recognized in the KNOCS, which provides a separate minor group for handicraft workers. This group includes six more detailed groups of occupations and stresses the application of traditional techniques (Box 8).

The KNOCS does not have a directly equivalent group to the ISCO category "Traditional chiefs and heads of villages" but does include the occupation "121-34 Chief/Assistant chief". This is included in minor group 121 (Government administrators), and

is defined as "[p]erforms administrative duties in a given location. Settles disputes between members of the community."

Concerning traditional healing practices, the relevant ISCO-88 group "Traditional medicine practitioners" is not included in the KNOCS, but a separate category "329-12 Herbalist" is included. The definition of this occupation mentions the use of traditional techniques:

[t]reats common ailments such as insomnia, colds, cuts, abrasions and indigestion by using ointments, juices, baths and oils derived from herbs, medicinal plants, insects or by using other traditional techniques used in the community and which are believed to cure and heal by assisting or stimulating natural body processes.

(Ministry of Labour and Human Resource Development, Kenya 2003).

► Box 9. Extract from Kenya National Occupation Classification Standard (KNOCS 2000)

MINOR GROUP 733: HANDICRAFT WORKERS
Handicraft workers apply traditional techniques to produce various articles for personal or household use as well as for decorative purposes.
Skill Level - not specified

733-11 Handicraft Worker in Metal

Applies traditional techniques to prepare metallic items such as rings, necklaces, arm and ankle bangles and other ornamental metallic objects for personal or decorative purposes.

► Examples of occupations classified here are:

- Handicraft worker, metal
- Maker, metallic necklace/traditional

733-12 Handicraft Worker in Stone and Related Materials

Applies traditional techniques to produce stone and clay items such as mortars, grinding stones, stone beads, carvings, smoking pipes and other moulded shapes for personal, or household use or for decorative purposes.
Examples of occupations classified here are:

- Carver, stone

- Handicraft worker, stone and related materials
- Maker, stone mortar

733-13 Handicraft Worker in Wood and Related Materials

Applies traditional techniques to prepare wood, straw, rattan, reeds and other materials and to produce articles such as wooden curios, stools, hair combs, coconut grater, baskets (including fishing baskets), sleeping and other mats and ornaments made of wood and related materials for personal or household use or for decorative purposes.

Examples of occupations classified here are:

- Handicraft worker, reed weaving
- Handicraft worker, wooden articles
- Weaver, basketry

733-14 Handicraft Worker in Textile and Related Materials

Applies traditional techniques to prepare, make, weave, paint or decorate articles of textile and

related materials

related materials for personal or household use or for decorative purposes.

Examples of occupations classified here are:

- Handicraft workers, textile and related materials
- Weaver, sisal fibre products

733-15 Handicraft Worker in Leather and Related Materials

Applies traditional techniques to prepare, make, decorate and repair articles of leather and related materials for personal or household use or decorative purposes.

Examples of occupations classified here are:

- Handicraft worker, leather articles
- Maker, leather drums/musical
- Maker, scabbard

733-99 Handicraft Workers n.e.c.

This group includes those who prepare, make, decorate and repair handicraft articles made from shells, bones and synthetic beads.

Examples of occupations classified here are:

- Handicraft worker, bone articles
- Maker, bead belts
- Maker, bead necklace/synthetic

In some national occupation classifications, separate groups and occupations are listed in cases where traditional knowledge is a requirement, even though the occupations listed may not have existed in pre-colonial times. The Australian and New Zealand Standard Classification of Occupations (ANZSCO) includes several examples.

ANZSCO unit group 4115 (Indigenous health workers) includes workers who "assist with the coordination and provision of health care delivery to indigenous communities". Several of the tasks listed as being performed by workers in this unit group would require traditional indigenous knowledge, as shown in bold below:

- maintaining health records and statistics;
- acting as an advocate in the community they serve, and as a communicator and interpreter on behalf of clients and other health workers;
- providing clinical functions, such as case management and follow-up, independently or in consultation with other health care providers;
- providing health education to individual clients and staff in health facilities;
- providing cultural education to persons outside the cultural community and life skills education to the community they serve;
- providing counselling and referring clients to other health care providers where necessary (ABS and Stats NZ 2019).

This unit group is further subdivided into two occupations at the fifth level of ANZSCO, one relevant for Australia and the other for New Zealand.

► Box 10. Indigenous health workers in Australia and New Zealand

411511 ABORIGINAL AND TORRES STRAIT ISLANDER HEALTH WORKER

Liaises with patients, clients, visitors to hospitals and other medical facilities and staff at health clinics, and works as a team member to arrange, coordinate and provide health care delivery in Aboriginal and Torres Strait Islander community health clinics. Registration or licensing may be required.

411512 KAIAWHINA (HAUORA) (MAORI HEALTH ASSISTANT)

Assists with health care delivery to patients and clients in accordance with Tikanga Maori (Maori culture and custom).

Whilst this is the only unit group in ANZSCO that relates exclusively to indigenous peoples, several occupations defined in other unit groups have a specific requirement for the use of traditional

indigenous knowledge. Since occupational data from the population census and labour force survey are coded where possible to the six-digit level of ANZSCO, it is possible in principle to compile separate data for each of these occupations. However, sampling variability in the labour force survey would impose limitations.

ANZSCO unit group 2412 (Primary school teachers) includes, among others, two occupations that relate specifically to the indigenous population of New Zealand. They involve teaching and coordinating curriculum activities in the Māori language for students at primary school level:

241211 Kaiako Kura Kaupapa Māori (Māori-medium Primary School Teacher)

241212 Pouako Kura Kaupapa Māori (Māori-medium Primary School Senior Teacher).

In addition, ANZSCO unit group 2411 (Early childhood (pre-primary school) teachers) includes occupation 241112 (Kaiako Kohanga Reo (Māori language nest teacher)). These are teachers who work with whanau (family) to care for young children in a kohanga reo (Māori language nest) and help them understand Māori language and customs.

ANZSCO unit group 4221 (Education aides) includes separate occupations for the indigenous peoples of both Australia and New Zealand:

422111 Aboriginal and Torres Strait Islander Education Worker

422113 Kaiawhina Kohanga Reo (Māori Language Nest Assistant)

422114 Kaiawhina Kura Kaupapa Māori (Māori-medium School Assistant).

According to ANZSCO, “Education aides perform non-teaching duties to assist teaching staff in schools, provide care and supervision for children in preschools, and provide assistance to Aboriginal, Torres Strait Islander and Māori students and their teachers.” Workers in the first occupation listed above assist Aboriginal and Torres Strait Islander students in their education, provide feedback to parents or guardians and teachers about students’ progress, and liaise with educational bodies, government agencies and committees. Education aides in the two Māori occupations assist with teaching duties and activities in the Māori language for children at

primary, pre-primary or early childhood level with emphasis given to Tikanga Māori (Māori custom).

In addition, ANZSCO provides a separate occupation 252215 (Traditional Māori health practitioner). Several other occupations that include a requirement for traditional knowledge are listed in ANZSCO as specializations, while not being identified as separate occupations, including:

Aboriginal Community Council Member

Councillor, Aboriginal Land Council

Aboriginal and Torres Strait Islander Land and Sea Ranger

Aboriginal Health Nurse

Aboriginal Education Teacher

Aboriginal Ceremonial Celebrant

Aboriginal Liaison Officer

Māori Liaison Adviser.

Since these occupations are listed as specializations of occupations at the fifth (six-digit) level of ANZSCO, they are not separately identifiable in data coded to the most detailed level of the classification.

In some national occupation classifications, a requirement for traditional knowledge is specified in the tasks performed in occupations that are not focused solely on indigenous peoples. For example, the Canadian National Occupation Classification for Statistics (NOC-S) lists “teach the techniques, cultural origins and symbolic meanings of Aboriginal, ethnic and folkloric dances” as a task performed by dance teachers. Would it be reasonable to assume that an indigenous person working as a dance teacher in Canada would therefore be engaging in a traditional cultural practice?

6.5.3. Occupations where knowledge of traditional culture and practices may influence the way the work is performed

This all brings us back to the notion that the concept which might be most relevant for the compilation of statistics on traditional occupations, and which reflects modern-day circumstances and needs, should not be restricted to occupations as they were practised prior to colonization and the introduction of a market economy. As we have previously noted,

the concept of traditional occupations should also include occupations that involve the ongoing use and development or adaptation of traditional knowledge, if the work is performed by an indigenous person who has such knowledge. This approach reflects the dynamic nature of indigenous knowledge systems.

At the International Technical Workshop on Indicators Relevant for Indigenous Peoples, held in Baguio City, Philippines in 2008, it was agreed that the most suitable option to serve as an indicator of traditional knowledge was: occupations where knowledge of traditional culture and practices may influence the way the work is performed. The information presented at the workshop suggested that, in addition to those listed above for which traditional knowledge, culture and practices are central to the performance of the tasks, knowledge of traditional culture and practices may influence the way the work is performed in the following ISCO-08 groups:

- minor group 213 (Life science professionals)
- unit group 2230 (Traditional and complementary medicine professionals)
- minor group 264 (Authors, journalists and linguists)
- minor group 265 (Creative and performing artists)
- sub-major group 61 (Market-oriented skilled agricultural workers)
- sub-major group 62 (Market-oriented skilled forestry, fishery and hunting workers).

Table 7 shows all of the ISCO-08 groups presented at the 2008 workshop for which traditional knowledge

was considered as either central to the performance of the tasks or may influence the way the work is performed. Statistics on the occupational groups in the left column can be compiled from data coded only to the ISCO-08 two-digit (sub-major group) level and comprise all skilled agricultural, forestry and fishery workers (ISCO major group 6). Those listed in the second column can be compiled from data coded to the three-digit (minor group) level, and those listed only in the third column can be compiled or separately identified only based on data coded to the four-digit (unit group) level. Aggregate statistics compiled from data coded only to the three-digit level would therefore exclude traditional chiefs and heads of villages and handicraft workers.

It is a reasonable assumption that traditional knowledge would influence the way the work is performed in most jobs in these occupational groups, although caution should be exercised in some cases. For example, skilled agricultural workers on large commercial plantations, or industrialized indoor poultry farms, may not have the opportunity to use their traditional knowledge. Production methods may be determined by management or specified in a contract with a client. Deep-sea fishery workers are frequently employed in large ocean-going vessels that may be at sea for many days or weeks on end, whereas for many indigenous communities, traditional knowledge related to fishing would derive from knowledge of coastal or inland waters. If significant numbers of indigenous persons are employed in these situations, consideration may need to be given to excluding the relevant ISCO groups from estimates of employment in traditional occupations, depending on national circumstances.

► **Table 8. ISCO groups for which traditional knowledge may influence performance of tasks**

Sub-major group	Minor group	Unit group
		1113 Traditional Chiefs and Heads of Villages
	213 Life Science Professionals	2131 Biologists, Botanists, Zoologists and Related Professionals 2132 Farming, Forestry and Fisheries Advisers 2133 Environmental Protection Professionals
	264 Authors, Journalists and Linguists	2641 Authors and Related Writers 2642 Journalists 2643 Translators, Interpreters and Other Linguists
	265 Creative and Performing Artists	2651 Visual Artists 2652 Musicians, Singers and Composers 2653 Dancers and Choreographers 2654 Film, Stage and Related Directors and Producers 2655 Actors 2656 Announcers on Radio, Television and Other Media 2659 Creative and Performing Artists Not Elsewhere Classified
		323, 3230 Traditional and Complementary Medicine Associate Professionals
61 Market-oriented Skilled Agricultural Workers	611 Market Gardeners and Crop Growers	6111 Field Crop and Vegetable Growers
		6112 Tree and Shrub Crop Growers
		6113 Gardeners; Horticultural and Nursery Growers
		6114 Mixed Crop Growers
	612 Animal Producers	6121 Livestock and Dairy Producers 6122 Poultry Producers 6123 Apiarists and Sericulturists 6129 Animal Producers Not Elsewhere Classified
		613, 6130 Mixed Crop and Animal Producers
62 Market-oriented Skilled Forestry, Fishery and Hunting Workers	621, 6210 Forestry and Related Workers	
	622 Fishery Workers, Hunters and Trappers	6221 Aquaculture Workers
		6222 Inland and Coastal Waters Fishery Workers
		6223 Deep-sea Fishery Workers
		6224 Hunters and Trappers
63 Subsistence Farmers, Fishers, Hunters and Gatherers	631, 6310 Subsistence Crop Farmers	
	632, 6320 Subsistence Livestock Farmers	
	633, 6330 Subsistence Mixed Crop and Livestock Farmers	
	634, 6340 Subsistence Fishers, Hunters, Trappers and Gatherers	
		7317 Handicraft Workers in Wood, Basketry and Related Materials
		7318 Handicraft Workers in Textile, Leather and Related Materials.

6.5.4. ISCO-08 groups that could potentially be added to the list of traditional occupations

The lists of occupations presented at the 2008 workshop was never intended to be definitive or exhaustive. It was recognized that there was a need for further investigation to ensure that all relevant ISCO-08 groups are identified. Based on the review of the academic literature, and our analysis of the information collected in the Indigenous Navigator, we have identified several other ISCO-08 groups that could potentially be added to the list of occupations used for operational measurement of traditional occupations, but for which further consideration is needed. These include the following unit groups:

- 2230 Traditional and Complementary Medical Practitioners
- 2341 Primary School Teachers
- 2342 Early Childhood Educators
- 2354 Other Music Teachers
- 2355 Other Arts Teachers
- 3141 Life Science Technicians (excluding Medical)
- 3142 Agricultural Technicians
- 3143 Forestry Technicians
- 3413 Religious Associate Professionals
- 3434 Chefs
- 5113 Travel Guides
- 5120 Cooks
- 5311 Child Care Workers
- 5312 Teachers' Aides
- 7111 House Builders
- 7115 Carpenters and Joiners [includes wooden boat builders]
- 7312 Musical Instrument Makers and Tuners
- 7314 Potters and Related Workers
- 7511 Butchers, Fishmongers and Related Food Preparers
- 7512 Bakers, Pastry-cooks and Confectionery Makers
- 7513 Dairy Products Makers
- 7514 Fruit, Vegetable and Related Preservers
- 7531 Tailors, Dressmakers, Furriers and Hatters
- 7535 Pelt Dressers, Tanners and Fellmongers

- 7536 Shoemakers and Related Workers
- 9624 Water and Firewood Collectors.

Traditional medicine

There are two unit groups in ISCO-08 that refer specifically to traditional medicine:

- 2230 Traditional and Complementary Medical Practitioners, and
- 3230 Traditional and Complementary Medicine Associate Professionals.

These groups include occupations in which traditional knowledge of healing methods and medicinal properties of herbs is used in treating illnesses and promoting well being, including such occupations as homeopath, naturopath, herbalist, and village healer.

Spiritual leaders

Indigenous spiritual leaders play an important part in the retention and transmission of indigenous knowledge and culture, as do storytellers, musicians and dancers. The last three of these occupations are already included in the originally proposed list of ISCO groups for which traditional knowledge may influence the performance of tasks as part of minor group 265 (Creative and performing artists). Spiritual leaders of various types are included in unit groups 2636 (Religious professionals) and 3413 (Religious associate professionals). However, indigenous spiritual leaders may only represent a small proportion of the jobs classified in each of these groups. Religious professionals include Christian priests and Islamic imams, for example.

If significant numbers of indigenous persons are engaged as priests or imams, it may not be appropriate to count them as practising traditional occupations, unless these belief systems are considered to be part of indigenous culture. We would recommend therefore that unit group 2636 (Religious professionals) should only be included if relevant in the national context.

ISCO unit group 3413 (Religious associate professionals) also includes occupations such as monk and nun that form part of mainstream religious practice in many countries. However, this group also includes faith healers, who may play an important role as

spiritual leaders among indigenous peoples. For this reason it has been included in the proposed list of traditional occupations.

In the analysis of labour force survey microdata described in more detail in Chapter 8, no indigenous persons were identified in either of these groups, while the numbers of non-indigenous assigned to these groups was also very small.

Teaching and childcare occupations

The rapid assessment study conducted by the FPP identified teaching and transmission of traditional knowledge as an important traditional occupation, while respondents in the Indigenous Navigator identified childcare. Both childcare and teaching are acknowledged to be important ways in which traditional knowledge is passed on and preserved. In Australia and New Zealand, as we have seen above, there are several recognized occupations for teachers and teachers' aides that explicitly involve helping young children to understand traditional indigenous knowledge, language and culture. Should it follow from this that some or all occupations in education and childcare should be included in the measurement of traditional occupations, if the person employed in these occupations identifies as indigenous?

The relevant groups in ISCO-08 are shown below, with those we consider potentially suitable for inclusion in the list highlighted:

1345 Education Managers

23 Teaching Professionals

231 University and Higher Education Teachers

2310 University and Higher Education Teachers

232 Vocational Education Teachers

2320 Vocational Education Teachers

233 Secondary Education Teachers

2330 Secondary Education Teachers

234 Primary School and Early Childhood Teachers

2341 Primary School Teachers

2342 Early Childhood Educators

235 Other Teaching Professionals

2351 Education Methods Specialists

2352 Special Needs Teachers

2353 Other Language Teachers

2354 Other Music Teachers

2355 Other Arts Teachers

2356 Information Technology Trainers

2359 Teaching Professionals Not Elsewhere Classified

531 Child Care Workers and Teachers' Aides

5311 Child Care Workers

5312 Teachers' Aides.

We have highlighted only those teaching occupations likely to involve the transmission of knowledge across a broad range of subjects, or specializing in cultural topics, with a focus on the formative years of primary education and early childhood. Teachers in secondary, vocational and higher education tend to specialize in particular subjects not all of which would involve the use or transmission of traditional knowledge. It could be argued, however, that any person who identifies as indigenous and works as a teacher would be likely to pass on aspects of traditional knowledge to students, using teaching strategies and methodologies that are culturally appropriate for indigenous students, while serving as a role model for them. It is therefore proposed to create a supplementary indicator based on indigenous persons employed as teachers.

Education managers, such as head teachers, are in a highly influential position and those who identify as indigenous would be highly likely to have a positive influence on traditional knowledge. They would also be included in the proposed supplementary indicators for indigenous teachers and for indigenous persons in management.

