



International
Labour
Organization



User Manual

▶ ILO/RAP

Rapid Assessment Protocol
Social Protection Costing Tool



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Preface

The ILO Rapid Assessment Protocol Social Protection Costing Tool (ILO/RAP) is an online, computer-based projection and simulation tool developed by the Social Protection Department of the International Labour Office (ILO). The objective of ILO/RAP is to assist decision makers as they implement or improve social protection benefits towards a universal social protection floor (SPF). To this end, ILO/RAP helps to (1) collect data on existing social protection benefits and programmes; (2) identify coverage gaps in existing or planned social protection programmes and estimate the cost associated with filling these gaps; and (3) generate a set of demographic and financial projections that serve as a road map for moving from an existing system to one that provides comprehensive and effective protection, meets at least the four guarantees of the ILO [Social Protection Floors Recommendation, 2012 \(No. 202\)](#) and progressively achieves universal coverage.

This technical guide explains the methodology and process flow of ILO/RAP and serves as a reference manual for users. ILO/RAP is part of a series of quantitative tools developed by the Social Protection Department to support evidence-based policy reforms. The related technical guides and models can be made available to experts in ILO constituent countries as part of ongoing technical support and capacity-building activities in quantitative techniques in social security. Users of ILO/RAP are expected to be social protection practitioners who have experience in the design and costing of health and social protection systems. The ILO/RAP model and technical manual can also be used as a teaching aid for social protection programming and costing under the ILO Social Security Standards.

ILO/RAP is derived from a process of Assessment-Based National Dialogue (ABND) developed by the ILO over many years. ILO/RAP and this manual are in line with international actuarial standards and practices, particularly the ILO [Social Security \(Minimum Standards\) Convention, 1952 \(No. 102\)](#). They draw on the extensive knowledge acquired by the ILO over multiple decades of sharing policy advice and conducting analytical work on social protection, in particular that presented in its flagship publications of the Quantitative Methods in Social Protection Series: [Financing Social Protection](#) (Cichon et al. 2004) and [Actuarial Practice in Social Security](#) (Plamondon et al. 2002).

ILO quantitative tools are subject to constant development and improvement. New versions of this manual will be published at regular intervals so as to reflect major technical advances. Requests for further information and user feedback are welcome and can be communicated to us at socpro@ilo.org.

Geneva, January 2024

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How to use this manual: Getting started

This manual was created primarily for social protection professionals working on quantitative aspects of social protection systems, to guide their use of the ILO Rapid Assessment Protocol Social Protection Costing Tool (ILO/RAP). It includes an introduction to the different policy applications of the tool, which is accessible to all users, in particular planners and policymakers involved in the management and development of social protection benefits.

- Section 1 provides an **overview of the model** and its place in the process of rapid cost assessment of a social protection system.
- Section 2 discusses the model's **utility in policymaking** as well as the ISSA-ILO Guidelines on Actuarial Work for Social Security that support the **rationale behind it**, and presents the **basic assumptions** regarding the model's architectural framework, its **key functions**, administration and **outputs** (reports and indicators).
- Section 3 provides a **practice exercise** to become familiar with the model and its functions, and to learn tricks and techniques within the model.
- The **Glossary of terms** provides comprehensive **definitions of key concepts** used in the model and how they are applied.

We recommend reading through the entire manual, taking the time to understand all the definitions and concepts presented in sections 1 and 2, before moving on to section 3 to set up and work through some examples in the model.

Table of Contents

Preface	iv
How to use this manual: Getting started	v
1. Introduction	1
The role of ILO/RAP in the process of Assessment-Based National Dialogue	1
Use cases of ILO/RAP	3
2. Rationale and specifications of ILO/RAP	5
Conceptual bases for the modelling, the creation and the redesign of social protection floors using ILO/RAP	6
(a) Entities in the model	6
(b) Transitions	6
(c) Processes	7
3. Walkthrough	9
3.1 Log-in and setup	9
3.2 Step 1: Setting up beneficiary population groups and benefits	11
Initial setup	11
3.3 Step 2: Initial inventory of benefits and covered populations: Identifying gaps.....	12
Configuration tab.....	13
3.4 Step 3: Creating a model	17
Models tab.....	17
3.5 Step 4: Creating scenarios and viewing outputs	29
Scenarios tab	29
4. Next steps	33
Frequently Asked Questions	34
Glossary of terms	35
Appendix I Standard population groups.....	36
Appendix II Calculation of the annual adjustment of benefits in real and nominal terms	38
Appendix III Methodology for calculating single-year-of-age demographics from five-year age groups...	39
Appendix IV List of variables.....	43

1. Introduction

The Rapid Assessment Protocol Social Protection Costing Tool (ILO/RAP) is a simplified financial projection model that aims at estimating the future costs of introducing one or more cash transfer elements of the social protection floor (SPF). The objective of ILO/RAP is the implementation or improvement of a (universal) SPF by (1) creating an inventory of existing social protection benefits and beneficiary populations; (2) identifying coverage gaps and estimating the cost associated with the implementation of a set of social protection benefits; and (3) providing a methodology for moving from an existing system to one that provides comprehensive and effective protection, meets at least the four guarantees of the [Social Protection Floors Recommendation, 2012 \(No. 202\)](#) and achieves universal coverage gradually.