Finally, it should be noted that the ISCO-08 groups "other language teachers", "other music teachers" and "other arts teachers" are teachers who teach their students outside the mainstream primary, secondary and higher education systems, by providing private or small-group tuition or as an extra-curricular activity in association with mainstream education. We consider that indigenous persons working in the arts and music teaching occupations would generally be using indigenous knowledge and culture in their work. ISCO-08 unit group 2353 (Other

language teachers) refers only to those who "teach *non-native languages* to adults and children who are learning a language for reasons of migration, to fulfil employment requirements or opportunities, to facilitate participation in educational programmes delivered in a foreign language, or for personal enrichment" (emphasis added). Since significant numbers in this group are employed in occupations such as "teacher of English as a foreign language", we would not consider it suitable for inclusion in the main indicator for traditional knowledge.

Life science and related technicians

Scientists working in life sciences, environmental protection and agriculture were included in the list of occupations identified at the workshop in Baguio and are classified in ISCO-08 in the following unit groups:

2131 Biologists, Botanists, Zoologists and Related Professionals

2132 Farming, Forestry and Fisheries Advisers

2133 Environmental Protection Professionals

Park rangers are included among environmental protection professionals. Animal trackers would in most cases also be classified in that group. Indigenous persons employed in these occupations may not hold formal qualifications in science, but require extensive and detailed knowledge of the local environment and animal behaviour.

Technicians working in these fields, however, were not included in the originally proposed list. Occupations in ISCO-08 minor group 314 (Life science technicians and related associate professionals) are classified into the following unit groups:

3141 Life Science Technicians (excluding Medical)

3142 Agricultural Technicians

3143 Forestry Technicians.

According to ISCO-08, workers classified in these groups "perform a variety of technical tasks to support life science professionals with their research, development, management, conservation and protection work, in areas such as biology, botany, zoology, biotechnology and biochemistry, and to

agriculture, fisheries and forestry." It seems highly likely that traditional indigenous knowledge would have a significant impact on the way the work is performed in the occupations classified in all of these groups. When members of indigenous peoples work in collaboration with scientists on these types of activities, sharing and applying their traditional knowledge, their occupations could potentially be classified in one of these groups.

Chefs, cooks and food processing workers

Activities involving processing and preparing food and drink are frequently cited as traditional occupations of indigenous peoples both in the academic literature and in the perceptions of indigenous peoples themselves. Occupations related to preparing and processing food in ISCO-08 include:

3434 Chefs

5120 Cooks

751 Food Processing and Related Trades Workers

7511 Butchers, Fishmongers and Related Food Preparers

7512 Bakers, Pastry-cooks and Confectionery Makers

7513 Dairy Products Makers

7514 Fruit, Vegetable and Related Preservers

7515 Food and Beverage Tasters and Graders

7516 Tobacco Preparers and Tobacco Products Makers.

Those occupations that we consider could potentially be included in the measurement of traditional occupations are highlighted. In Latin America, tobacco preparers and product makers could also be considered for inclusion, since several groups use tobacco products in rituals and ceremonies. However, some indigenous persons employed in these groups may be working in relatively industrialized settings and may not have the opportunity to use their traditional occupations, notwithstanding the fact that food product machine operators are classified elsewhere in ISCO. Further investigation and discussion of these groups may therefore be warranted.

Travel guides

According to ISCO-08, “[t]ravel guides accompany individuals or groups on trips, sightseeing tours and excursions and on tours of places of interest such as historical sites, industrial establishments and theme parks.” This group includes occupations such as “art gallery guide”, “tour escort” and “tourist guide”. Among the tasks performed in this group are:

- escorting and guiding tourists on cruises and sightseeing tours;
- escorting visitors through places of interest such as museums, exhibitions, theme parks, factories and other industrial establishments;
- describing and providing information on points of interest and exhibits and responding to questions;
- conducting educational activities for schoolchildren.

It seems reasonable that persons who identify as indigenous working in these occupations would, in many cases, be providing information drawn from their traditional knowledge and culture, and may indeed be engaged in such occupations for that reason. There may, of course, be instances where this might not be the case, for example when escorting visitors through factories – but this would be in a minority of cases.

House builders and carpenters

Building traditional houses and other structures, as well as carpentry and boat-building, are frequently cited as traditional occupations. Examples of traditional building techniques can be found, for example, in Indonesia, where the Toraja people build *tongkonan* (traditional houses characterized by sweeping roofs that aid in air circulation) (Bell 2015). Another example is the traditional construction techniques used to build stone terraces and ponds in rice paddies by the Ifugao people of the Philippines Cordilleras (UNESCO, n.d.). Given the mountainous terrain of the region, these construction skills have been a useful asset for stonewall builders to find employment in modern construction, home-building and road-building.

As already noted above, ISCO-88 includes a separate unit group 7121 (Builders, traditional materials)

which should be considered as a traditional occupation if practised by an indigenous person. However, the scope of the equivalent group in ISCO-08 unit group 7111 (House builders) is not to be restricted to traditional materials:

House builders erect, maintain and repair houses and similar small buildings using either traditional or modern techniques and materials.

Tasks performed by house builders include, among others:

- (f) arranging for specialized work such as bricklaying, painting, plumbing and electrical wiring to be done by subcontractors;
- (g) coordinating and supervising the activities of subcontractors, labourers and other workers.

However, construction project managers, project builders and construction supervisors are excluded from this ISCO unit group. It is therefore restricted to those who build relatively small structures, possibly with assistance from other workers but who are engaged directly in the construction work, meaning that project coordination and supervision should not be the main component of the work.

ISCO-08 unit group 7115 (Carpenters and joiners) refers to workers who “cut, shape, assemble, erect, maintain and repair various types of structures and fittings made from wood and other materials”. It includes occupations such as carpenter, door installer, joiner, and wooden boat builder.

The question that requires further consideration is whether it is reasonable to assume that a person who identifies as indigenous, and is employed for pay or profit in a job in either of these unit groups, is likely to be using traditional knowledge and construction methods. For those performing this type of work in own-use production, this would of course be a reasonable assumption.

Handicraft workers

Traditional handicrafts are among the most frequently cited of traditional occupations, embracing a wide range of methods using locally available materials to make household artefacts, tools and construction materials. ISCO-08 minor group 731

(Handicraft workers) includes the following nine relatively diverse unit groups:

- 7311 Precision-instrument Makers and Repairers
- 7312 Musical Instrument Makers and Tuners
- 7313 Jewellery and Precious Metal Workers
- 7314 Potters and Related Workers
- 7315 Glass Makers, Cutters, Grinders and Finishers
- 7316 Signwriters, Decorative Painters, Engravers and Etchers
- 7317 Handicraft Workers in Wood, Basketry and Related Materials
- 7318 Handicraft Workers in Textile, Leather and Related Materials
- 7319 Handicraft Workers Not Elsewhere Classified.

ISCO-08 notes as follows:

Handicraft workers combine artistic and manual skills to design, make, repair, adjust, maintain and decorate precision instruments, musical instruments, jewellery and other precious metals, pottery and porcelain ware. They apply traditional and/or recently developed techniques to carve, mould, assemble, weave and decorate various glass, ceramics, textile, straw, stone, wood and leather articles.

From the point of view of identifying traditional occupations, the inclusion of recently developed as well as traditional techniques should not be a problem. We have already observed that traditional occupations are dynamic and have always evolved over time, and continue to do so, in response to changed circumstances and technological developments. However, the inclusion in this minor group of precision-instrument makers and repairers makes it difficult to consider that the whole minor group should be included as part of an indicator of traditional knowledge – photographic equipment repairers, surgical instrument makers, and watchmakers would be unlikely to require the use of traditional knowledge. The other unit groups, however, all include traditional occupations identified in the literature and by indigenous peoples. For example, “handicraft workers not elsewhere classified” includes “stone articles handicraft worker”. Traditional weavers are included in unit group 7318

(Handicraft workers in textile, leather and related materials). Although some of the occupations included in this minor group could not easily be construed as traditional occupations (e.g. piano tuner, signwriter), it may make sense to include all except “precision-instrument makers and repairers” among occupations for which traditional knowledge would influence the way the work is performed.

Garment makers

Making clothing, hats, shoes and embroidery are frequently cited as traditional occupations, and considered as part of traditional handicrafts such as weaving. ISCO-08 classifies these occupations in a separate minor group:

- 753 Garment and Related Trades Workers
 - 7531 Tailors, Dressmakers, Furriers and Hatters
 - 7532 Garment and Related Patternmakers and Cutters
 - 7533 Sewing, Embroidery and Related Workers
 - 7534 Upholsterers and Related Workers
 - 7535 Pelt Dressers, Tanners and Fellmongers
 - 7536 Shoemakers and Related Workers.

Although sewing machine operators are classified elsewhere in ISCO-08, many of the occupations classified in these groups would not be closely related to traditional methods for making garments, or have evolved from them. The garment industry is highly industrialized with extensive global supply chains. Large numbers of women, especially in Asia, are employed in factories or engaged as homeworkers to assemble garments using a combination of sewing machines, cutting and sewing by hand, according to specifications established externally through global and domestic supply chains (Bonnet et al. 2021; WIEGO 2016). If significant numbers of indigenous women are employed in this type of garment manufacture, and this seems likely (Lushai 2014), there is a risk that including these occupations as part of an indicator of traditional occupations would overstate the extent to which traditional knowledge is being used and maintained.

Traditional sewing and garment-making skills might nevertheless be relevant for this type of work, and it would be unfortunate to exclude traditional activities

in garment-making from the measurement of traditional occupations. For these reasons, we consider that three occupations from this minor group could potentially be included as part of the measurement of traditional occupations:

7531 Tailors, Dressmakers, Furriers and Hatters

7535 Pelt Dressers, Tanners and Fellmongers

7536 Shoemakers and Related Workers.

These occupations generally involve the manufacture of whole garments, or preparation of animal skins for use, rather than assembly of various components. However, including “sewing, embroidery and related workers” would potentially draw in large numbers of workers who are not using traditional knowledge and skills; this is an area that warrants further investigation and discussion.

Less skilled “elementary” occupations

Occupations classified in ISCO-08 major group 9 (Elementary occupations) “involve the performance of simple and routine tasks which may require the use of hand-held tools and considerable physical effort” (ILO 2012). Jobs in this group require limited formal or informal education and training and would not normally involve the use of traditional knowledge and skills.

Indigenous persons who have moved into urban areas may frequently find themselves in low- paid and/or precarious jobs classified among elementary occupations such as domestic cleaners, rickshaw pullers, fast-food cooks, car guards and street vendors. In rural areas, it could be expected that significant numbers of indigenous persons are employed in low-skilled agricultural jobs on commercial farms, plantations, ranches, etc. These jobs are classified in ISCO-08 sub-major group 92 (Agricultural, forestry and fishery labourers), which includes the following unit groups:

9211 Crop Farm Labourers

9212 Livestock Farm Labourers

9213 Mixed Crop and Livestock Farm Labourers

9214 Garden and Horticultural Labourers

9215 Forestry Labourers

9216 Fishery and Aquaculture Labourers.

ISCO-08 notes as follows:

Workers in subsistence agriculture who perform a limited range of simple and routine tasks, usually under the direction of others, are classified in the relevant unit group in Minor Group 921: Agricultural, Forestry and Fishery Labourers.

ILO 2012

Some individuals practising traditional occupations could be classified in one of these categories. The ISCO index of occupational titles lists a few occupations that would be relevant, such as shellfish gatherer. However, most of the jobs classified here involve the performance of repetitive and simple tasks for the whole working day, rather than the series of activities that characterize traditional occupations. They include, for example: sugar cane cutter, fruit picker, stable hand, farm helper, lawn mower, axeman and fish farm labourer. It is difficult to envisage that employment in these types of occupations would involve or require the use of significant traditional skills or knowledge, or that including them in statistics on the practice of traditional occupations would serve the needs of policy analysis on the topic.

It is true that, in traditional livelihood activities, young people or children may work in activities such as fruit and vegetable picking during the harvest season, or as farm helpers (watching livestock, for example). Young people of working age in traditional subsistence activities or in small market-oriented household family farming, however, would generally work in a wide range of activities in which they would gradually learn the traditional methods and skills required for subsistence. In common with other apprentices, they would be classified in ISCO-08 according to the occupation they are learning – namely, as skilled agricultural workers.

Including all agricultural, forestry and fishery workers in these unit groups as part of an indicator of traditional occupations would inevitably result in the inclusion of large numbers of jobs held by indigenous workers on plantations and in commercial livestock farming, forestry, fishery and aquaculture operations, in roles that do not allow the use of their traditional skills and knowledge. This would once again give a distorted impression of the extent to which traditional knowledge is being used, perpetuated and adapted. However, as we shall

►► Traditional occupations are occupations in which indigenous knowledge, cultural practices, innovations and technologies may influence the way the work is performed, if the work is performed by a person who identifies as belonging to an indigenous or tribal group

see in Chapter 8, the distinction between skilled agricultural workers and agricultural labourers on the basis of responses to occupation questions in surveys is not always clear, and there are variations in national practices. Indigenous persons classified as agricultural labourers who are working on small farms operated by their family household would be highly likely to be using and developing indigenous knowledge and skills. This would also be the case in small forestry and fishery enterprises.

It may, therefore, be appropriate to include the unit groups in sub-major group 92 (Agricultural, forestry and fishery labourers) in the list of traditional occupations when the indigenous person’s status in employment is employer, own-account worker, or contributing family worker. Workers in these occupations with a status in employment of employee or dependent contractor would not be considered to be in a traditional occupation. While this would add complexity to the process of identifying traditional occupations, it would be a pragmatic solution to dealing with some of the difficulties and vagaries of assigning occupation codes to survey responses for workers in agriculture, forestry and fishing. Assessment at national level may be advisable, however, to determine the most appropriate treatment and to determine which approach represents the greater risk of over- or under-identification of the practice of traditional occupations.

Water and firewood collectors

ISCO-08 unit group 9624 (Water and firewood collectors), whilst classified among “elementary occupations”, does clearly relate directly to traditional livelihood activities. Some traditional knowledge about where to find reliable sources of clean water, and the right types of wood for particular purposes, would be needed in some cases. This group should probably therefore be included as part of any indicator of traditional occupations.

6.6. Potential statistical definition and indicators of traditional occupations

6.6.1 Proposed statistical definition of traditional occupations

Traditional occupations can be defined within occupational classification systems either on a relatively narrow basis, as:

- occupations in which traditional knowledge, culture and practices are central to the performance of the tasks;
- or on a broader basis which also includes:

- occupations in which knowledge of traditional culture and practices may influence the way the work is performed,
- if the work is performed by a person who identifies as belonging to an indigenous or tribal group.

If defined on a narrow basis, the ISCO groups included would be limited to those listed in section 6.5.1 above. If defined on a broader basis, all the ISCO-08 groups listed in Table 7 would be included, as well as some or all of the additional groups listed in section 6.5.4.

Our strong view is that statistics on traditional occupations should not be limited to the economic and cultural activities that indigenous peoples have traditionally undertaken, but should also embrace other occupations in which indigenous peoples are using their traditional knowledge, for example in life sciences, climate research and tourism. We therefore recommend the following definition of traditional occupations for statistical purposes:

►► Indigenous knowledge refers to the constantly evolving information, skills, practices, science and technology passed from generation to generation within an indigenous or tribal group. The work performed in traditional occupations embraces production of goods and services for own use and other forms of unpaid work including volunteer work and unpaid trainee work, as well as employment for pay or profit.

Traditional occupations are occupations in which indigenous knowledge, cultural practices, innovations and technologies may influence the way the work is performed, if the work is performed by a person who identifies as belonging to an indigenous or tribal group.

Indigenous knowledge refers to the constantly evolving information, skills, practices, science and technology passed from generation to generation within an indigenous or tribal group. The work performed in traditional occupations embraces production of goods and services for own use and other forms of unpaid work including volunteer work and unpaid trainee work, as well as employment for pay or profit.

To operationalize this definition for use with data classified according to ISCO-08, a final decision on the ISCO-08 groups to be included will need to be made, using the discussion in the preceding sections as guidance. A consolidated list of the ISCO groups recommended for testing at national level is provided in Annex 1. In many cases it may be necessary to adapt this list to reflect national specificities, for example with respect to religious professionals or traditional handicrafts.

When data are classified according to a national classification that is not based directly on ISCO-08, the data could be mapped to ISCO-08 if a correspondence table from the national classification to ISCO-08 exists. It would be preferable in many cases, however, to identify the groups in the national classification that fit the definition of traditional occupations, using the recommended list of ISCO groups as guidance. Specific occupations that fit within the definition might be identified in the national classification but not included in the ISCO list. In such cases it would be important to ensure

that indigenous peoples are able to participate in national discussions to identify the groups in the national classification that fit the definition.

An operational definition based on selected codes in an occupation classification would potentially allow the compilation of estimates and indicators from existing datasets (if they include an indigenous identifier and occupation data at the ISCO-08 four-digit level or comparable national classification). It should be recognized, however, that this approach has certain limitations. It relies on the assumption that indigenous persons working in the selected occupations will use their traditional knowledge in performing their work, while those working in other occupations will not. It should therefore be considered as a proxy measure that is nevertheless valuable.

A more direct measure would require the collection of information on whether and how indigenous knowledge is used in the performance of work. It is likely that significant development and testing would be required to come up with a sufficiently reliable method of collecting this information. Once such a measure is available, it could potentially be used to refine the list of traditional occupations to be used in data collections when it is not feasible to include a direct measure.

6.6.2. Proposed statistical indicators for traditional occupations

Once the set of ISCO-08 categories to be used as part of the statistical definition of traditional occupations has been determined, these categories can be used to create one or more indicators to assess the

►► The following main or headline indicators are proposed for further discussion: prevalence of indigenous persons employed in traditional occupations; prevalence of indigenous subsistence foodstuff producers.

extent to which the practice of traditional occupations leads to the retention of traditional knowledge and supports the livelihoods of indigenous peoples. The compilation of statistics for these indicators for a particular point in time can provide information on the current status of traditional occupations, and their importance in relation to other occupations and sources of livelihood. An important purpose of the indicators, however, should also be to support analysis of changes over time, both in terms of the overall prevalence of the practice of traditional occupations, as well as the extent to which the practice of specific occupations is increasing or in decline. This would require collection and compilation of the data required on a periodic basis using the same or a very similar data source.