At the same time, ILO/RAP provides an overview of the country's main indicators: demographic, labour market and macroeconomic ones, as well as the evolution of the government's balance sheet. A RAP analysis forms part of an Assessment-Based National Dialogue exercise that uses the projections made by the tool to transform broad policy recommendations into financially viable policy scenarios. This costing exercise thus aims to provide realistic cost estimates to be used for discussions on available fiscal space and government budget reallocations, in turn helping with the prioritization of possible social protection policy options.

The ILO/RAP costing model is aimed at supporting the work of different actors involved in the development and management of national social protection systems. These include ILO constituents; relevant government ministries such as those of labour, of social solidarity or development, of finance and of health and population; workers' and employers' organizations; civil society; social protection policymakers; academics; staff and employees of relevant ministries and social protection institutions; and international development partners including international financial institutions.

Work on ILO/RAP comprises three steps. Firstly, the user inputs data on existing and future social protection schemes and beneficiary populations. Secondly, the model calculates the gaps in adequacy, financing and coverage of these benefit packages. Thirdly, the model is used to calculate the cost of selected benefit package combinations and to develop a final analysis. The tool is under constant improvement and currently available in English, Spanish and French.

The role of ILO/RAP in the process of Assessment-Based National Dialogue

The development of ILO/RAP was guided by the ILO's previous experience in conducting Assessment-Based National Dialogue (ABND) exercises in a number of countries using the Rapid Assessment Protocol (RAP) tool in its Microsoft Excel version. For more information on the ABND process and best practices, see [Social Protection Assessment-Based National Dialogue: A Global Guide](#) (ILO 2015).

The ILO/RAP online tool attempts to systematize and standardize the process of costing a universal social protection floor (SPF) through the comparison of different social protection scheme scenarios within a given country.

In this document, the SPF is understood as defined by Recommendation No. 202, which establishes a set of four basic guarantees: essential healthcare, protection of children, protection of persons of working

age and protection of the elderly. The SPF may include other elements or benefits depending on the specific needs and definitions of each country.

As per the aforementioned ABND guide: “Countries are encouraged to prioritize the implementation of SPFs both as a fundamental element of their national social protection systems and as a starting point for the provision of higher levels of protection to as many people as possible, and as soon as possible, in accordance with growing economic and fiscal capacities.

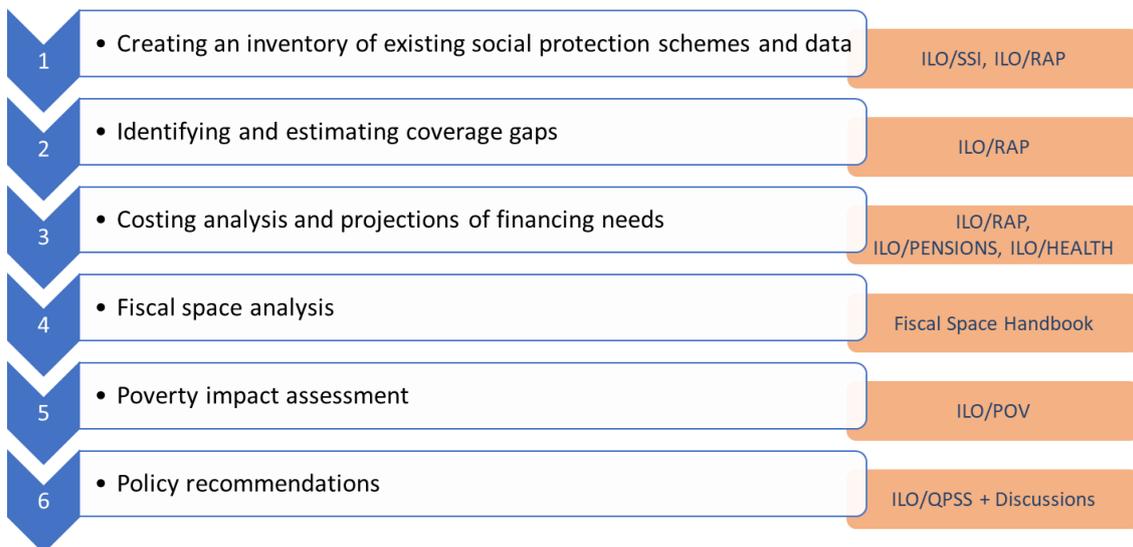
“At a minimum, SPFs should comprise the following nationally defined sets of goods and services or basic social security guarantees:

- a) Access to essential health care, including maternity care, at a nationally defined minimum level that meets the criteria of availability, accessibility, acceptability and quality;
- b) Basic income security for children at a nationally defined minimum level, including access to nutrition, education, care and any other necessary goods and services;
- c) Basic income security at a nationally defined minimum level for persons of active age who are unable to earn sufficient income, in particular in the case of sickness, unemployment, maternity and disability; and
- d) Basic income security at a nationally defined minimum level for older persons.”