The following main or headline indicators are proposed for further discussion:

- prevalence of indigenous persons employed in traditional occupations;
- prevalence of indigenous subsistence foodstuff producers.

Prevalence of indigenous persons employed in traditional occupations

- The prevalence of indigenous persons employed in traditional occupations may be expressed as:
 - headcounts;
 - percentage of employed indigenous persons (and/or of specific indigenous or tribal peoples);
 - percentage of indigenous persons of working age² (and/or of specific indigenous or tribal peoples);

² The working-age population is commonly defined as persons aged 15 years and older, although the age limits can vary from country to country (ILO, [Glossary of Statistical Terms](#)).

- percentage of all employed persons (indigenous and non-indigenous).

To the extent possible, the statistics should be disaggregated by:

- occupation at the most detailed level feasible;
- sex;
- age groups;
- economic activity;
- status in employment;
- working time;
- earnings or income.

This main or headline indicator will provide insights into the extent to which indigenous peoples are using their traditional skills and knowledge in the market economy. It should therefore be based on the broad definition of traditional occupations: i.e. occupations where knowledge of traditional culture and practices may influence the way the work is performed. It may nevertheless be useful, as a supplementary indicator, to compile statistics for the subset of these occupations that fit within the narrower definition comprising occupations in which traditional knowledge, culture and practices are central to the performance of the tasks.

Statistics for this indicator (or set of indicators) should whenever possible be based on all jobs held by the person. Where information is available only on the main job, this may result in significant underestimation of total employment in traditional occupations.

Since this first indicator relates to employment as defined at the 19th ICLS, it excludes own-use production work, and other forms of unpaid work. In principle, work activities in ISCO-08 sub-major group 63 (Subsistence farmers, fishers, hunters and gatherers) would not therefore be included.

Prevalence of indigenous subsistence foodstuff producers

An indicator based only on employment would miss a significant component of the practice of traditional occupations, especially in communities where subsistence foodstuff production is common. We therefore propose a second main or headline indicator: namely, prevalence of indigenous subsistence foodstuff producers. This indicator may be expressed as:

- headcounts;
- percentage of indigenous persons of working age (and/or specific indigenous or tribal peoples);
- rates computed in relation to employed indigenous persons (and/or specific indigenous or tribal peoples);
- rates computed in relation to non-indigenous subsistence foodstuff producers;
- percentage of the working age population (indigenous and non-indigenous).

To the extent possible these statistics should be disaggregated by:

- occupation;
- sex;
- age groups;
- labour force status;
- economic activity;
- working time;
- income.

Disaggregation of statistics on subsistence foodstuff producers by labour force status will allow identification of those who are also active in the labour market, either in employment or as unemployed jobseekers, as well as identifying those whose main or only source of livelihood is subsistence activity.

If statistics on work activities in subsistence foodstuff production are classified by occupation, this should be done at the most detailed level feasible. In practice this would mainly involve the four sub-categories in ISCO-08 sub-major group 63:

- 631 Subsistence Crop Farmers
- 632 Subsistence Livestock Farmers
- 633 Subsistence Mixed Crop and Livestock Farmers
- 634 Subsistence Fishers, Hunters, Trappers and Gatherers.

Some work activities classified by ISCO-08 major group 9 (Elementary occupations) might also be included:

- 9211 Crop Farm Labourers
- 9212 Livestock Farm Labourers
- 9213 Mixed Crop and Livestock Farm Labourers
- 9214 Garden and Horticultural Labourers
- 9215 Forestry Labourers
- 9216 Fishery and Aquaculture Labourers.

However, information on own-use foodstuff producers may, in many cases, be classified by economic activity (industry) and not by occupation. The modules measuring own-use production of farming, animal and fishing products in the ILO model labour force survey questionnaires collect information about the main products worked on and propose that these activities be assigned a four-digit ISIC code. Disaggregation by economic activity (industry) mainly concerns ISIC Rev.4, section A (Agriculture, forestry and fishing). The sub-categories within ISIC section A allow the provision of more detailed information about the type of production than ISCO, as noted in more detail in section 6.2 above. This would be particularly informative in the absence of information about occupation.

Supplementary indicators

These two headline indicators would cover a large part of the practice of traditional occupations but would not include such practice in own-use production of goods other than for subsistence foodstuff production, own-use provision of services, volunteer

work and unpaid trainee work. For complete identification of own-use producers of goods, surveys may also include questions that cover other productive activities for own final use, including fetching water, collecting firewood, manufacture of household goods, preservation of food, and construction or renovation of one's own dwelling, as specified in the ILO model labour force survey questionnaires (ILO 2020a).

A third indicator is therefore proposed to allow the capture of all own-use production of goods: namely, prevalence of indigenous own-use producers of goods in traditional occupations.

As with the indicator for own-use foodstuff producers, this indicator may be expressed as:

- headcounts;
- percentage of indigenous persons of working age (and/or specific indigenous or tribal peoples);
- rates computed in relation to employed indigenous persons (and/or specific indigenous or tribal peoples);
- rates computed in relation to non-indigenous own-use producers of goods;
- percentage of the working age population (indigenous and non-indigenous), and to the extent possible these statistics should be disaggregated by:
 - occupation;
 - sex;
 - age groups;
 - labour force status;
 - economic activity;
 - working time;
 - income.

This indicator would need to combine indigenous subsistence foodstuff producers with indigenous own-use producers of goods, counting those engaged in production of both foodstuff and other goods only once. The nature of the activity in own-use production of goods other than from agriculture, forestry and fishing should also be taken into consideration in the national context, so as to exclude any non-traditional occupations. Disaggregation by occupation and industry, where

possible, would also enrich the data and would involve a wider range of occupations and industries than for subsistence. For those engaged in both subsistence foodstuff production and production of other goods, it may make sense to assume that foodstuff production is the main activity, and base the occupation and industry on that. Alternatively, data on hours worked could be used to determine the main activity.

As previously noted, own-use provision of services is undertaken by virtually all persons of working age. Any indicator of the practice of traditional occupations in own-use provision of services would therefore need to be based on investigation of the extent to which traditional knowledge is used or passed on to others in these activities. As we are not aware of any official statistics that collect this type of information, no concrete indicator is proposed.

With respect to the practice of traditional occupations in volunteer work and in unpaid trainee work, indicators could be compiled from surveys that measure these activities on a similar basis to those used for the headline indicators, using relevant populations as denominators for calculation of rates.

The above indicator sets cover the bulk of possibilities for the practice of traditional occupations. The following additional supplementary indicators, some of which include activities beyond the definition of traditional occupations outlined above, are proposed for further discussion:

- indigenous persons employed in occupations where knowledge of traditional culture and practices may positively influence biodiversity and/or climate change;
- indigenous persons employed as teachers (or in education, based on ISIC);
- indigenous persons employed in managerial occupations;
- indigenous persons employed in agriculture, forestry and fishing.

The occupations included in the indicator "indigenous persons employed in occupations where knowledge of traditional culture and practices may positively influence biodiversity and/or climate change" would mainly be a subset of the occupations included in the main indicator "prevalence of indigenous persons employed in traditional occupations". It could include the following ISCO-08 groups:

- minor group 131: Production Managers in Agriculture, Forestry and Fisheries;
- minor group 213: Life Science Professionals;
- minor group 314: Life Science Technicians and Related Associate Professionals;
- major group 6: Skilled Agricultural, Forestry and Fishery Workers.

The proposed supplementary indicator for “indigenous persons employed as teachers” would reflect the likelihood that any person who identifies as indigenous and works as a teacher would be likely to pass on aspects of traditional knowledge to students, as well as serving as a role model for indigenous students. It might include the following ISCO-08 groups:

1345 Education Managers

23 Teaching Professionals

231 University and Higher Education Teachers

2310 University and Higher Education Teachers

232 Vocational Education Teachers

2320 Vocational Education Teachers

233 Secondary Education Teachers

2330 Secondary Education Teachers

234 Primary School and Early Childhood Teachers

2341 Primary School Teachers

2342 Early Childhood Educators

235 Other Teaching Professionals

2351 Education Methods Specialists

2352 Special Needs Teachers

2353 Other Language Teachers

2354 Other Music Teachers

2355 Other Arts Teachers

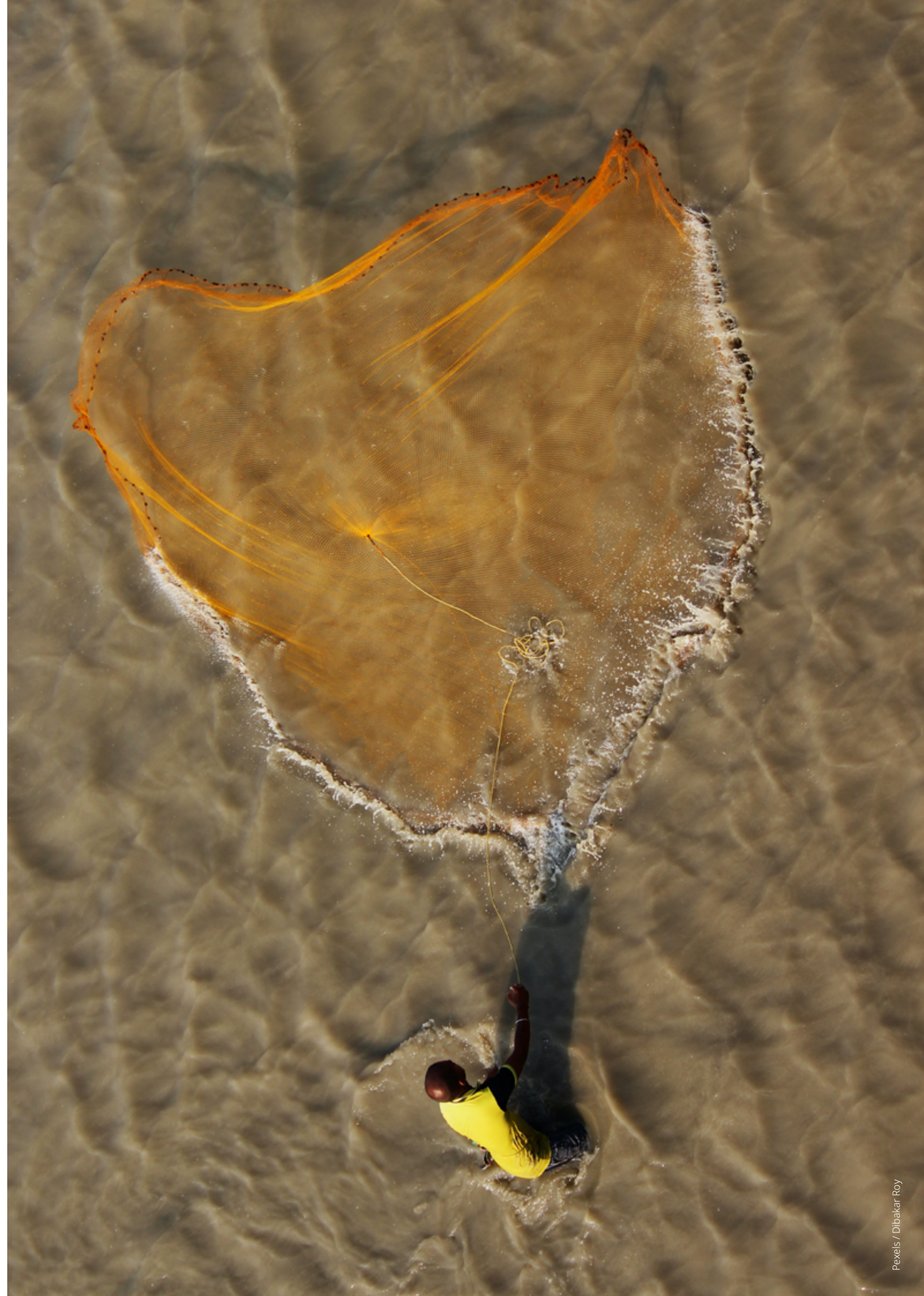
2356 Information Technology Trainers

2359 Teaching Professionals Not Elsewhere Classified

5312 Teachers' Aides.

Statistics on the prevalence of indigenous persons employed in management occupations would provide information on the extent to which indigenous peoples are engaged in leadership and decision-making roles. This would be a useful indicator of the socio-economic position of the indigenous population compared to the non-indigenous population and of the extent to which decision-making and leadership might be informed and inspired by traditional knowledge and culture. It could be defined operationally on the basis of the number of indigenous persons with jobs in ISCO-08 major group 1 (Managers). Alternatively, jobs classified in the less skilled sub-major group 14 (Hospitality, retail and other services managers) could be excluded.

The proposed indicator for “indigenous persons employed in agriculture, forestry and fishing” would provide an indication of the extent to which indigenous persons are employed in primary productive activities related to their traditional livelihoods and in which traditional knowledge might have some influence on the way the work is performed. It could be based on the classification of employment by industry and would be defined as all indigenous persons employed in ISIC Rev.4, section A (Agriculture, forestry and fishing) and would not therefore be limited to persons employed in occupations not included in the proposed headline indicators. For example, it would include mobile farm and forestry plant operators, and agricultural, forestry and fishery labourers.





7

Data sources

►► Potentially relevant types of data source used for the compilation of official statistics include: labour force surveys; other household surveys including those targeting indigenous populations; population censuses; employer surveys and other economic data collections; agricultural censuses; administrative records.

To compile statistics about the traditional occupations practised by indigenous peoples, information that allows the identification of indigenous persons or households needs to be available in the same data source as information about their occupations and/or the economic activities of the economic units in which they work. Potentially relevant types of data source used for the compilation of official statistics include:

- labour force surveys;
- other household surveys including those targeting indigenous populations;
- population censuses;
- employer surveys and other economic data collections;
- agricultural censuses;
- administrative records.

7.1. Labour force surveys

Labour force surveys (LFS) and other household surveys, as well as population censuses, provide details on the characteristics of households and their members, including their economic characteristics such as labour force participation, own-use production of foodstuffs, occupation and income. In countries with significant indigenous or tribal populations, household-based collections are increasingly including questions on indigenous status or ethnicity, which allow the identification of those who belong to indigenous or tribal groups. Household-based data collections, however, can provide only limited information about the characteristics of the workplaces of household members, but frequently do include data on economic activity (industry) and place of work.

LFS are the main regular source of statistics on the labour market. In many countries, they provide

estimates on a sub-annual basis (monthly or quarterly) on the main aggregates of employment, the labour force, labour underutilization (including unemployment), and on subsistence foodstuff producers where this is relevant in the national context. In some developing countries, however, LFS are conducted only annually or less frequently.

Data on occupation and economic activity in the main job, and sometimes in secondary jobs, are almost always included in the LFS, but may be released in detailed tabulations on an annual basis. Statistics about participation and working time in own-use production (other than subsistence foodstuff production), unpaid trainee work and volunteer work are generally collected less frequently, either as part of supplementary modules periodically added onto the LFS, or as part of special purpose surveys or multi-purpose surveys.

In common with other household surveys, the principal difficulties in using the LFS to compile statistics on traditional occupations derive from the sample size and design. For example, the sample may not be large enough to compile reliable estimates on occupation for small populations, such as ethnic minorities, especially for occupations in which only small numbers of people are employed. This will frequently be the case for occupation groups such as “traditional chiefs and heads of villages”. However, when traditional occupations are aggregated the total numbers may well support the compilation of reliable estimates. Typically, LFS data on occupation are coded to the four-digit level of ISCO, or a related national classification, while statistics are tabulated at aggregate one-, two- or three-digit levels. Statistics may also be published for the most common unit groups at the four-digit level.

Household surveys do not necessarily provide reliable and valid estimates for disaggregating information on disadvantaged groups, especially if these are spatially distributed in a different manner from the

►► Periodic oversampling for indigenous populations could potentially be a method to improve the measurement of the labour market characteristics of indigenous peoples, including the practice of traditional occupations, and to monitor changes in the practice of traditional occupations over time.

rest of the population, as is frequently the case for indigenous and tribal peoples (López 2019). One way to address problems derived from sample design in compiling estimates for indigenous peoples from LFS and other household surveys is to oversample an existing survey. This would involve selectively visiting additional households in areas where the population of indigenous peoples is known to be high. This can allow the provision of additional information for small populations that are unevenly distributed geographically. If this type of oversampling is done on a periodic basis it could potentially also allow the inclusion of supplementary questions for those who identify as indigenous, including, for example, questions on whether individuals use indigenous knowledge in their jobs or work activities.

The regularity and ongoing nature of LFS make them an important source of information on changes over time. Indeed, the samples in many LFS are specifically designed to support the measurement of short-term changes in key indicators, such as employment and indicators of labour underutilization, as well as longer-term changes such as its occupational structure. Periodic oversampling for indigenous populations could potentially be a method to improve the measurement of the labour market characteristics of indigenous peoples, including the practice of traditional occupations, and to monitor changes in the practice of traditional occupations over time.

7.2. Surveys targeting indigenous peoples

In some countries, special purpose surveys that target specific indigenous populations have been developed by national statistical offices, or other agencies. By only including indigenous households in their scope, these surveys can overcome some

of the problems associated with measuring small populations in sample surveys. However, the final sample in this type of survey is usually much smaller than in the LFS, which may make it difficult to produce estimates for detailed occupational groups if data on occupation are included in the survey.

These surveys include topics of particular relevance to indigenous peoples but may not necessarily include questions on occupation. For example, the [National Aboriginal and Torres Strait Islander Social Survey, 2014-15](#) conducted by the Australian Bureau of Statistics includes data on various labour force characteristics but does not include occupation. The [2017 Aboriginal Peoples Survey \(APS\)](#), conducted by Statistics Canada (StatCan), includes data on occupation and industry, but the only published data are for the top five industries and the top five occupations of employed First Nations women and men (Anderson 2019). The Canadian survey also includes data on “other labour activities”, defined as follows:

There are other labour activities that can contribute to economic well-being that may not be captured with conventional measures. The APS asks about: hunting, fishing and trapping, gathering wild plants, making clothing or footwear and making carvings, jewellery and other kinds of artwork.