ILO/RAP enables users to take advantage of the structure of the four social security guarantees, as well as a step-by-step approach to modelling a national system of social protection benefits and beneficiary population groups that ensures that all groups are covered throughout their life cycle.

ILO/RAP is a critical part of the ABND process, which integrates several subprocesses and their respective tools, as shown in Figure 1. In particular, ILO/RAP looks to meet the first three steps of the ABND process: generating an inventory of existing social protection programmes; using this to identify coverage gaps; and generating financial and demographic projections that help estimate what is required in order to diminish and eventually eliminate these gaps. In doing so, ILO/RAP creates a strong base to conduct a fiscal space analysis and generate policy recommendations towards achieving a universal SPF, in a way that is consistent and comparable over time and across countries.

Figure 1: ILO process for assessing social protection floors in the context of ABND



Use cases of ILO/RAP

ILO/RAP offers a diverse range of uses and scenarios that can significantly enhance social protection systems. Its applications include the rapid analysis of existing systems, projections on coverage and financing needs for sustaining an existing set of benefits, the ex ante costing of additional benefits or population groups, and rapid assessments for individual benefits, among others. By leveraging the capabilities of the ILO/RAP model, governments and organizations can strengthen their social protection systems, ensuring inclusive support for vulnerable populations and promoting the creation of robust social protection floors (SPFs). ILO/RAP is thus a simple but powerful tool that can be used for a range of policymaking needs, including those listed below.

- **The rapid analysis of existing social protection systems and their coverage and financing gaps**
The ILO/RAP model can be used for a time-efficient analysis of existing social protection systems (the status quo). It efficiently identifies any gaps in coverage and financing, providing decision-makers with valuable insights towards setting up or expanding an SPF, and offers clear indications of where benefits can be expanded, which population groups lack coverage, and how much it would cost to scale up the provision of social protection benefits towards universal social protection. Assessment of the current social protection system enables policymakers to identify areas that require improvement and prioritize interventions effectively, thereby empowering social protection actors and government institutions to optimize their existing social protection provision and ensuring that the needs of vulnerable populations are met efficiently and effectively.
- **Projection of financing needs for maintaining a set of social protection benefits**
The anticipatory approach of the ILO/RAP model is instrumental in projecting the financing needs for sustaining a specific set of social protection benefits. By accurately estimating the required resources to maintain the set of existing benefits over a number of years, governments and organizations can better plan and allocate funds to meet the needs of growing populations and potentially changing economic scenarios. Forward planning enables governments to better allocate resources, prepare for contingencies, and formalize expenditure flows in changing political contexts. This pre-emptive financial forecasting can ensure a continuous provision of essential social protections, preventing disruptions and ensuring the stability of social safety nets.
- **Ex ante costing analysis of new/additional social protection benefits and population groups**
One of the key strengths of the ILO/RAP model is its ability to conduct ex ante costing analysis for potential future social protection systems. Such an analysis enables decision makers to evaluate the consequences of changes to social protection benefits before their implementation. ILO/RAP can help governments model the impacts on coverage and financing of introducing new benefits, modifying existing benefits, and merging benefits into a unified package. As population structures change over time, ILO/RAP can also help model modifications to beneficiary population groups over time. By examining these scenarios beforehand, policymakers can make informed choices that maximize the social impact on changing

demographic situations over time, while taking into consideration the financial implications. As above, this can lead to more effective and sustainable social protection systems.

- **Rapid costing of individual (or a limited set of) social protection benefits**

ILO/RAP is designed to facilitate the costing of entire social protection systems; but in the case of time constraints or limited resources, the tool can also be used for the quick costing of a single social protection benefit, or a limited set of benefits. While analysing the entire system comprehensively is recommended, the model's capability to perform rapid cost assessments is beneficial when time is limited, and represents a valuable resource for urgent decision-making.

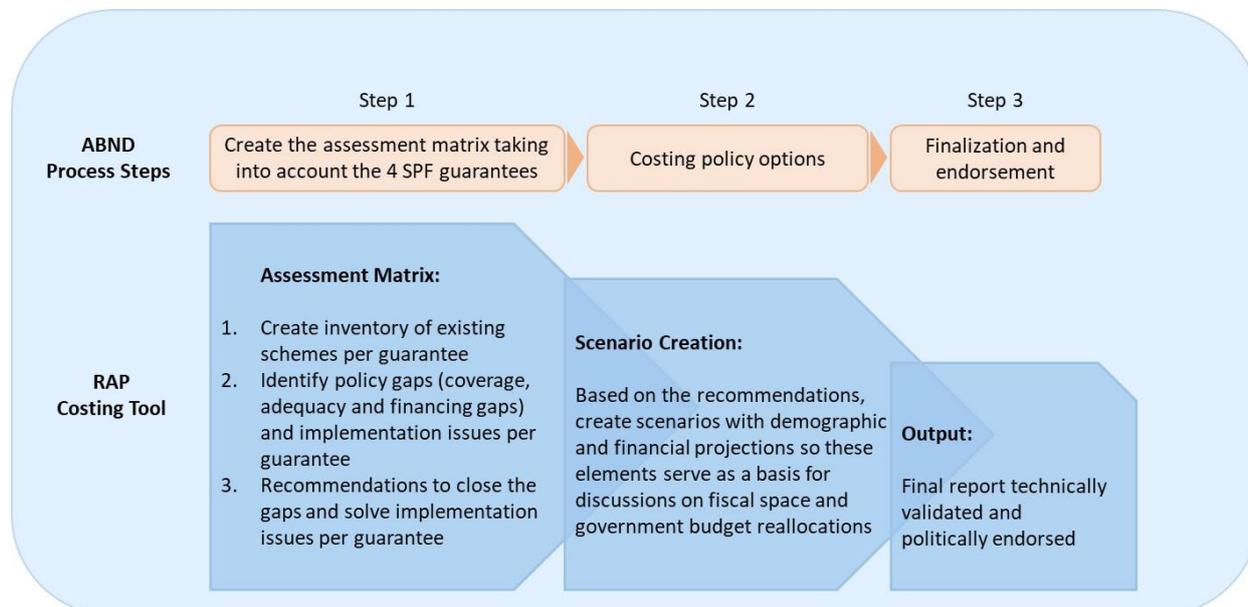
2. Rationale and specifications of ILO/RAP