StatCan 2018

Increasing recognition of the importance of measuring the practice of traditional occupations could result in the more frequent inclusion of information on occupation in these types of survey. They may also be a suitable vehicle for the collection of information on the extent to which traditional knowledge is used and passed on in employment, in own-use production work and in other activities.

7.3. Time-use surveys

Time-use surveys (TUS) are an important source of statistics on own-use production work, including own-use provision of services. These are household surveys that use detailed time diaries to record how individuals allocate their time over different work and non-work activities during one or more 24-hour periods. Because childcare and housework are activities done throughout the day, often in parallel with other activities, information on these activities is best collected through TUS. They are typically conducted relatively infrequently (several years apart) and have small samples which could make it difficult to use them to compile statistics on small and geographically-concentrated indigenous populations. To be useful for the compilation of statistics on the practice of traditional occupations in own-use provision of services, they would need to collect information on the extent to which indigenous respondents use traditional knowledge or pass it on to others while performing activities such as childcare or food preparation.

7.4. Population censuses

Bearing in mind the difficulties associated with compiling data on traditional occupations in sample surveys, the most reliable source of detailed information on the occupations of indigenous peoples in employment will be the population census.

Since a census is a complete enumeration of the whole population, detailed statistics on occupation and industry of employment in the main job can be compiled for small population groups, subject only to constraints around confidentiality, and the capacity of agencies to analyse the data. This generally means that access to the census microdata may be limited to staff of the national statistical office, or to outside researchers through anonymized unit record files, in which certain items are aggregated or perturbed to ensure that individual persons or households cannot be identified.

Participation in own-use production of goods is a new core topic for the 2020 round of population censuses. Many countries previously included own-use production of goods, particularly foodstuff production, as part of employment work. In countries where a part of the population engages in own-use production of foodstuffs, the ILO has advised that decisions to include questions on

own-use production of foodstuffs in the population census will depend on a number of factors, including the following:

- relevance: how relevant this form of work is to the national economy; and to the agriculture/fishing sector in particular;
- continuity: whether these activities were included before in employment;
- integration with other sources: whether the agriculture census covers subsistence agriculture, or if your country plans to link the population and agriculture censuses;
- availability of other sources: how frequently other relevant household surveys can be conducted (ILO 2019).

Since asking about own-use production of goods other than foodstuffs may introduce too many questions and compromise data quality, it is unlikely that this information will be available from population censuses.

In most countries censuses are conducted every ten years and provide a “snapshot” of the situation at a particular point in time. If similar questions, concepts and definitions are used from one census to the next, they can also provide information at a detailed level on longer-term changes and could potentially be a source of data on changes over time in the practice of specific occupations among specific indigenous and tribal populations.

7.5. Economic data collections

Most economic data collections collect data directly from businesses (establishments) and provide extensive information about the characteristics of businesses. Whilst they may include data on the number of workers employed in the business, and in some cases their occupations, with few exceptions they provide only limited information about the characteristics of the persons who operate or work in the establishment.

Agricultural censuses, however, provide detailed information about not only the economic characteristics of agricultural holdings, but also include more comprehensive information than other economic data collections about the persons working in these holdings. This refers in particular to the person who makes the major decisions regarding resource use and exercises management control

over the holding (the “agricultural holder”) and, for holdings in the household sector, each member of the household. [The World Programme for the Census of Agriculture 2020](#), published by the Food and Agriculture Organization (FAO) of the United Nations includes “national/ethnic group of household head or agricultural holder” as a recommended item in agricultural censuses, and notes that :

In many countries, there are major differences in agricultural practices between different national or ethnic groups, which are important to measure in an agricultural census. For the agricultural census analysis, a single national/ethnic group indicator for the holding must be designated, and this is usually done by referring to the household head or the agricultural holder. However, this may not always be appropriate. The national/ethnic groups used by a country should be consistent with the population census and other national statistics

FAO 2015

This effectively means that, in countries that include this item in the agricultural census and can identify indigenous populations through questions on ethnicity in their population census, it should also be possible to identify indigenous households and agricultural holdings operated by members of indigenous populations in the agricultural census. An essential item in the agricultural census programme is “main purpose of production of the holding”. This differentiates those mainly producing for own consumption and mainly producing for sale, thus allowing the identification of subsistence foodstuff producers. Several other items recommended by the FAO for inclusion in the agricultural census are of high relevance for understanding the nature of the practice of traditional occupations, including for example:

- use of shifting cultivation;
- number of years since cleared;
- use of organic agricultural practices;
- types of tillage practices;
- presence of conservation agriculture;
- presence of soil conservation practices;
- working time on the holding (for household members and employees).

In some cases, therefore, agricultural censuses may provide a rich supplementary source of information on the practice of traditional occupations and the characteristics of the economic units in which they are practised. While agricultural censuses are conducted infrequently, typically every ten years, they may form part of an integrated system of agricultural statistics and be linked to more frequently conducted agricultural surveys. Depending on the items included, agricultural surveys may also provide useful supplementary information on the practice of traditional occupations.

Another potential source of detailed data on the economic activities of enterprises operated by indigenous peoples is mixed modular informal sector surveys, in which the first phase is an existing household survey with a labour force component. This ‘base’ survey is used as a filter to identify informal sector entrepreneurs, all or a random sample of whom can then be selected for the informal sector survey, which is an establishment survey (ILO 2013c). If an indigenous or ethnic identifier was included in the base household survey, this could be used to identify informal sector enterprises operated by indigenous persons or households. However, these surveys would only include data on indigenous households operating businesses in the informal sector and would therefore provide only a partial picture since those operating in the formal sector would be excluded.

7.6. Administrative records

Administrative records are an additional potential source of data on traditional occupations, such as those based on employment services, pension schemes, social security and tax systems, and vocational education and training schemes. However, they cover only registered and therefore formal activities and would need to include both an indigenous identifier and accurate information on occupation to be useful for the provision of statistics on the practice of traditional occupations, which might rarely be the case. A thorough evaluation of the quality and usefulness of any particular set of administrative records would need to be conducted in order to assess its potential for use for the compilation of statistics on the practice of traditional occupations.



8

Experimental estimates

8.1. Selection and analysis of microdata sets

To assess the feasibility and usefulness of the proposed indicators and methods, selected national survey microdata sets held by the ILO Department of Statistics were analysed to compile estimates for the statistical definition of traditional occupations and indicators proposed in Chapter 6. An initial review of the ILO Microdata Repository was undertaken to identify datasets that included both an indigenous or ethnic identifier and data on occupation coded (ideally) to the 4-digit level of ISCO. Datasets from the following countries were identified as potentially being suitable for the compilation of estimates for the indicators of the practice of traditional occupations:

- Brazil
- Ecuador
- Nicaragua
- Bolivia
- Uruguay
- Lao People's Democratic Republic (Lao PDR)
- Mongolia
- Nepal
- Sri Lanka
- Ghana
- Liberia
- Sierra Leone.

Detailed analysis of the data from Ecuador, the Lao PDR and Nepal was undertaken to compile estimates for selected indicators. These datasets were chosen as they included:

1. a sufficient number of observations of indigenous and tribal peoples to compile usable estimates of work performed by members of indigenous and tribal peoples; and
2. occupation data coded to the 4-digit level of ISCO-08.

The selection of these countries for more detailed analysis does not necessarily mean that the datasets from the other countries (or from other

countries not listed above) were not suitable to compile estimates of the practice of traditional occupations. The three datasets selected were considered the most likely to yield useful results.

In the case of Brazil, the sample used in the survey was very large compared to most household sample surveys, reflecting the large and varied population of Brazil. There were more than 1.5 million observations, representing a total population of 211 million. A "colour or race" question with a separate "indigenous" response category was asked of all household members. However, only 6,611 individuals were identified as indigenous in response to this question, representing a total of 661,446 indigenous persons in the weighted estimates, or 0.3 per cent of the total population. This is significantly less than the 896,917 indigenous persons counted in the 2010 census conducted by the Brazilian Institute of Geography and Statistics (IWGIA, n.d.), suggesting that the sample may not have been fully representative of the indigenous population, which may be geographically concentrated in certain areas. Moreover, with a total number of observations of 6,611 indigenous persons, many of the estimates for the number of persons employed in detailed occupations were subject to high levels of sampling error, while estimates for more aggregate or large occupational groups were more robust.

With respect to Africa, the surveys in Ghana, Liberia and Sierra Leone included general questions on ethnic affiliation. It was not possible, however, to determine which, if any, of the groups listed in the datasets should be considered as belonging to a designated indigenous or tribal group.

For each of the selected countries, efforts were made to compile estimates of the following indicators, as well as equivalent estimates of the non-indigenous population for comparison purposes:

- prevalence of indigenous persons employed in traditional occupations as an aggregate but also disaggregated by occupation and sex (headcounts, and as a percentage of employed indigenous persons);

- prevalence of indigenous foodstuff producers;

- indigenous persons employed in occupations where knowledge of traditional culture and practices may positively influence biodiversity and/or climate change;

- indigenous persons employed as teachers (or in education, based on ISIC);

- indigenous persons employed in managerial occupations;

- indigenous persons employed in agriculture, forestry and fishing.

The list of ISCO-08 unit groups used for the operational measurement of traditional occupations can be found in Annex 1 below. The unit groups in sub-major group 92 (Agricultural, forestry and fishery labourers) were not counted as traditional occupations in the estimates compiled. As a result of the analysis described below, we have concluded that indigenous persons employed in these occupations with a status in employment of employer, independent worker without employees (own-account worker), or contributing family worker should be considered in many countries to be practising a traditional occupation, while those with a status of employee or dependent contractor should not. Since there is variation between countries regarding the circumstances in

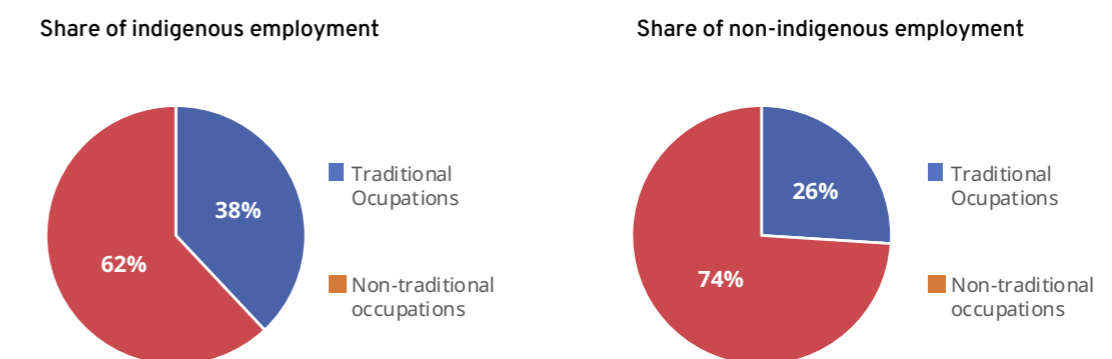
which indigenous workers are employed in agriculture, as well as in the procedures used to assign responses to survey questions on occupations to classification categories, further investigation and assessment at national level is advisable.

8.2. Ecuador

In the monthly labour force survey ([Encuesta de empleo, subempleo y desempleo](#)) in Ecuador, the question "How do you identify yourself according to your culture and customs?"¹ is asked of all persons aged 5 and over. In the annual data for 2021, there were 224,225 observations in the sample in response to this question. A total of 18,259 of these were identified as indigenous. In the weighted estimates this represents 9.3 per cent of the population (1,483,460 indigenous persons out of an estimated total population aged 5 and over of 16,039,539).

Among the employed population aged 15 and over, 38 per cent of those identified as indigenous were employed in their main job in occupations included on the list of traditional occupations proposed in Chapter 6 (figure 1). A significantly smaller share (26 per cent) of employed non-indigenous persons was engaged in these occupations.

► **Figure 1. Share of indigenous and non-indigenous employment in traditional and other occupations, Ecuador 2021**



1 "¿Cómo se identifica según su cultura y costumbres?"

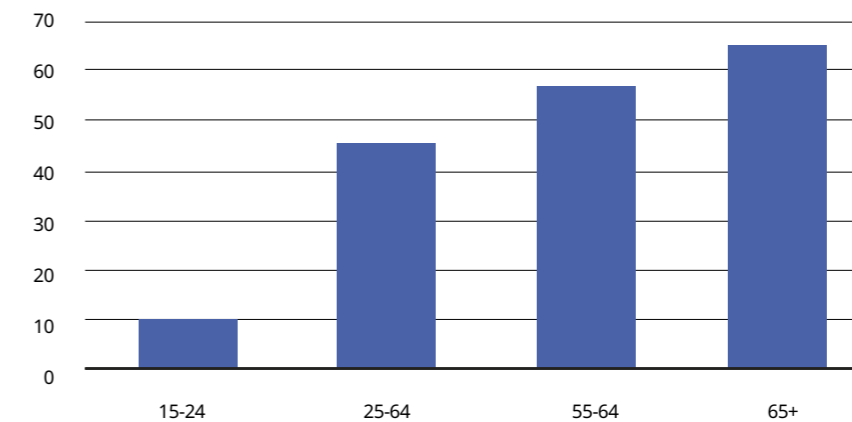
► **Table 9. Persons employed in traditional and non-traditional occupations by sex and indigenous status, Ecuador 2021**

	Males		Females		Total males and females (thousands)
	Thousands	%	Thousands	%	
<i>Indigenous</i>					
Traditional occupations	254	67	126	33	380
Non-traditional occupations	277	45	338	55	615
Total indigenous employment	531	53	464	47	995
<i>Non-indigenous</i>					
Traditional occupations	1,142	63	677	37	1,818
Non-traditional occupations	2,999	58	2,149	42	5,147
Total non-indigenous employment	4,141	59	2,825	41	6,966

With regard to indigenous persons employed in traditional occupations, men significantly outnumbered women (67 and 33 per cent, respectively), while the majority of indigenous persons employed in the non-traditional occupations were female (55 per cent) (table 9). Among non-indigenous persons employed in the proposed traditional occupations, 63 per cent were male and 37 per cent were female, reflecting a similar but less pronounced pattern of gender distribution.

The practice of traditional occupations was significantly more prevalent among the older indigenous

population than among the younger age groups (figure 2). Only 10.3 per cent of the indigenous population aged 15–24 were employed in traditional occupations, compared to 45 per cent of those aged 25–49, 57 per cent of 55 to 64-year-olds, and 65 per cent of those aged 65 or more. As with the distribution by sex, a similar but less marked progression in the distribution by age was found among the non-indigenous population, with 17 per cent of non-indigenous 15–24 year-olds and 47 per cent of those aged 65 or more employed in the proposed traditional occupations.

► **Figure 2. Share of indigenous persons employed in traditional occupations by age group, Ecuador 2021 (%)**

More than 90 per cent of indigenous persons employed in the proposed traditional occupations were employed in the agriculture, forestry and fishing industries (table 10). Almost three quarters (74 per cent) of all employed indigenous persons were in the same industries, among whom 45 per cent were engaged in occupations included on the proposed list of traditional occupations.

This reflects the inclusion of skilled agricultural, forestry and fishery workers on the list, while the equivalent groups for elementary (low-skilled) workers are excluded. Virtually all of the indigenous persons employed in the proposed traditional occupations in agriculture, forestry and fishing were skilled agricultural workers. Almost 347,000 indigenous workers were classified in this group. More than 389,000 indigenous persons (39 per cent of indigenous persons in employment) were employed as (unskilled) farm labourers, in ISCO-08 sub-major group 92 (Agricultural, forestry and fishery labourers). The numbers employed in each of these groups correspond closely to the numbers employed in traditional and non-traditional occupations in agriculture, respectively.

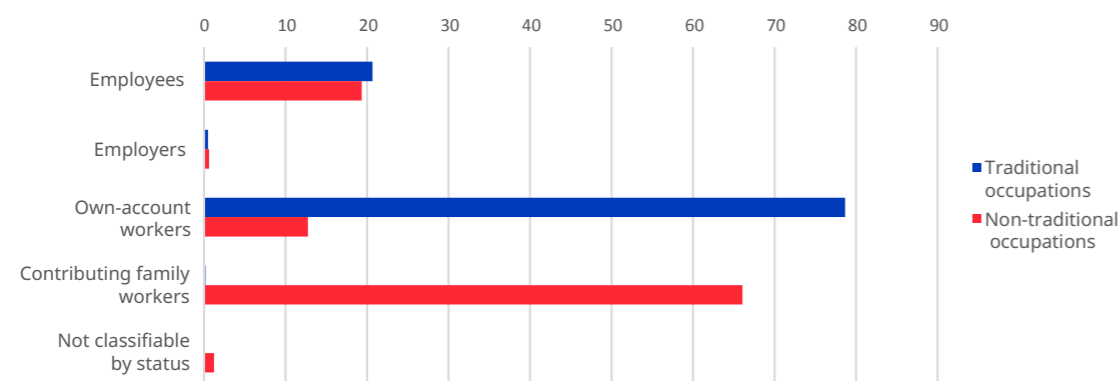
The data on status in employment shed some light on this. A total of 83 per cent (288,000) of indigenous skilled agricultural workers were own-account workers, less than 17 per cent were employees, and there were negligible numbers of employers and own-account workers. Among indigenous persons classified as agricultural, forestry and fishery labourers, almost 96 per cent (376,000) were contributing family workers. Almost all were working on crop and livestock farms. It can be concluded that contributing family workers working on household farms were systematically classified as agricultural labourers, while own-account workers were classified as skilled agricultural workers.

Since contributing family workers in agricultural holdings are generally the children or spouses of the farm owners, they are likely to be performing or learning to perform a wide range of tasks and duties on the farm, and to be using, passing on, or gaining indigenous knowledge and skills where these exist. In this instance, it would therefore be appropriate to consider that indigenous contributing family workers classified in ISCO sub-major group 92 should be included among those employed in traditional occupations.