What follows is a broad description of the recommended steps to optimize the use of ILO/RAP in a national dialogue towards assessing the current state of social protection and/or creating a universal social protection floor (SPF). Each phase of the process is described in detail in [Social Protection Assessment-Based National Dialogue: A Global Guide](#) (ILO 2015).

The three steps towards creating a universal SPF according to Recommendation No. 202 are:

1. **Draw up an inventory of both existing social protection benefits and those that are in the process of being implemented**, including all the elements that characterize them, such as the populations protected by each of them, the eligibility conditions, and the characteristics and level of benefits they provide (their adequacy).
2. **Identify the policy gaps (coverage, adequacy and financing gaps) and implementation issues, and formulate recommendations to successfully establish the SPF** in accordance with Recommendation No. 202.
3. **Define a strategy to gradually eliminate or reduce these gaps over time**, adapted to the country's current and expected priorities, capacities and resources, and supported by the results of ILO/RAP. This strategy should be defined in the framework of a national dialogue process and should allow for a transition from the current model to the ideal SPF system.

Figure 2: RAP model process flow



As shown in Figure 2, ILO/RAP uses the schemes, gaps and social protection strategy above to generate different scenarios in which the impact of a given set of policies can be simulated. These include accelerating the extension of coverage of a specific social protection benefit, creating a new benefit to cover an existing protection gap, or replacing various existing benefits with others. Each scenario will contain its respective demographic and financial projection, associated costs, and relative cost indicators as a proportion of GDP and government expenditure, by year of projection. Scenarios can be compared

in order to identify the best strategy for moving towards an inclusive and universal SPF as outlined in Recommendation No. 202.

Conceptual bases for the modelling, the creation and the redesign of social protection floors using ILO/RAP

As explained above, the main objective of ILO/RAP is to support the modelling of the costing process that is associated with the active improvement of a social protection floor (SPF) in terms of social protection benefits, effective coverage (the number of people currently receiving a benefit) and the adequacy of benefits (the sufficiency of the benefit amount). This is true for countries that have existing social protection systems as well as those that are just beginning to conceptualize or introduce social protection benefits.

In order to carry out a RAP analysis, it is important to consider the entities, transitions and processes within the model.

(a) Entities in the model

ILO/RAP allows the user to manage the relationship between the parameters and variables and their intended outcomes, as shown in table 1.

Table 1: Parameters and intended outcomes

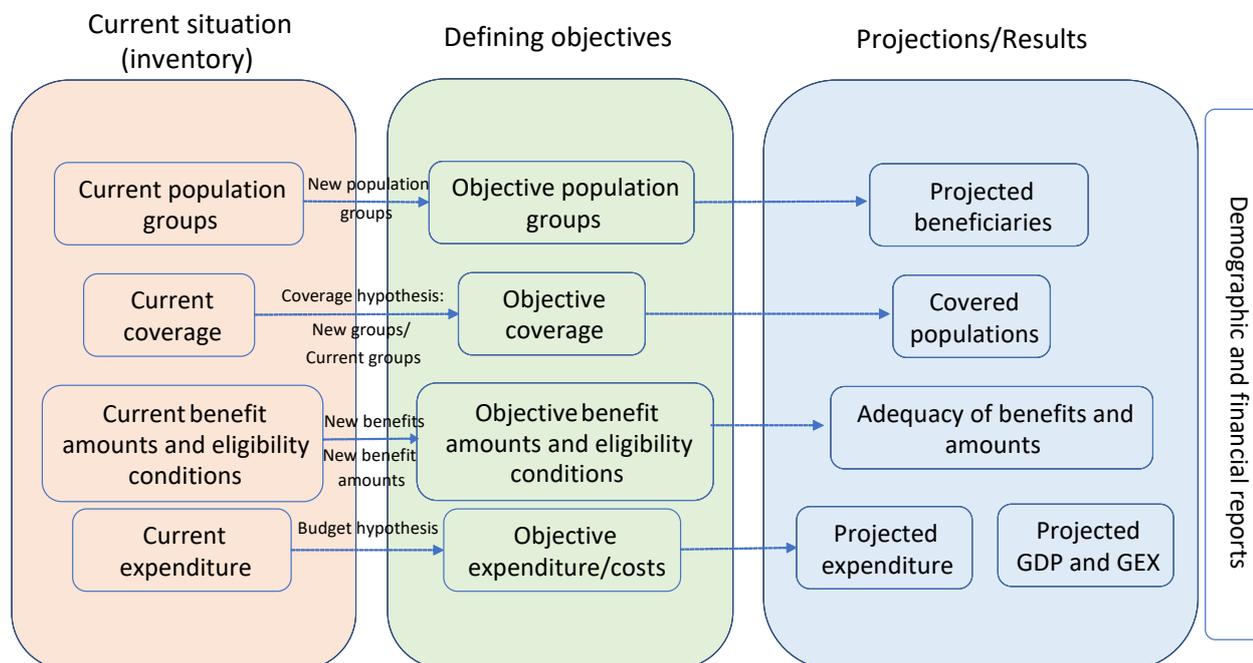
Parameter/variable	Benchmark or intended outcome
Social protection benefits	Desired set of social protection floor benefits
Benefit levels	Adequate level of benefits ¹
Beneficiary population groups	Universal coverage of beneficiaries
Coverage rates	Target coverage rates
Costs and expenditures	Base year and projections
Other variables	Total population, labour market, GDP, government expenditure, inflation