► **Table 10. Indigenous persons employed in traditional and non-traditional occupations by economic activity, Ecuador 2021**

	Traditional occupations		Non-traditional occupations		Total	
	Thousands	%	Thousands	%	Thousands	%
Agriculture, forestry and fishing	344	90.59	393	63.84	737	74.05
Manufacturing	9	2.35	22	3.59	31	3.12
Construction	0	0.04	35	5.72	35	3.55
Market Services	9	2.43	124	20.08	133	13.34
Non-market services	17	4.58	34	5.49	51	5.14
Other activities	0	0.01	8	1.28	8	0.79
Total	380	100	615	100	995	100

► **Figure 3. Indigenous employment in traditional and other occupations by status in employment, Ecuador 2021 (%)**



The distribution of employment by economic activity among the non-indigenous population differed markedly from that of the indigenous population, with only 26 per cent of the employed non-indigenous population employed in agriculture, forestry and fishing (figure 4). However, a large share of non-indigenous employment in occupations included in the list of traditional occupations was in this industry group.

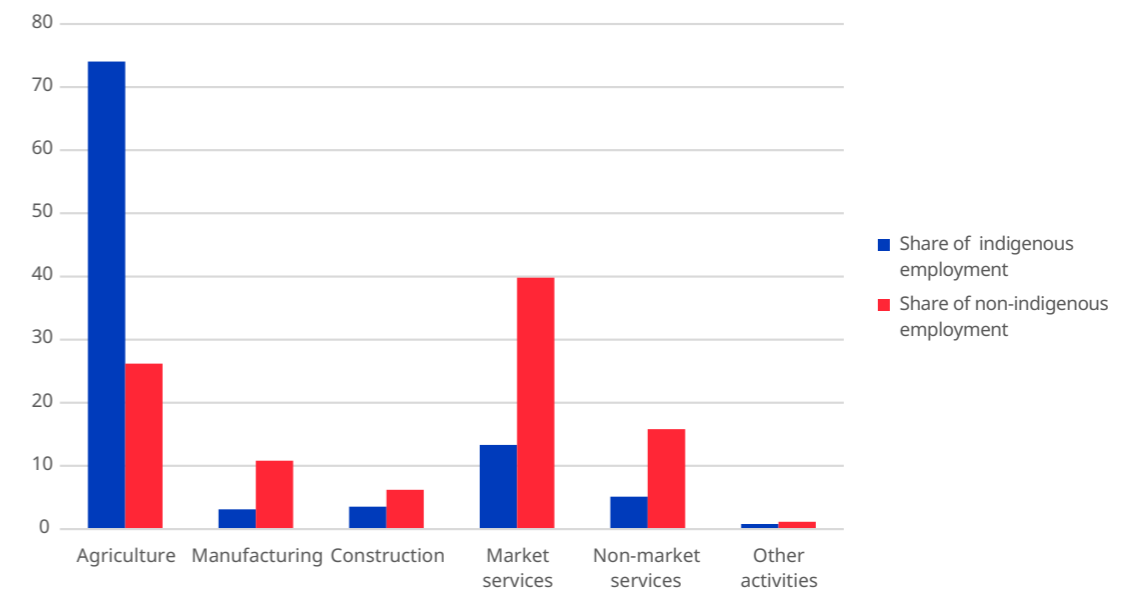
35 per cent of indigenous workers were employed in occupations in which we consider that traditional knowledge may influence biodiversity and/or climate

change. Almost all of these (91 per cent) were skilled agricultural workers, while 3.4 per cent were primary school teachers or early childhood educators.

With respect to education more broadly, only 20,165 indigenous persons were employed as teachers,

representing 2.03 per cent of indigenous employment, compared with 3.4 per cent of non-indigenous employment. Only 0.25 per cent of employed indigenous persons were in managerial occupations, compared to 1 per cent among non-indigenous persons.

► **Figure 4. Share of employment of indigenous and non-indigenous persons by economic activity, Ecuador 2021 (%)**



In the 2021 survey, Ecuador included own-use producers of goods in employment, in line with the now superseded resolution concerning statistics of the economically active population, employment, unemployment and underemployment adopted in 1982 by the 13th ICLS. This means that subsistence foodstuff producers were included in employment. Based on their response to the occupation question, 113,000 indigenous workers were identified as subsistence farmers. This represents almost 33 per cent of all indigenous skilled agricultural workers, and 11 per cent of indigenous employment. Among the non-indigenous population, a total of 197,000 workers were identified as subsistence farmers, representing 2.8 per cent of non-indigenous employment. However, the real number of indigenous and non-indigenous subsistence foodstuff producers may be higher, as it is likely that workers in Ecuador who were engaged in subsistence foodstuff production with a status in employment of contributing family worker may have been classified by occupation as agricultural labourers, and therefore excluded from subsistence foodstuff producers based on this method.

8.3. Nepal

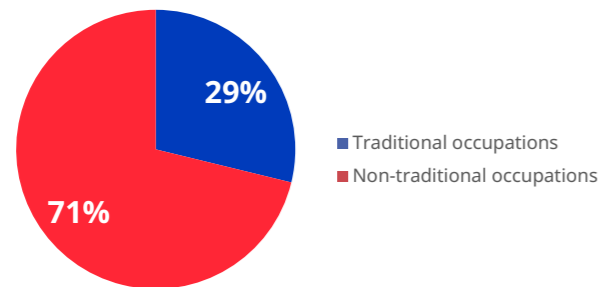
In the 2017-18 Labour Force Survey in Nepal, all household members were asked "What is your caste/ethnicity?" There were almost 78,000 responses to this question. In the weighted estimates, more than 10 million, or 35.8 per cent of the population, were counted among groups considered to be indigenous or tribal. A list of the ethnic groups considered indigenous in Nepal is included in Annex 2.

Among the indigenous population aged 15 and over, 35.6 per cent (2.73 million) were employed, 4.2 per cent were unemployed and 60.2 per cent were outside the labour force. The employment rate among the non-indigenous population was slightly lower at 33.3 per cent.

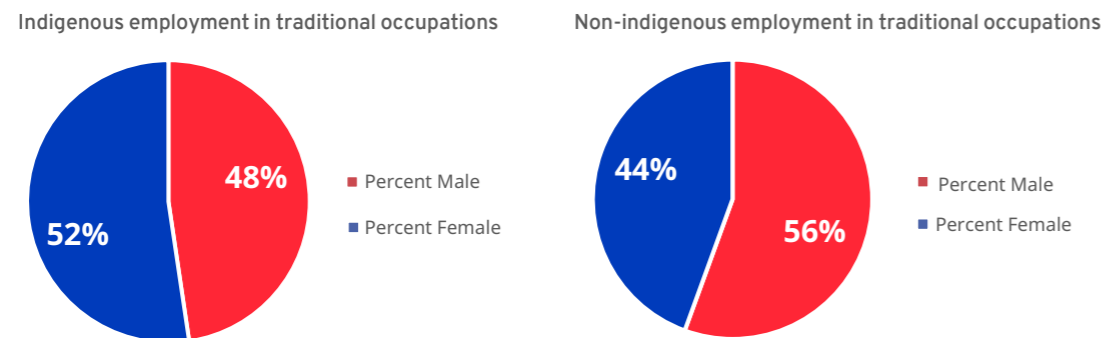
As shown in figure 5, 28.8 per cent of employed indigenous persons were engaged in occupations in their main job that are included on the list of traditional occupations proposed in Chapter 6. The share of non-indigenous persons employed in these occupations was slightly higher (29.4 per cent).

Slightly more indigenous women than men were employed in traditional occupations: 52 per cent were female, and 48 per cent were male (Figure 6). In contrast, among non-indigenous persons employed in the proposed traditional occupations, 56 per cent were male and 44 per cent were female

► Figure 5. Share of indigenous employment in traditional and other occupations, Nepal 2017-18



► Figure 6. Share of indigenous and non-indigenous employment in traditional occupations by sex, Nepal 2017-18



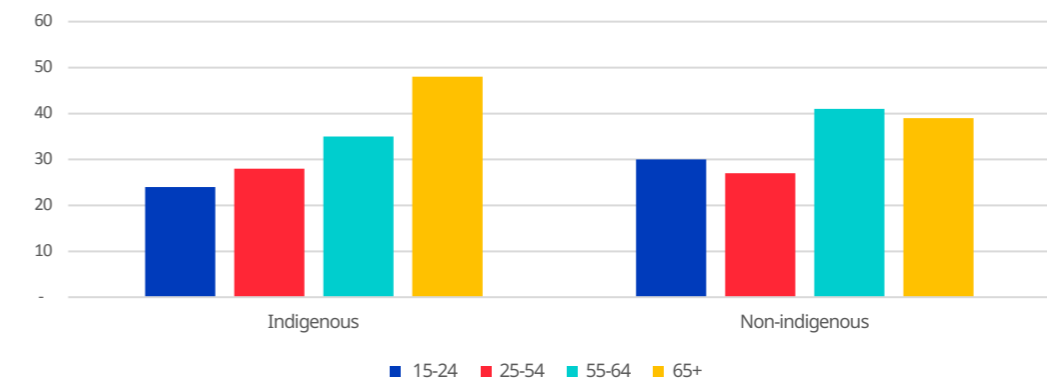
Looking at the distribution by age, 24 per cent of the employed indigenous population aged 15–24 were in traditional occupations, compared to 28 per cent of those aged 25–49, 35 per cent of 55–64-year-olds, and 48 per cent of those aged 65 or more (Figure 7). The distribution by age among the non-indigenous

population was quite different, with 30 per cent of 15–24 year-olds and 27 per cent of those aged 25–49, 41 per cent of 55–64-year-olds, and 39 per cent of those aged 65 or more employed in the proposed traditional occupations.

► Table 11. Persons employed in traditional and non-traditional occupations by sex and indigenous status, Nepal 2017-18

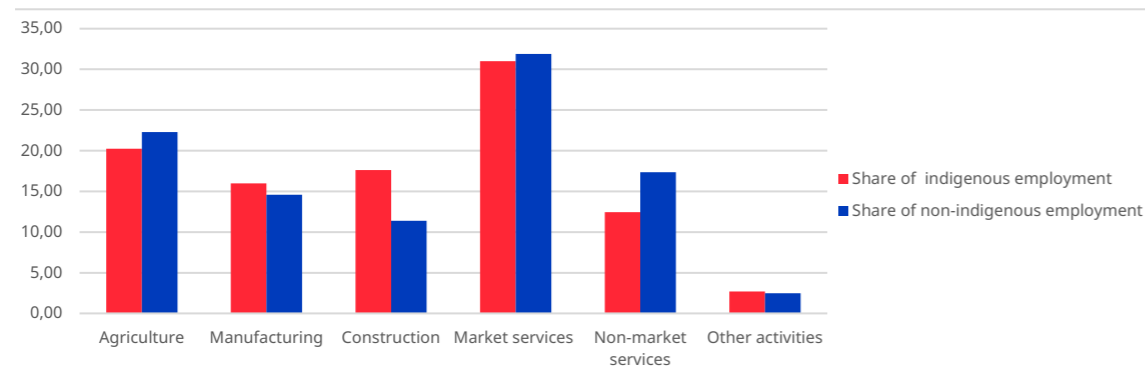
	Males		Females		Total males and females (thousands)
	Thousands	%	Thousands	%	
<i>Indigenous</i>					
Traditional occupations	375	48	412	52	788
Non-traditional occupations	1,257	65	689	35	1946
Total indigenous employment	1,632	60	1,106	40	2,734
<i>Non-indigenous</i>					
Traditional occupations	710	56	568	44	1,279
Non-traditional occupations	2,104	68	970	32	3,074
Total non-indigenous employment	2,814	65	1,538	35	4,352

► Figure 7. Share of employed indigenous and non-indigenous persons in traditional occupations by age group, Nepal 2017-18 (%)



The overall distribution of employment by economic activity followed a relatively similar pattern for both the indigenous and non-indigenous populations, except that a significantly higher share of indigenous compared with non-indigenous workers was employed in construction, while a higher share of non-indigenous workers was employed in non-market services, which includes many higher-status jobs in public administration, education, health and social care (Figure 8).

In contrast with Ecuador, only 20 per cent of the employed indigenous population in Nepal were in the agriculture, forestry and fishing industries (table 12). A slightly higher share of non-indigenous persons (22 per cent) was employed in this industry group. A total of 44 per cent of indigenous persons and 49 per cent of non-indigenous persons employed in the proposed traditional occupations were in these industries.

► **Figure 8. Share of employment of indigenous and non-indigenous persons by economic activity, Nepal 2017-18 (%)**

A relatively large share (26.7 per cent) of indigenous persons employed in traditional occupations was in manufacturing (table 12). This may reflect the practice of traditional handicrafts by indigenous workers. A total of 7.6 per cent of indigenous persons employed in traditional occupations were in ISCO-08 minor group 731 (Handicraft workers). This represented 2.2 per cent of total indigenous employment compared to 1.8 per cent of non-indigenous employment.

A total of 43 per cent of indigenous persons (339,000) employed in traditional occupations were

skilled agricultural, forestry and fishery workers compared to 49 per cent among the non-indigenous population (table 14). More than 66 per cent of indigenous skilled agricultural workers were market-oriented animal producers, while 25 per cent were market gardeners and crop growers. The distribution of skilled agricultural workers by occupation was similar for both indigenous and non-indigenous workers, although a higher share of indigenous workers were animal producers, and a higher share of non-indigenous workers were crop growers.

► **Table 12. Indigenous persons employed in traditional and non-traditional occupations by economic activity, Nepal 2017-18**

Economic activity	Traditional occupations		Non-traditional occupations		Total	
	Thousands	%	Thousands	%	Thousands	%
Agriculture, forestry and fishing	345	43.8	208	10.7	553	20.2
Manufacturing	210	26.7	227	11.7	437	16.0
Construction	58	7.4	424	21.8	481	17.6
Market Services	68	8.7	779	40.1	848	31.0
Non-market services	105	13.3	235	12.1	340	12.4
Other activities*	1	0.1	73	3.8	74	2.7
Total	788	100.0	1,946	100.0	2,734	100.0

► **Table 13. Non-indigenous persons employed in traditional and non-traditional occupations by economic activity, Nepal 2017-18**

Economic activity	Traditional occupations		Non-traditional occupations		Total	
	Thousands	%	Thousands	%	Thousands	%
Agriculture	629	49.2	341	11.1	970	22.3
Manufacturing	306	23.9	329	10.7	635	14.6
Construction	58	4.52	438	14.3	496	11.4
Market Services	67	5.2	1,327	43	1,388	31.9
Non-market services	216	16.9	539	17.5	755	17.4
Other activities*	3	0	105	3	108	2.5
Total	1,278	100	3,074	100	4,352	100

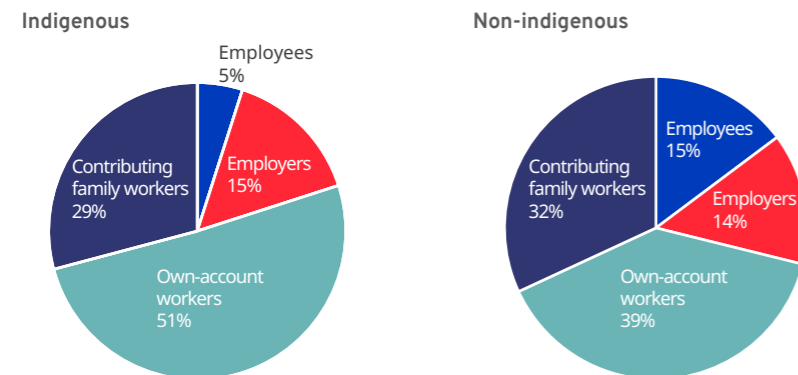
► **Table 14. Skilled agricultural, forestry and fishery workers by indigenous status and occupation, Nepal 2017-18**

ISCO-08 Group	Indigenous		Non-indigenous	
	Thousands	%	Thousands	%
611 Market Gardeners and Crop Growers	86	25.3	218	34.7
612 Animal Producers	225	66.3	357	56.9
613 Mixed Crop and Animal producers	10	3.0	213	3.4
Other Skilled Agricultural Forestry and Fishery Workers	18	5.3	310	4.9
Total	339	100	627	100

Almost 187,000 indigenous persons were classified as agricultural forestry and fishery labourers, of whom 75 per cent were crop farm labourers and only 10 per cent were livestock farm labourers. This suggests that most of the agricultural labourers were working in different types of farm establishment (such as plantations) from the skilled agricultural workers, who were mainly animal producers.

The status in employment of these workers provides further clarification. Only 5 per cent of indigenous skilled agricultural, forestry and fishery workers were employees (figure 9). There were virtually no employees among the 225,000 animal producers, while 8 per cent of the less numerous market gardeners and crop growers were employees. Among the non-indigenous population the share of employees was somewhat higher.

► **Figure 9. Skilled agricultural, forestry and fishery workers – status in employment, Nepal 2017-18**



► **Figure 10. Indigenous agricultural, forestry and fishery labourers: frequency and share of employees, Nepal 2017-18**



The distribution of status in employment of agricultural, forestry and fishery labourers was quite different, with 75 per cent classified as employees (figure 10). Among indigenous crop farm labourers, 80 per cent were employees while 12 per cent were contributing family workers, and 7 per cent were own-account workers. Among the relatively small number of indigenous livestock farm labourers, however, only 21 per cent were employees, 63 per cent were contributing family workers, and the remainder were own-account workers or employers.

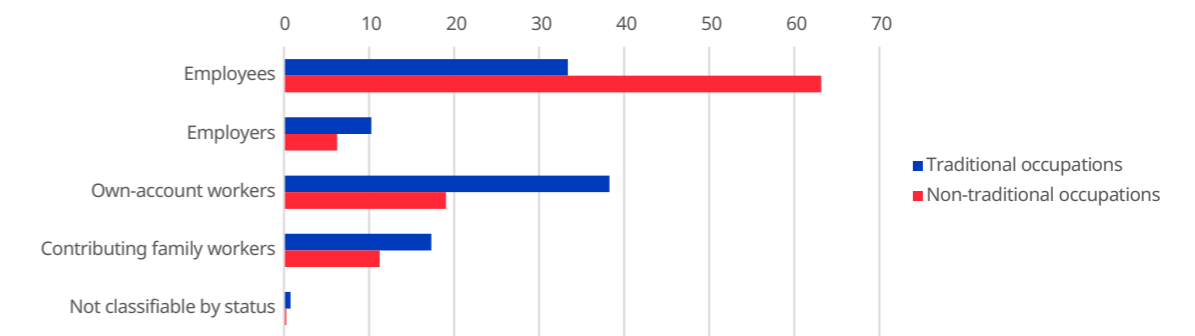
This evidence lends support to the view that agricultural, forestry and fishery labourers who are employees should be excluded from the list of

traditional occupations, while those who are independent workers or contributing family workers should be included.

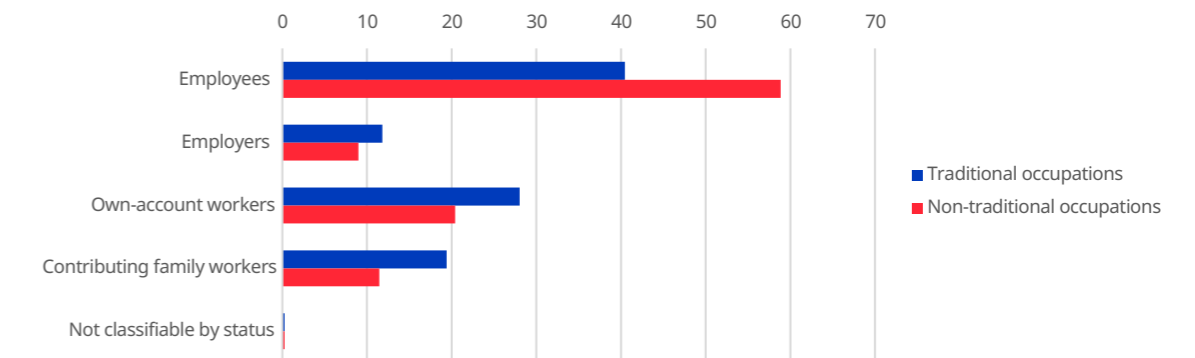
Indigenous workers employed in traditional occupations were more likely to be employers, own-account workers or contributing family workers than those in non-traditional occupations, the majority of whom were employees (figure 11).

A similar pattern could be observed among non-indigenous persons, although a higher proportion of those employed in the proposed traditional occupations were employees (figure 12). This was also the case among the non-indigenous agricultural, forestry and fishery labourers.

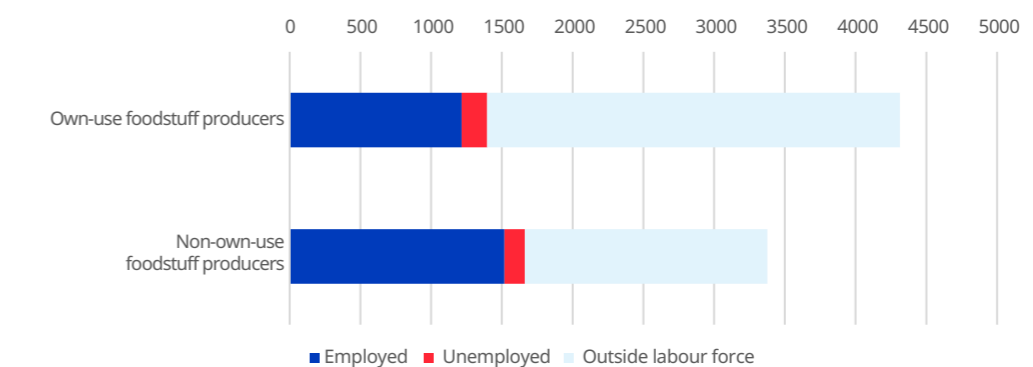
► **Figure 11. Indigenous employment in traditional and other occupations by status in employment, Nepal 2017-18 (%)**



► **Figure 12. Non-indigenous employment in traditional and other occupations by status in employment, Nepal 2017-18 (%)**



► **Figure 13. Own-use foodstuff production and labour force status, indigenous persons aged 15 and over, Nepal 2017-18 (thousands)**



In addition to work for pay or profit (employment), the Nepal 2017/18 labour force survey measured other forms of work including own-use production work (both production of goods and provision of services for own final use) and volunteer work. The questionnaire allowed subsistence foodstuff production that individuals were involved in during the 30 days prior to the survey interviews to be differentiated from other categories of production of goods for own final use, such as manufacturing household goods, fetching water, collecting firewood and construction of one's own dwelling (Nepal CBS 2019, 35-36). More than 45 per cent (4.6 million) of indigenous persons aged 15 or over were engaged in own-use foodstuff production (i.e. in subsistence activities). Of these, 39 per cent were male and 61 per cent were female. A total of 28 per cent of indigenous own-use foodstuff producers of foodstuffs were also employed in jobs for pay or profit, while 4 per cent were unemployed (actively seeking and available for employment) and 68 per cent were outside the labour force. A significantly higher share of own-use foodstuff producers was outside the labour force by comparison with those not producing foodstuffs for their own use.

Large numbers of the non-indigenous population (7.8 million, or 42 per cent) were also engaged in subsistence foodstuff production, of whom 69 per cent were outside the labour force. The distributions of the indigenous and non-indigenous populations with respect to own-use foodstuff production were therefore quite similar both in the total numbers and labour market participation.

With respect to provision of services for own final use, including household chores and provision of care and assistance to family members, the survey showed that out of the whole population aged 15 or over (indigenous and non-indigenous), 90.7 per cent of females participated while only 47.2 per cent of males participated (Nepal CBS 2019, 35-36). While we have not compiled separate estimates for the indigenous population, this indicates that the inclusion of own-use provision of services among traditional occupations would result in a very high proportion of indigenous women and men being counted as practising a traditional occupation. Inclusion of own-use provision of services should therefore require measurement of whether traditional knowledge is used

or passed on to others in the performance of these activities.

A total of 12.6 per cent of employed indigenous persons were in jobs in which traditional knowledge could be expected to influence biodiversity and climate change, while the 45 per cent or 4.3 million own-use producers of foodstuffs could also be expected to use their traditional knowledge to this effect.

Almost 1 per cent of employed indigenous persons were in managerial occupations, compared to 1.4 per cent among the non-indigenous population. With respect to education, 121,775 indigenous persons were employed as teachers, representing 4.45 per cent of indigenous employment. This compared with 8.1 per cent among the non-indigenous population.

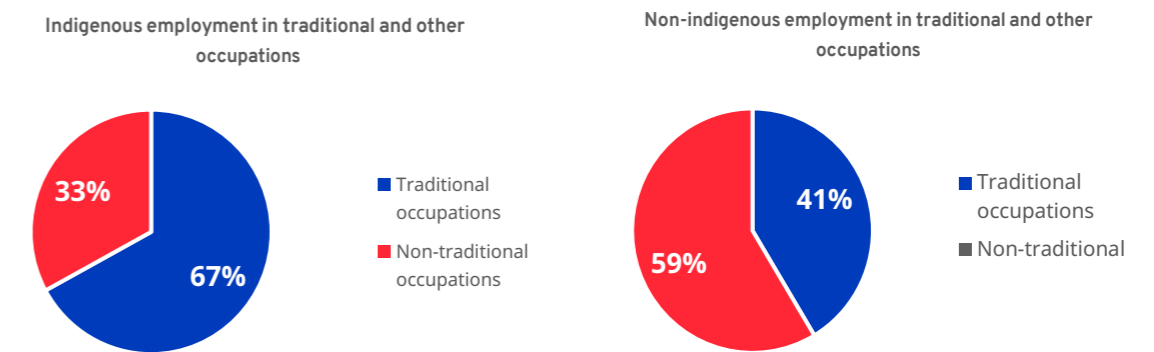
8.4. Lao People's Democratic Republic.

In the 2017 labour force survey in the Lao People's Democratic Republic (Lao PDR), all household members were asked a question on "ethnic origin". A total of 29,902 responses were assigned to ethnic groups considered to be indigenous, representing 3,127,168 indigenous persons in the weighted estimates, or 45.5 per cent of the total population. All ethnicities were considered indigenous except Lao. These groups are also referred to as ethnic minorities in the statistical report of the country and include Khmou, Hmong, Phouthay, Tai, Makong, Katang, Lue, Akha and other ethnic minorities.²

The labour market participation rate for indigenous persons was relatively low, with 532,217 or 27 per cent in employment for pay or profit, 3 per cent unemployed and 70 per cent outside the labour force. Among the non-indigenous population, 44 per cent were employed, 5 per cent were unemployed, and 52 per cent were outside the labour force. It may be assumed that a large proportion of those outside the labour force were engaged in subsistence activity, but the survey did not include a direct measure of this.

Among the employed population aged 15 and over, 67 per cent of those identified as indigenous were engaged in occupations in their main job that are included on the proposed list of traditional occupations (figure 14). A significantly lower proportion (41 per cent) of employed non-indigenous persons were engaged in these occupations.

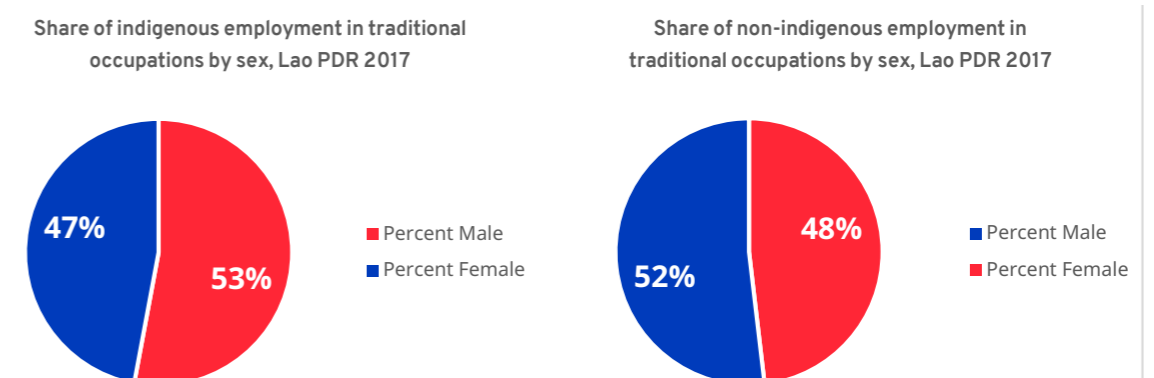
► **Figure 14. Share of indigenous and non-indigenous employment in traditional and other occupations, Lao PDR 2017.**



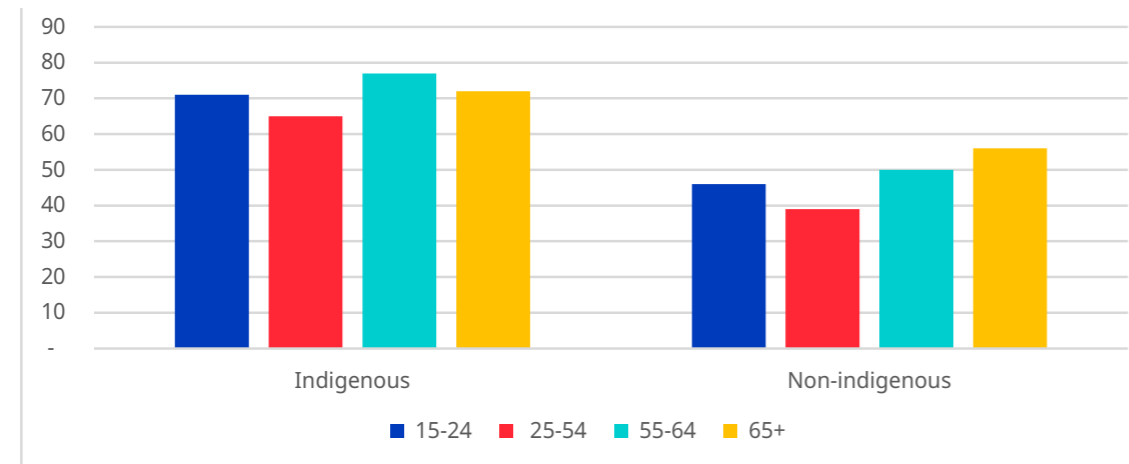
More indigenous men than women were employed in traditional occupations (53 per cent men compared with 47 per cent women), as shown in figure 15. Among the non-indigenous population, the distribution by sex was the opposite, with 48 per cent male and 52 per cent female. These differences are relatively small, however, and may not be of great significance.

A total of 71 per cent of the indigenous population aged 15–24 in the Lao PDR were employed in traditional occupations, compared to 65 per cent of those aged 25–49, 77 per cent of those aged 55–64-year-olds, and 72 per cent of those aged 65 or more (figure 16). The pattern of distribution by age among the non-indigenous population was not markedly different, with 46 per cent of 15–24 year-olds and 39 per cent of those aged 25–49, 50 per cent of 55–64-year-olds, and 56 per cent of those aged 65 or more employed in the proposed traditional occupations.

► **Figure 15. Share of indigenous and non-indigenous employment in traditional occupations by sex, Lao PDR 2017**



² ILO's understanding based on IFAD, *Country Technical Note on Indigenous Peoples' Issues, Lao People's Democratic Republic*, 2012.

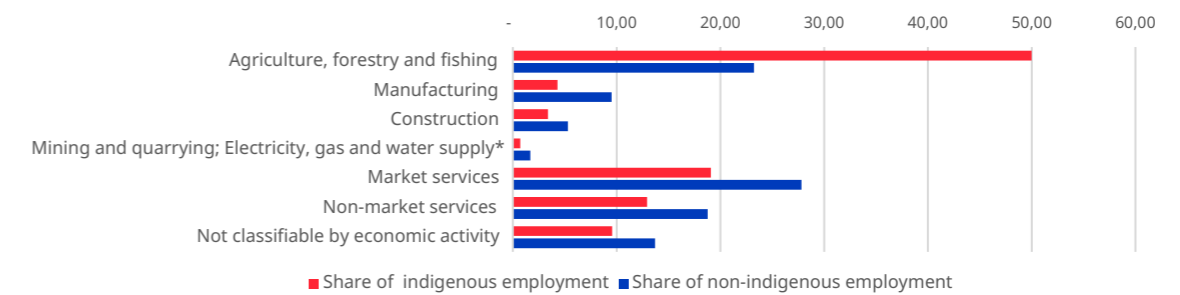
► **Figure 16. Share of employed indigenous and non-indigenous persons in traditional occupations by age group, Lao PDR 2017 (%)**► **Table 15. Indigenous persons employed in traditional and non-traditional occupations by economic activity, Lao PDR 2017**

	Traditional occupations		Non-traditional occupations		Total (thousands)	%
	Thousands	%	Thousands	%		
Agriculture, forestry and fishing	254	71.2	12	7.0	266	50.0
Manufacturing	11	3.1	12	6.8	23	4.3
Construction	3	0.9	15	8.5	18	3.4
Mining, quarrying; Electricity, gas and water supply	0*	0.1*	4	2.0	4	0.7
Market Services	45	12.5	57	32.4	102	19.1
Non-market services	11	3.2	58	32.8	69	12.9
Not classifiable by economic activity	33	9.1	18	10.5	51	9.6
Total	357	100.0	175	100.0	532	100.0

*Unreliable estimate due to sampling error.

Looking at the economic activities in which indigenous persons were employed, 50 per cent of the employed indigenous population in the Lao PDR were in the agriculture, forestry and fishery industries (table 15, figure 17). This compared with 23 per cent of the non-indigenous population. A total of 71 per cent of indigenous persons employed in traditional occupations were in this industry category.

In all industry groups other than agriculture, forestry and fishing, indigenous employment was significantly lower than non-indigenous, both in absolute numbers of employed persons, and as a share of employment in each group (Figure 17).

► **Figure 17. Share of employment of indigenous and non-indigenous persons by economic activity, Lao PDR 2017 (%)**► **Table 16. Non-indigenous persons employed in traditional and non-traditional occupations by economic activity, Lao PDR 2017**

	Traditional occupations		Non-traditional occupations		Total (thousands)	%
	Thousands	%	Thousands	%		
Agriculture, forestry and fishing	269	53.0	16	2.2	285	23.2
Manufacturing	56	11.1	60	8.4	117	9.5
Construction	19	3.8	46	6.4	65	5.3
Mining, quarrying; Electricity, gas and water supply	2*	0.3*	19	2.7	21	1.7
Market Services	48	9.4	293	40.8	341	27.8
Non-market services	30	5.9	200	27.9	230	18.8
Not classifiable by economic activity	84	16.5	84	11.7	168	13.7
Total	507	100.0	718	100.0	1,226	100.0

*Unreliable estimate due to sampling error.

It is also notable that 92 per cent of indigenous persons employed in traditional occupations in the Lao PDR were classified by occupation as skilled agricultural forestry and fishery workers. This implies that approximately 20 per cent of those classified in these occupations were in classified industries other than agriculture, forestry and fishing, since only 71 per cent of those in traditional occupations were employed in this industry group. This may in part be explained by the relatively large shares of workers in traditional occupations whose responses could not be classified by economic activity (9.1 per cent). Others may have been classified under retail

and wholesale trade (market services) if responses to industry questions referred to selling farm produce.

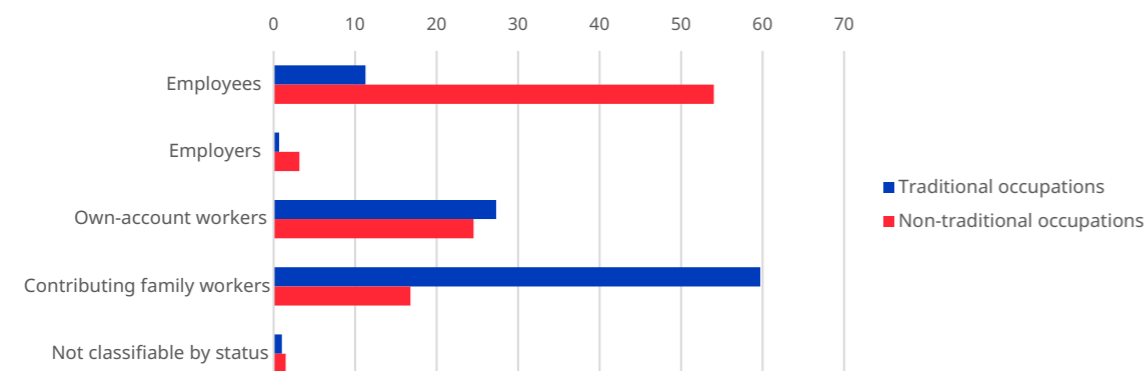
In contrast to Ecuador and Viet Nam, very small numbers of workers were classified in the Lao PDR as agricultural, forestry and fishery labourers. This suggests that the procedures and job titles used in occupation coding may not have distinguished between skilled and elementary agricultural workers. Some elementary workers may therefore have been classified as skilled agricultural workers. This is a common problem in occupation coding since the terms used to describe agricultural jobs frequently

do not differentiate between skilled and elementary workers. It may explain, at least in part, the higher share of skilled agricultural workers among those employed in traditional occupations in the Lao PDR than in Ecuador and Nepal.