(b) Transitions

The kinds of transitions handled by the model from the current situation to a desired future situation, including the relationships between entities (parameters and variables) interacting in the model, may be observed in Figure 3.

¹ On the topic of adequacy of protection, the ILO states that “for social protection floors, the basic social security guarantees should prevent or at least alleviate poverty, vulnerability, and social exclusion, and allow life in dignity”. ILO, “[Universal Social Protection: Key Concepts and International Framework](#)”, *Social Protection Spotlight* (policy brief), 2019.

Figure 3: Transitions in ILO/RAP



(c) Processes

Inputs, outputs and projections

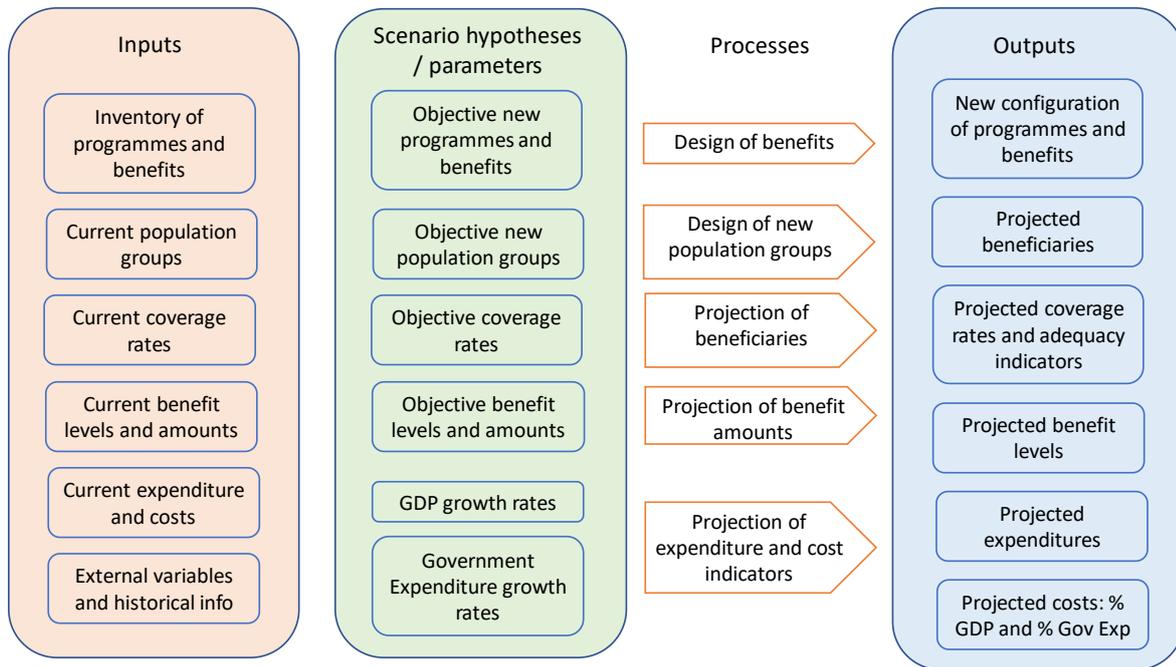
The initial setup of ILO/RAP is defined by the existing combination of beneficiary population groups, benefit packages with their specific eligibility conditions and coverage rates, and costs or government expenditures. This is the orange box in figure 4.

ILO/RAP enables users to define a desired future level of benefits and beneficiary populations, which are affected by the eligibility conditions set out for these benefits, as well as the level of government spending and coverage foreseen. As the end goal envisioned by the ILO is universal social protection coverage, it refers to these future targets as “objectives” in order to avoid confusion between future targets for benefits and beneficiary populations and the targeting of benefits to a limited population. These objective indicators can be seen in the green box in figure 4.