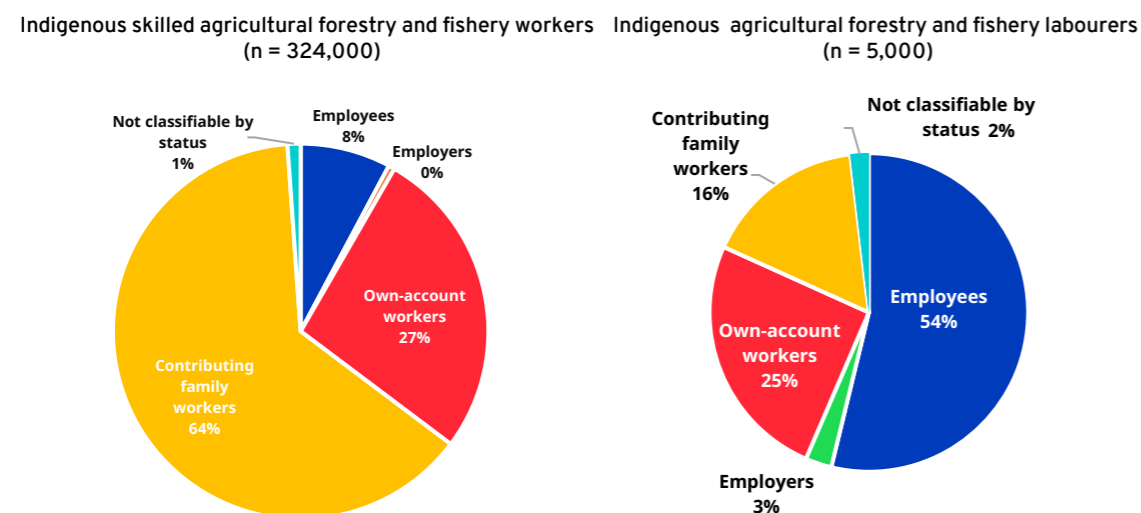
However, the classification of workers in selected occupations by status in employment tells a different story that sheds light on this issue and on the extent to which indigenous workers in agricultural occupations may use and develop their traditional knowledge as part of their employment. While 54

per cent of indigenous workers in non-traditional occupations were employees, only 11 per cent of those employed in traditional occupations were employees (figure 18). A total of 27 per cent of those employed in traditional occupations were own-account workers and almost 60 per cent were contributing family workers, meaning that 87 per cent were working in a business owned and operated by themselves or a close family member. The distribution among the non-indigenous population was similar.

► **Figure 18. Indigenous employment in traditional and other occupations by status in employment, Lao PDR 2017 (%)**



► **Figure 19. Indigenous skilled agricultural forestry and fishery workers & Indigenous agricultural forestry and fishery workers - status in employment, Lao PDR 2017**



►► [...] it is possible to compile statistically robust estimates from surveys such as labour force surveys for the bulk of the indicators related to the practice of traditional occupations proposed in this paper.

Among the 324,000 indigenous skilled agricultural forestry and fishery workers, less than 8 per cent were employees, 634 per cent were contributing family workers, 27 per cent were own-account workers and less than 1 per cent were employers (figure 19). A total of 91 per cent were therefore working as own-account workers or as contributing family workers on a small family farm without regular employees. In contrast, 54 per cent of the 5,000 indigenous persons classified as agricultural forestry and fishery labourers were employees.

As we have already noted, contributing family workers in agricultural holdings are likely to be performing or learning to perform a wide range of tasks and duties on the farm, and to be using, passing on, or gaining indigenous knowledge and skills where these exist. This suggests they were correctly classified as skilled workers, and if using or developing traditional knowledge and skills, appropriately classified as practising traditional occupations. Bearing in mind the relatively small numbers of agricultural employees, it is unlikely that any misclassification of occupation between the skilled workers and labourers would have a significant impact on estimates of the practice of traditional occupations.

Moving on to the remaining supplementary indicators, 62 per cent of employed indigenous persons in the Lao PDR were in jobs in which traditional knowledge could be expected to influence biodiversity and climate change. Almost all of these were skilled agricultural workers. More than 6 per cent of employed indigenous persons were in managerial occupations, compared to 12.7 per cent among non-indigenous persons. With respect to education, 4 per cent of indigenous persons in employment were teachers, compared with 8.1 per cent among non-indigenous persons.

8.5. What does the microdata analysis tell us?

It can be concluded from the analysis of microdata for the selected countries that it is possible to compile statistically robust estimates from surveys such as labour force surveys for the bulk of the indicators related to the practice of traditional occupations proposed in this paper. This is likely to hold true at least in countries where indigenous peoples form a relatively large share of the population, and where a valid indigenous identifier is included in the survey schedule. In the case of countries with relatively small indigenous populations, or when indigenous populations are distributed unevenly, the sample would need to be designed to ensure that the share of indigenous persons is sufficiently large and representative of the range of indigenous peoples that exist in the country. Alternatively, such data could be compiled from census records or from special purpose surveys. In the absence of information about whether indigenous knowledge is used in performing the work, however, the extent to which these indicators provide useful and meaningful information on the practice of traditional occupations is less clear.

The estimates on the share of indigenous persons employed in managerial occupations and in teaching occupations are useful and relatively easy to compile. They provide information on the position of indigenous peoples in society compared to the non-indigenous population. They may support assessment of the extent to which indigenous peoples may be able to use their traditional knowledge in decision-making and pass it on to future generations as part of their employment. These indicators, however, do not allow a direct assessment of the practice of traditional occupations, or of the extent to which indigenous persons employed in these occupations do, in reality, use or pass on their traditional knowledge.

►► The key issues that remain unclear based on the analysis of microdata are whether indigenous persons employed in the proposed list of traditional occupations do, in reality, use and maintain their traditional knowledge and skills; and whether there are other occupations in which traditional knowledge and skills are used

The estimates compiled for indigenous persons employed in occupations where knowledge of traditional culture and practices may positively influence biodiversity and/or climate change were also relatively easy to produce. However, these estimates were not always significantly different from those on the prevalence of indigenous persons employed in traditional occupations, on account of the high contribution of skilled agricultural, forestry and fishery workers to both indicators.

It was possible to produce estimates of the prevalence of indigenous subsistence foodstuff producers in both Ecuador and Nepal. In Ecuador, these workers were counted among the employed, and workers whose main activity was subsistence foodstuff production could be identified by their occupation code as subsistence farmers. However, workers engaged in subsistence foodstuff production may also be coded to other categories in ISCO, such as agricultural labourers, and would therefore be excluded from the measurement of subsistence foodstuff production. Measuring subsistence foodstuff producers based on occupation alone may therefore have limitations. In Nepal, it was possible to identify these workers based on questions on subsistence foodstuff production and to provide data on the share of these workers who were also in employment for pay or profit.

The compilation of data on the economic activities in which indigenous persons are employed provided some useful insights. In many cases a high proportion of employed indigenous persons worked in agriculture compared to non-indigenous persons, suggesting that their indigenous knowledge may be used and maintained as part of their employment. However, the data on employment in agriculture does not differentiate between skilled agricultural workers and elementary workers who may not be using traditional knowledge.

The data on the proposed traditional occupations showed that various types of skilled agricultural workers were the most common occupations among the proposed traditional occupations. Comparison of the data for the three countries analysed also points to the difficulties and inconsistencies encountered when matching responses to questions on occupation and economic activity with categories in a classification system. This is particularly the case when there is a need to distinguish between skilled and elementary agricultural workers (ILO 2012, 47-48) but may also impact on the quality of data on economic activity for agriculture.

In defining the proposed set of traditional occupations used in the microdata analysis, there was an underlying assumption that workers classified in ISCO-08 major group 6 (Skilled agricultural forestry and fishery workers) are indeed skilled workers who would be able to use indigenous knowledge as part of the practice of their occupations. On the other hand, it was assumed that workers classified as agricultural, forestry and fishery labourers in major group 9 (Elementary workers) would not be expected to work in roles that require high levels of skill and knowledge. Indigenous persons employed as agricultural labourers would not, therefore, be in a position to put their indigenous knowledge into practice.

The different national practices and difficulties in assigning survey responses to each of these groups mean, however, that some agricultural jobs may be coded as skilled agricultural workers or as agricultural labourers inconsistently and somewhat arbitrarily, depending on the job titles given in response to the survey question, or on status in employment. In some cases, large numbers of contributing family workers and even own-account workers were classified as agricultural labourers. This could have a significant impact on the measurement of the practice of traditional occupations.

As we have already noted, indigenous agricultural workers who are classified by status in employment as employers, independent workers without employees (own-account workers) or contributing family workers could all be expected to be performing or learning a wide range of tasks, and using or acquiring traditional indigenous knowledge and skills. This would also apply in forestry and fishing, even though the numbers of workers are much smaller. Our analysis of data for Ecuador, Nepal and the Lao PDR supports the idea that indigenous persons with such status in employment in jobs classified as agricultural, forestry and fishery labourers (ISCO-08 sub-major group 92) should be counted as workers in traditional occupations. It would also make sense to include this group in the proposed indicator for indigenous persons employed in occupations where knowledge of traditional culture and practices may positively influence biodiversity and/or climate change.

Indigenous employees and dependent contractors working as agricultural, forestry and fishery labourers (ISCO-08 sub-major group 92) should not be counted as practising traditional occupations, however. This would result in large numbers of elementary workers on plantations and in similar settings, who would not have the opportunity to use or acquire traditional knowledge and skills, being counted as practising traditional occupations. While this adds complexity to the process of identifying and compiling estimates of traditional occupations, it offers a pragmatic solution to dealing with some of the difficulties and vagaries of assigning

occupation codes to survey responses for workers in agriculture, forestry and fishing.

The key issues that remain unclear based on the analysis of microdata are whether indigenous persons employed in the proposed list of traditional occupations do, in reality, use and maintain their traditional knowledge and skills; and whether there are other occupations in which traditional knowledge and skills are used. It seems likely that the large numbers of indigenous skilled agricultural workers would use and maintain their traditional knowledge. However, the characteristics and distributions of indigenous and non-indigenous workers in these occupations and in the other proposed traditional occupations were frequently quite similar. This leaves some doubt as to whether those identified as indigenous practise these occupations in a different way from those not identified as indigenous. In the case of handicraft workers in Nepal, the slightly larger share of workers among indigenous compared with non-indigenous workers might suggest the practice of traditional handicrafts, but the difference was not sufficiently large to be conclusive.

In conclusion, many of the proposed indicators can provide useful and interesting estimates. Inferences and policy recommendations based on the indicators related to the prevalence of employment in traditional occupations, however, should be made with caution in the absence of direct evidence of the extent to which indigenous workers in these occupations do use and maintain traditional knowledge and skills.



9

Conclusions, future work and next steps

►► [...] comprehensive official statistics on traditional occupations are rarely available, partly owing to the continuing poor visibility of indigenous and tribal peoples in official statistics, and partly owing to the absence of an agreed definition of traditional occupations for statistical purposes.

9.1. Conclusions

The practice of traditional occupations is essential to support the retention and further development of traditional indigenous and tribal knowledge, and to promote the application of this knowledge to the protection of biodiversity and mitigation of climate change. Statistics on the practice of traditional occupations are needed to help researchers, policymakers and the indigenous and tribal peoples themselves develop a better understanding of the work and livelihood activities of indigenous peoples and to provide objective information on their value for society as a whole. This would inform the development of appropriate policies in support of indigenous peoples' livelihoods and local economies and contribute to monitoring global indicators and targets on biodiversity. However, comprehensive official statistics on traditional occupations are rarely available, partly owing to the continuing poor visibility of indigenous and tribal peoples in official statistics, and partly owing to the absence of an agreed definition of traditional occupations for statistical purposes. In this paper we have tried to address both of these issues.

9.1.1. Visibility of indigenous and tribal peoples in official statistics

To make indigenous and tribal peoples visible in official statistics, appropriate questions need to be asked in relevant statistical data sources, such as censuses and surveys. The question(s) used should determine whether an individual belongs to a group

that is identified as indigenous or tribal by government or by expert organizations such as the IWGIA. To determine whether an individual belongs to such a group, she or he should have an ancestral connection to the group and self-identify as a member of that group. The most appropriate approach to the design of questions to identify such people will vary between countries and regions depending on cultural perceptions about concepts of ethnicity and indigeneity, and the number and nature of the ethnic groups that need to be identified.

In the Americas and Oceania, questions that target indigenous peoples, or that combine general questions on ethnic characteristics with follow-up questions targeting indigenous peoples, have been shown to be effective – especially if they focus on self-identification. Such questions are widely used in censuses in these regions and are increasingly also being included in household sample surveys. In Africa and Asia, when questions on ethnicity or race are asked in censuses and surveys, they frequently do not focus on identification with a particular group but rather on ancestry or race. Commonly used questions that simply ask for ethnicity, without further explanation, may result in a response that is more related to ancestry than to a person's identification with a particular ethnic group. The development and testing of questions that target identification with specific ethnic or tribal groups of concern might therefore be an effective way to improve the visibility and quality of information about indigenous and tribal peoples in these regions.

9.1.2. Definition and measurement of traditional occupations

Traditional occupations are generally understood as the activities that indigenous and tribal peoples have traditionally undertaken to provide for their subsistence needs and livelihoods. The practice of these occupations relies on intimate knowledge of ancestral lands, the environment, and natural resources passed on from generation to generation. These occupations and the skills and knowledge underlying them are not static. They have evolved over time and will continue to do so. The concept of traditional occupations to be measured in statistics should not therefore be limited to the economic and cultural activities that indigenous peoples have traditionally undertaken in the past, but should also embrace other occupations in which indigenous peoples are using their traditional knowledge today and will do so in the future, for example in life sciences, climate research and tourism.

The concept of work adopted in 2013 by the 19th ICLS for the purposes of official statistics is very broad and includes any activity performed by persons of any sex and age to produce goods or to provide services for use by others or for own use. Traditional occupations may be practised in any of the forms of work recognized in official labour statistics, including own-use production work, employment for pay or profit, unpaid trainee work, volunteer work, and other work activities.

The following definition of traditional occupations is proposed for statistical purposes:

Traditional occupations are occupations in which indigenous knowledge, cultural practices, innovations and technologies may influence the way the work is performed, if the work is performed by a person who identifies as belonging to an indigenous or tribal group.

Indigenous knowledge refers to the constantly evolving information, skills, practices, science and technology passed from generation to generation within an indigenous or tribal group. The work performed in traditional occupations embraces production of goods and services for own use and other forms of unpaid work including volunteer work and unpaid trainee work, as well as employment for pay or profit.

For the operational measurement of traditional occupations, it is necessary to reflect this definition in terms of a set of occupations defined in a classification of occupations used for the compilation of official labour statistics. In Chapter 6, we have identified the groups in the current version of ISCO that we believe should be considered for inclusion. These groups are listed below in Annex 1. This list could be used to identify the relevant occupations in national datasets, especially when ISCO-08 is used directly. National occupation classification schemes, however, may frequently identify specific occupations that fit within the definition traditional occupations that are not separately identified in ISCO. It would be preferable in such cases, therefore, to identify the groups in the national classification that fit the definition of traditional occupations, using the agreed list of ISCO groups as guidance.

It is important to recognize, however, that this approach has limitations. It relies on the assumption that indigenous persons working in the selected occupations will use their traditional knowledge in performing their work, while those working in other occupations will not. It should therefore be seen as a proxy but nevertheless valuable measure.

A more direct measure would require the collection of information on whether and how indigenous knowledge is used in the performance of work, including in employment, own-use production of goods, and own-use provision of services. It is likely that significant development and testing would be required to devise a sufficiently reliable method of collecting this type of information – but this should be a priority. Once such a measure is available, it could potentially be used to refine the list of traditional occupations to be used in data collections when it is not feasible to include a direct measure.

Statistics classified by occupation may also be limited to the type of work performed in the main job in which a person is employed for pay or profit. The practice of traditional occupations in secondary jobs and in own-use production work would be excluded if measurement is restricted to the main job. When statistics on own-use production of goods are compiled, they generally include information about the nature of the work performed, and assumptions can be made about whether the work performed would involve the use or sharing of indigenous knowledge.

Since very large shares of both indigenous and non-indigenous populations are involved in own-use

provision of services, it would not be appropriate to assume that any indigenous person who performs household chores, prepares meals and cares for children is necessarily using or passing on indigenous knowledge. We have proposed, therefore, that in the unpaid provision of services to one's own household and family members (own-use provision of services), activities such as childcare and preparation of meals should only be considered as traditional occupations if we have evidence that traditional knowledge is used or passed on to others (see section 5.2 above). Without such evidence, virtually all women and a large share of men who identify as indigenous would be counted as practising a traditional occupation. Almost all women and many men provide some services for consumption by members of their own household, such as caring for children, domestic cleaning and preparation of meals.

However, indigenous peoples have themselves identified these activities as important traditional occupations that play an important part in passing on traditional knowledge from generation to generation. Moreover, we have proposed the inclusion of indigenous persons employed as cooks, chefs and childcare workers as part of the statistical measurement of traditional occupations. The identification of sources and the development of methods to measure the extent to which indigenous knowledge is used and passed on to others in the own-use provision of services should therefore be a priority.