In order to transition from the existing situation to the one desired with respect to social protection benefits, the model uses input parameters, variables and assumptions to generate a set of projections for benefits and beneficiary populations through the course of the time period defined by the model. This can be seen in the blue box in figure 4.

In line with the above explanation and as presented in figure 4, a set of inputs can be designed to define a framework for various benefits, population groups and beneficiaries, as well as the respective transitions between them.

Figure 4: Stages in ILO/RAP



The definition of hypotheses for the different parameters allows for the construction of scenarios of change or transition between the existing situation in the initial year and the ideal situation after redesigning programmes for the social protection floor (mainly populations covered, benefits and benefit levels).

These three stages are described in more detail in the following section.

3. Walkthrough

3.1 Log-in and setup

- How to request a user ID
- What to do when logging in for the time
- Home page overview
- Tabs overview

To log in to ILO/RAP, interested users can request an exploratory user account by writing to pfacts@ilo.org, stating the name of the social security institution that they are associated with, and their role.

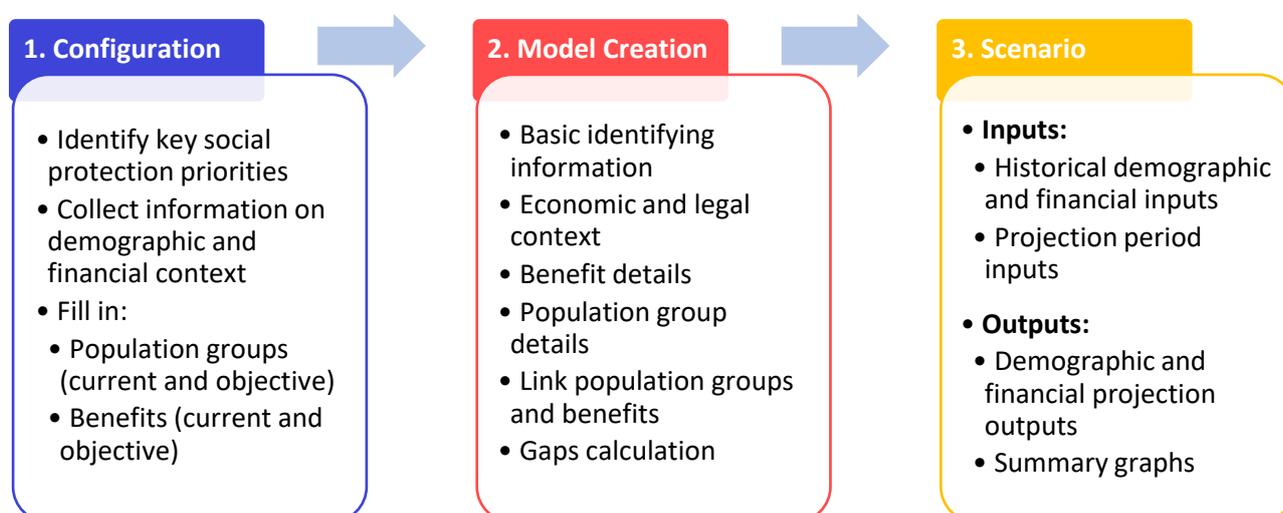
Once access has been granted, users can check the email account used for registration to obtain their temporary password for logging in to ILO/RAP. When users first visit ILO/RAP, they can enter this email address and use the “Change password” option to create a new password, and log in. ILO/RAP can be accessed at the following link: <https://qpss.ilo.org:9082/>

Upon logging in, users are directed to a home page that contains a brief overview of the tool and additional materials to inform their use of it. From here, users can, in the following order:

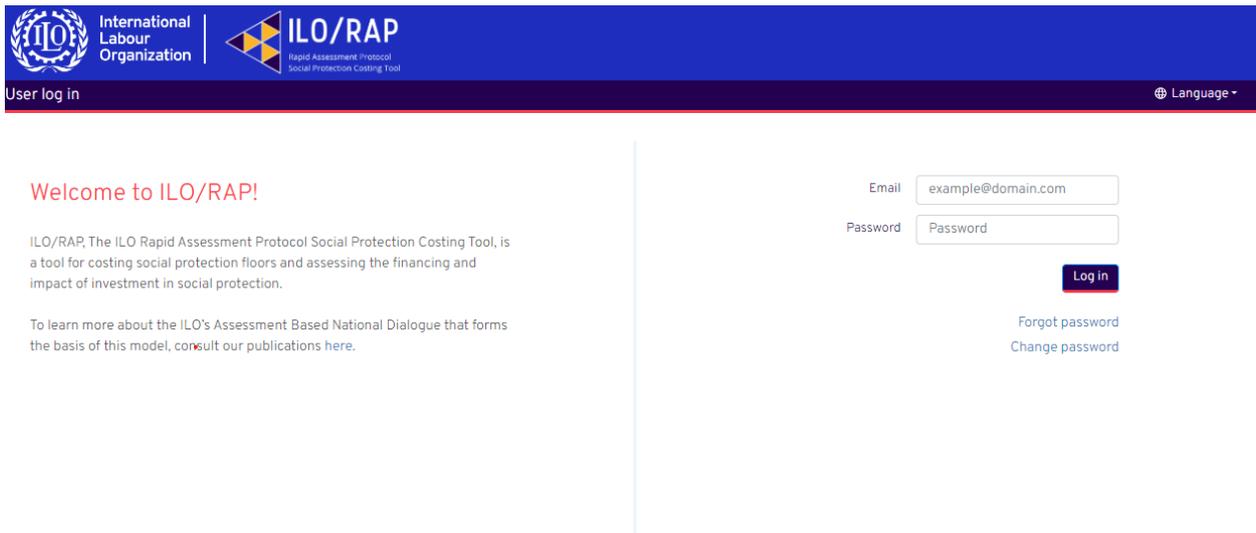
1. use the **Configuration** tab to create the beneficiary population groups and benefits to be used in the model;
2. use the **Models** tab to set up model parameters and create a model by linking these population groups and benefits, and by entering demographic, financial and contextual information for the base year;
3. use the **Scenarios** tab to create scenarios of this model in which different benefit amounts can be entered for each benefit scheme over time, and enter information for the period of the projection;
4. use the Run button in the Scenario tab to generate and analyse demographic and financial projections; and
5. use the **Results** tab to view graphs.

Figure 5 depicts the ILO/RAP workflow.

Figure 5: Workflow in ILO/RAP



A screenshot of the home page of ILO/RAP is presented below.



After a user has logged into their account, they will find, in the top-right corner of the web page, the model logo, username, language option (English, French or Spanish), and log-out option; and in the top-left area of the web page, in the menu bar, tabs for the home page, the page for configuration of benefits and population groups, the model creation page and the scenario creation page (see the screenshot below).

On the benefits page under the Configuration tab, there is the option to create a new benefit by clicking the “New” button in the top-left area of the web page under the menu ribbon. Once a new benefit has been created, it can be viewed, edited and deleted by clicking on the ellipsis symbol (“...”) next to its name in the Actions column (see the indicative red circle in the screenshot below).



The above layout is the same under each of the three tabs – Configuration (benefits and population groups), Models and Scenarios. Under the Scenarios tab, there is the additional option to add a benefit to the scenario already created.

3.2 Step 1: Setting up beneficiary population groups and benefits

- Definition of a beneficiary population group
- Definition of benefits
- How to set up beneficiary population groups and benefits
- Links between beneficiary population groups and benefits

Initial setup

Both creating an inventory of existing social protection benefits and mapping the objective social protection situation require demographic and financial information, assumptions, and hypotheses for the individual parameters and variables illustrated in table 1. Population groups and benefits are defined below.

1. Population groups

A beneficiary population group is a set of individuals or households who are receiving or are intended to receive a social protection benefit.

Through the process of designing or redesigning the social protection floor (SPF), there is a transition from an initial set of population groups to a redefined or optimized set of these, called "objective population groups". In this transition, groups may be redefined to include new beneficiary groups, to eliminate existing ones, to combine groups or to divide them into subgroups. This is usually accompanied by changes in the legal scope to cover new definitions of groups of individuals or households.

2. Benefits

Benefits are cash or in-kind transfers received by the intended beneficiary population group. Benefit amounts are determined by the social protection objectives of a given social protection package. The transition from the existing situation to an envisioned one often calls for the reconfiguration of current benefit packages, the creation of new benefits, the combination of two or more benefits, or the retirement of benefits in order to increase the level and adequacy of coverage of social protection benefits.

3. Coverage rates

The model also makes it possible to simulate the transition between the initial coverage rates (which are calculated as a proportion of the universe of people who could potentially receive each benefit) and the desired coverage rates through the policy measures to be implemented. Typically, this will lead to defining increased coverage rates for new population groups and decreased coverage rates for population groups who access benefits that users wish to close. New population groups with existing or new benefits may merge with pre-existing population groups in the initial year. Therefore, through coverage rate assumptions, both for the initial and the new population groups, the transition in terms of coverage can be modelled.

4. Expenditure levels

Once annual projections of the number of beneficiaries (based on hypothetical coverage rates) and benefit levels are available, the projected expenditure on each of the social protection benefits can be calculated. From the expenditure projections, some projected indicators of expenditure can also be

calculated to provide more details for decision-making; these include per capita expenditure on each benefit, expenditure as a percentage of GDP, or expenditure as a percentage of government expenditure, among others.

3.3 Step 2: Initial inventory of benefits and covered populations: Identifying gaps

- Creating beneficiary population groups
- Creating benefits

The first step in any RAP analysis is to create an inventory of existing programmes and benefits. It is necessary to know the risks covered (death, disability, illness and so on), the eligibility conditions defining the objective populations (including, for example, poverty level, disability status, education level, old age without financial resources, or single parenthood) and the coverage levels of each of these benefits. It is also important to analyse whether or not the benefits are adequate – namely, whether or not they are sufficient to achieve their intended purpose, can be effectively accessed, are delivered in a timely manner to the beneficiary population and are delivered throughout the period for which protection is needed.