9.1.3. Existing and potential data sources

The current international standards and classification systems used for labour statistics allow for the compilation of statistics on occupations in which indigenous peoples are considered to use their traditional knowledge when the work is performed in employment for pay or profit, or when the work is performed in other forms of work such as own-use production work (including subsistence activity) and volunteer work. These standards allow the statistics to be disaggregated to provide information about the circumstances in which traditional occupations are practised, and the working conditions experienced by indigenous and tribal peoples compared to non-indigenous peoples.

In principle, it is possible to compile statistics on traditional occupations when information about the identification of persons or households and their

occupations or economic activities are available in the same source. For those practising traditional occupations in employment (i.e. work for pay or profit), this information is likely to be able to be compiled from population censuses, especially in the Americas and Oceania. This information may also be available from the regularly conducted labour force surveys in these regions.

The censuses in these regions can provide more detailed information, for small population groups and local areas, as well as for small occupations, but are conducted in most countries only once every ten years (some countries conduct a census every five years). Labour force surveys (LFS) are conducted in these regions at least annually. Since they are sample surveys, LFS can provide less detail than censuses on both occupation and on specific indigenous peoples. Indigenous identifiers are increasingly being included in LFS in the Americas and Oceania. Both censuses and LFS can be used to measure changes in the practice of traditional occupations over time.

In Africa and Asia, data on indigenous peoples are less likely to be available from national censuses, since questions on ethnicity may not be asked, or may not target ethnic groups considered to be indigenous peoples within the meaning of UNDRIP. Data on ethnicity may be available from some surveys in these regions, for example in Demographic and Health Surveys (DHS), and in some cases this may allow the identification of indigenous peoples. However, DHS may not necessarily include data on occupation. Data that could allow the identification of indigenous peoples are rarely available from LFS in Africa and only to a limited extent in Asia.

While there are valid concerns that it will be difficult to compile accurate estimates of the practice of traditional occupations from LFS data owing to limitations imposed by sample size and design, we have shown in Chapter 8 that this is possible at least in some Latin American and Asian countries with relatively large indigenous populations. The analysis of microdata reported in Chapter 8 has also demonstrated the feasibility and usefulness of statistics on some of the supplementary indicators proposed in this paper, including:

- indigenous persons employed as teachers;
- indigenous persons employed in managerial occupations;

- indigenous persons employed in agriculture, forestry and fishing.

Complete measurement of the practice of traditional occupations also requires their identification in own-use production work. Statistics on own-use subsistence foodstuff production are likely to become available in both LFS and census data in many of the countries where this is an important means of livelihood, as the most recent international standards and recommendations on labour statistics are gradually implemented in national statistical programmes. Statistics on own-use production of other goods may also become available from LFS, but on a less frequent basis.

In countries that are still compiling labour statistics based on the resolution concerning statistics of the economically active population, employment, unemployment and underemployment adopted in 1982 by the 13th ICLS, those whose main activity is subsistence foodstuff production can generally be identified based on the occupation code, since ISCO-08 and ISCO-88 both provide separate categories for subsistence farmers, fishers, hunters and gatherers. However, statistics collected on this basis would not necessarily be equivalent to estimates provided on the basis of the 19th ICLS, and would exclude any subsistence workers coded as agricultural, fishery and related labourers in ISCO-88 and ISCO-08 major group 9 (Elementary workers). Moreover, the 13th ICLS standards provide a narrower framework for work statistics overall. It should not, therefore, be assumed that statistics on subsistence foodstuff production based on occupation only are comparable with those based on the 19th ICLS standards – or that the choice does not matter.

Measurement of the practice of traditional occupations in own-use provision of services is more challenging. It would require the inclusion of questions in a single survey to measure both own-use provision of services, such as food preparation and childcare by indigenous women and men, and whether traditional knowledge was being used or passed on to others during the performance of these activities. Statistics on own-use provision of services are generally available in official statistics only from infrequently conducted time-use surveys. However, time-use surveys are complex, and have small samples which could make it difficult to use them to compile statistics on small and geographically concentrated indigenous populations. Many

countries do not conduct time-use surveys on a regular basis, if at all.

The ILO does have an ongoing project for the development of light time-use modules for attachment to LFS. Surveys including these modules could potentially be used to measure own-use provision of services among indigenous peoples. However, the possibility of adding additional questions to these modules is limited, due primarily to considerations of respondent burden and interview length.

A better approach might to develop methods to measure the practice of traditional occupations in own-use production of services in special purpose surveys targeting indigenous peoples. These surveys could potentially investigate the provision of services for own use among indigenous peoples in more depth than surveys targeting the entire population, and could also be used to provide both quantitative and qualitative data on the practice of traditional occupations by specific indigenous peoples. They could include questions to identify the extent to which indigenous knowledge is used and passed on to others in both employment and own-use production of goods and services. To the extent possible, the content of such surveys should be harmonized with surveys of the whole population, such as the labour force survey, especially with respect to core demographic and labour market variables.

Other sources of data, including agricultural censuses and surveys, some types of informal sector surveys, administrative records and others, could also be used as supplementary sources of information. In addition, resources based on community-based monitoring and information systems, such as the Indigenous Navigator or the [case studies](#) submitted to the CBD on customary sustainable use (FPP 2011), may serve as complementary sources of information on traditional occupations and traditional practices.

9.2. Future work and next steps

In this paper we have sought to describe the concepts needed and the methods that might be used to compile statistics on the practice of traditional occupations and related indicators. We have also tested the feasibility of compiling estimates related to these indicators based on microdata from three national labour force surveys. These are only the

first steps in what is likely to be a lengthy process of development. Further testing and development of the methods proposed will be needed at both national and international levels. It would also be useful to compare the results obtained using different methods and sources, and to assess the differences in the estimates produced.

9.2.1. Broad streams of activity to promote the measurement of the practice of traditional occupations

If progress is to be made, there will need to be collaboration, sharing of information and coordination between the agencies at national and international levels involved in the development of relevant global indicator frameworks and SDG monitoring. This will require the involvement of various international and national agencies responsible for social, labour and environmental statistics, climate policy, environmental affairs and indigenous and tribal affairs – and of course the indigenous and tribal communities themselves. It will be critically important to raise awareness within these agencies, and particularly within national statistical offices, of the need for statistics on the practice of traditional occupations and the retention of indigenous knowledge to inform the development of social and environmental policies, and of their relevance to the sustainable development goals and the CBD biodiversity indicators.

At national level, there will be a need to adapt the list proposed in this paper of occupations in which indigenous persons are likely to use or pass on indigenous knowledge to reflect national circumstances. Statistical estimates of the practice of traditional occupations and related indicators could then be compiled from existing sources of data such as the population census and LFS. It would also be useful to compare the results obtained using different methods and sources, and to assess the differences in the estimates produced.

Since estimates based on occupation alone will inevitably have limitations, there is a need, in parallel, to develop and test methods to directly measure the extent to which indigenous peoples use, retain and develop their indigenous knowledge while carrying out their work. Such testing could be undertaken as part of the development of statistical surveys targeting indigenous populations, as well as through

community-based monitoring initiatives such as the Indigenous Navigator, and through activities proposed by the working group on indicators of the International Indigenous Forum on Biodiversity. In countries with large indigenous populations and ongoing LFS, the testing programmes used to update the LFS could also be used to develop methods to assess the extent of use of indigenous knowledge in employment and own-use foodstuff production. The results of the various testing activities could be used to design questions for inclusion in other surveys and to refine and improve the categories to be included in the list of traditional occupations, at national and international levels, when a direct measure of the use of indigenous knowledge is not available.

In many regions, especially in Africa and Asia, there is also a need to improve the visibility and quality of information about indigenous and tribal peoples. This will be an essential requirement for compiling statistics on the practice of traditional occupations, as well as for providing more comprehensive and reliable information about the living conditions, size and composition of indigenous populations, and their situation in relation to the non-indigenous populations. This will require the development and testing of questions that target identification with specific ethnic or tribal groups of concern. Since many indigenous populations are relatively small and/or located in geographically concentrated areas, the population census will be one of the most important sources of statistics on indigenous and tribal peoples.

In summary, the following broad streams of activity to promote the measurement of the practice of traditional occupations could be envisaged:

1. Promote awareness of the need for statistics on the practice of traditional occupations, and of the steps that need to be taken to compile and disseminate them, and establish mechanisms to coordinate and share information.
2. Adapt the list of traditional occupations proposed in this paper to reflect national circumstances and differences between national classifications and ISCO, and compile estimates of practice of traditional occupations and related indicators from existing sources such as the population census and LFS.

3. Develop and test methods to directly measure the extent to which indigenous peoples use, retain and develop their indigenous knowledge while carrying out their work, in employment, own-use production of goods and own-use production of services.
4. Develop and test methods to improve the visibility and quality of information about indigenous and tribal peoples, in countries where methods for identification in censuses and surveys are currently inadequate.

9.2.2. Specific actions to promote the development of statistics on traditional occupations

The ILO, as the international agency responsible for both the Indigenous and Tribal Peoples Convention, 1989 (No. 169), and for the international coordination and development of labour statistics, has a key role both in promoting awareness of the need for statistics on traditional occupations and coordinating activities in pursuit of compiling such statistics. Several specific activities that could be initiated or coordinated by the ILO are suggested within each of the broad streams of activity.

Promote awareness and coordination

Specific actions that the ILO could undertake to promote both awareness of and facilitate mechanisms for coordination and information-sharing include the following:

- Establish a small technical group comprising statisticians and specialists in indigenous and tribal affairs from relevant international agencies, indigenous experts, NGOs and interested national statistical offices to support the ILO in promoting and coordinating the development of statistics on indigenous and tribal peoples, including the practice of traditional occupations, and to share information on initiatives and good practice.
- Present information and promote discussion of the need for statistics on traditional occupations at the 21st ICLS, which is expected to take place in October 2023.

- Present the proposals and updates on progress at relevant policy-oriented meetings and working groups such as those in the CBD context.

Adapt the list of traditional occupations and compile estimates from existing sources

To test and promote the compilation of estimates of the practice of traditional occupations and associated indicators on the basis of existing census or LFS data, the ILO could identify and support countries that have an interest in doing this with suitable datasets. The requirements would be the inclusion of a useable indigenous identifier and occupation data coded to the 4-digit level of ISCO-08, or an equivalent level of detail in a national classification. Support and coordination could be provided as needed, through the ILO Department of Statistics and members of the proposed technical group. The results could be shared with the technical group and/or presented at the 21st ICLS and the other forums discussed above. The analysis at national level would need to be completed by mid-2023.

Develop and test methods to directly measure the use of indigenous knowledge

The development and testing of methods to directly measure the use of indigenous knowledge in employment and own-use production work is a long-term goal that might best be undertaken following the establishment of a technical group, whose members would be aware of surveys under development that are targeting indigenous and tribal populations. Decisions to include information on the use of indigenous knowledge would need to be made in the early stages of survey design to allow sufficient opportunity for both cognitive and field testing of questions. The ILO Department of Statistics may also be able to identify opportunities for testing of these concepts in LFS testing programmes, as part of its wider activities to support countries in the implementation of recommendations and resolutions of the 19th and 20th ICLS.

While opportunities to undertake this type of testing may be identified during 2022 and 2023, it would be appropriate to invite participants at the 20th ICLS to identify opportunities to include the direct measurement of the use of indigenous knowledge in the performance of work in national household survey programmes.

Develop and test methods to improve the visibility and quality of information about indigenous and tribal peoples

The ILO should work with agencies responsible for international coordination of censuses to improve the quality of indigenous identification in the 2030 international round of censuses in countries where

this is currently lacking, in particular the United Nations Statistics Division (UNSD) and the regional commissions in Africa and Asia. There should be a focus on the need to measure the sense of belonging to one or more specific indigenous or tribal groups, rather than broadly defined notions of ethnicity or ancestry.

Proposals to improve advice on the enumeration of indigenous and tribal populations should be put onto the agenda of relevant expert groups and working groups established by the UNSD and other agencies to revise the UN Principles and Recommendations for Population and Housing Censuses. Since it is likely that Revision 4 of these recommendations will be submitted for adoption by the UN Statistical Commission in early 2025, this activity should start as soon as possible and be completed by mid- to late 2024.

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► Annexes

Annex 1: ISCO-08 groups to be used for operational measurement of traditional occupations when information on the use of indigenous knowledge at work is not directly available.

Unit groups

The following ISCO-08 unit groups were used for the compilation of experimental estimates described in Chapter 8, and are recommended for direct use or as guidance when identifying relevant categories in national occupation classification schemes. In addition, all unit groups in sub-major group 92 (Agricultural, forestry and fishery labourers) should be included if the status in employment of the indigenous worker is employer, independent worker without employees (own-account worker), or contributing family worker.

1113 Traditional Chiefs and Heads of Villages	2659 Creative and Performing Artists Not Elsewhere Classified
2131 Biologists, Botanists, Zoologists and Related Professionals	3141 Life Science Technicians (excluding Medical)
2132 Farming, Forestry and Fisheries Advisers	3142 Agricultural Technicians
2133 Environmental Protection Professionals	3143 Forestry Technicians
2230 Traditional and complementary medical practitioners	3230 Traditional and Complementary Medicine Associate Professionals
2341 Primary School Teachers	3413 Religious Associate Professionals
2342 Early Childhood Educators	3434 Chefs
2354 Other Music Teachers	5113 Travel Guides
2355 Other Arts Teachers	5120 Cooks
2641 Authors and Related Writers	5311 Child Care Workers
2642 Journalists	5312 Teachers' Aides
2643 Translators, Interpreters and Other Linguists	6111 Field Crop and Vegetable Growers
2651 Visual Artists	6112 Tree and Shrub Crop Growers
2652 Musicians, Singers and Composers	6113 Gardeners; Horticultural and Nursery Growers
2653 Dancers and Choreographers	6114 Mixed Crop Growers
2654 Film, Stage and Related Directors and Producers	6121 Livestock and Dairy Producers
2655 Actors	6122 Poultry Producers
2656 Announcers on Radio, Television and Other Media	6123 Apiarists and Sericulturists
	6129 Animal Producers Not Elsewhere Classified
	6130 Mixed Crop and Animal Producers
	6210 Forestry and Related Workers
	6221 Aquaculture Workers
	6222 Inland and Coastal Waters Fishery Workers
	6223 Deep-sea Fishery Workers
	6224 Hunters and Trappers
	6310 Subsistence Crop Farmers
	6320 Subsistence Livestock Farmers
	6330 Subsistence Mixed Crop and Livestock Farmers

6340 Subsistence Fishers, Hunters, Trappers and Gatherers

7111 House Builders

7115 Carpenters and Joiners [includes wooden boat builders]

7312 Musical Instrument Makers and Tuners

7313 Jewellery and Precious Metal Workers

7314 Potters and Related Workers

7315 Glass Makers, Cutters, Grinders and Finishers

7316 Signwriters, Decorative Painters, Engravers and Etchers

7317 Handicraft Workers in Wood, Basketry and Related Materials

7318 Handicraft Workers in Textile, Leather and Related Materials.

7511 Butchers, Fishmongers and Related Food Preparers

7512 Bakers, Pastry-cooks and Confectionery Makers

7513 Dairy Products Makers

7514 Fruit, Vegetable and Related Preservers

7531 Tailors, Dressmakers, Furriers and Hatters

7535 Pelt Dressers, Tanners and Fellmongers

7536 Shoemakers and Related Workers

9624 Water and Firewood Collectors.

Indigenous workers in the following unit groups should also be counted among those in traditional occupations if their status in employment is employer, own-account worker, or contributing family worker. Dependent contractors and employees in these occupations should be excluded.

9211 Crop Farm Labourers

9212 Livestock Farm Labourers

9213 Mixed Crop and Livestock Farm Labourers

9214 Garden and Horticultural Labourers

9215 Forestry Labourers

9216 Fishery and Aquaculture Labourers.

Minor groups

When data are only available at the ISCO-08 minor group (3-digit) level, indigenous persons employed

in the following groups should be considered to be practising traditional occupations. The results will be less accurate and complete than those compiled on the basis of data at the 4-digit level.

213 Life Science Professionals

264 Authors, Journalists and Linguists

265 Creative and Performing Artists

323 Traditional and Complementary Medicine Associate Professionals

611 Market Gardeners and Crop Growers

612 Animal Producers

613 Mixed Crop and Animal Producers

621 Forestry and Related Workers

622 Fishery Workers, Hunters and Trappers

631 Subsistence Crop Farmers

632 Subsistence Livestock Farmers

633 Subsistence Mixed Crop and Livestock Farmers

634 Subsistence Fishers, Hunters, Trappers and Gatherers

731 Handicraft Workers

921 Agricultural, Forestry and Fishery Labourers (only if status in employment is employer, independent worker without employees (own-account worker), or contributing family worker).

Sub-major groups

When data are only available at the ISCO-08 sub-major group (2-digit) level, indigenous persons employed in the following groups should be considered to be practising traditional occupations. The results will be considerably less accurate and complete than those compiled based on data at the 3- and 4-digit level, as they will exclude higher skilled scientific, technical and cultural occupations, as well as handicraft workers and all others not working in agriculture, forestry and fishing.

61 Market-oriented Skilled Agricultural Workers

63 Subsistence Farmers, Fishers, Hunters and Gatherers

92 Agricultural, Forestry and Fishery Labourers (only if status in employment is employer, independent worker without employees (own-account worker), , or contributing family worker).

Annex 2: Ethnic groups considered indigenous in Nepal¹

Bhote
Bote
Brahmu/ Baramo
Byasi/Sauka
Chepang /Praja
Chhantyal/Chhantel
Danuwar
Darai
Dhanuk
Dhimal
Dolpo
Dura
Gangai
Gharti/Bhujel
Gurung
Hayu
Hyalmo
Jhangad/ Dhagar
Jirel
Kisan
Koche
Kumal
Lepcha
Lhomi
Lhopa
Limbu
Magar
Majhi
Meche
Newar
Pahari
Pattharkatta/ Kushwadiya
Rai
Rajbansi
Raji
Raute
Satar/ Santhal
Sherpa
Tajpuriya
Tamang
Thakali
Thami
Tharu
Topkegola
Walung
Yakkha

¹ ILO's understanding based on National Foundation for Upliftment of Aadijati/Janjati Act, 2058 (2002).



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Route des Morillons 4

1211 Geneva 22

Switzerland

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