It is also necessary to identify the extent of coordination and coherence between the actions and benefits offered by different programmes. This is very important to avoid overlaps and uncovered gaps – namely, situations where the population or subgroup in question receives the same benefit from two different schemes (overlap), or does not receive a basic benefit from any existing scheme (exclusion gap). The direct consequences of this lack of coordination are reduced coverage, both in terms of the number of people protected and the level and quality of the benefit, with higher costs and failure to take advantage of potential economies of scale.

In order to facilitate building this inventory, the model contains a set of predetermined names for both benefits and situations of risk and vulnerability, as well as for particular population groups. These are based on the four social protection guarantees (namely, access to health care, as well as basic income security for children, older persons, and others) and functions derived from Recommendation No. 202. These 17 social protection functions, as listed below, are shared with the ILO Social Security Inquiry (ILO/SSI) and are intended to enable collaboration between the two tools.

1. **Old age:** Income maintenance and support in cash or kind (except health care) in connection with old age
2. **Invalidity/disability:** Income maintenance and support in cash or kind (except health care) in connection with the limited ability of persons with physical or psychosocial disabilities to engage in economic and social activities
3. **Survivorship:** Income maintenance and support in cash or kind in connection with the death of a household member
4. **Sickness:** Income maintenance and support in cash, in connection with physical or mental health conditions, excluding disabilities
5. **Maternity/paternity**
6. **Children:** Support in cash or kind (except health care) for bringing up children
7. **Household:** Support in cash or kind (except health care) for caring for household members
8. **Access to education**
9. **Unemployment:** Income maintenance and support in cash or kind in connection with unemployment
10. **Employment injury**

11. **Health care:** Health care intended to maintain, restore or improve the health of the persons protected, irrespective of the origin of their health condition
12. **Social work services**
13. **Public works programmes**
14. **Housing subsidies**
15. **Food and nutrition**
16. **Social assistance** targeted at poverty reduction
17. **Other support/assistance**

The main source of information for the inventory of social protection benefits is often the Social Security Inquiry (ILO/SSI), available online as part of the Quantitative Platform on Social Security. This information may be complemented with other sources such as International Social Security Association (ISSA) country profiles, national demographic statistics (population and labour force) and external databases (such as those of the IMF, World Bank or UN Agencies).

Information to create an inventory of existing social protection programmes is entered by the user as the first step of the costing exercise.

Configuration tab

1. Creation of beneficiary population groups

The first step in ILO/RAP is to create beneficiary population groups. These are defined by creating a reference population (such as the total population or the labour force) and choosing whether the benefit will be administered to an individual or a household. Then, the user can determine the age range that is eligible for the benefit, the sex corresponding to the benefit, and up to three additional eligibility criteria that must be met in order to be a beneficiary in this particular population group.

A list of standard population groups can be found in **Appendix I** (Standard population groups). Examples include households living below the poverty line, individuals with disabilities, mothers with newborn children, older persons and migrant workers.

Please note that – while population group names can be edited after creation – once a name is selected, it cannot be changed, as this affects future steps of the configuration process. A solution to changing the population group name (before finalizing the model creation process in the next step) is to delete the original population group and create a new one to use in the model.

The screenshot below shows this initial beneficiary population group creation form/table. This is accessed by going to Configuration >> Population groups >> New, entering the required information and saving it.

The screenshot shows the ILO/RAP web application interface. At the top, there are logos for the International Labour Organization and ILO/RAP. Below the logos is a navigation bar with links for Home, Configuration, Models, and Scenarios. A 'New' button is highlighted in a red box. The main content area displays a table with the following data:

Name	Reference population	Eligibility criteria	Actions
Pregnant women	Total population	Expected fertility divided by 35 years	...
Children under 2 y o	Total population	All eligible	...
Pre-school children	Total population	Assistance	...
Primary school	Total population	Assistance	...
Secondary school	Total population	Assistance	...
Poor families	Total population	Poverty	...
Informal economy workers	Labour force	Informal work	...
Old age non formally covered	Total population	Non formally covered	...
Disabled	Total population	Disability	...
Long term unemployed	Labour force	Long term unemployment	...

The screenshot shows the 'Population groups' modal form in the ILO/RAP web application. The form is titled 'Population groups' and has a close button (X). It contains the following fields and options:

- Population group name ***: A text input field with the placeholder 'Name'.
- Reference population**: A dropdown menu with 'Total population' selected.
- Beneficiary unit**: Radio buttons for 'Households' (selected) and 'Individual'.
- Eligibility criteria**: A list of three criteria, each with a 'Description' text input field and a 'Probability' text input field with 'Year 0' as a placeholder.
- Buttons**: 'Save' and 'Cancel' buttons at the bottom right.

The probability field, as shown in the above screenshot, indicates the incidence of the given eligibility criteria in the population in the base year. For example, if one of the eligibility criteria is that the beneficiary is the mother to a newborn (namely, a child under 1 year of age), the probability field will indicate the percentage of the population that mothers to newborns represent, expressed as a decimal between 0 and 1 (meaning 0 per cent to 100 per cent).

2. Creation of benefits

The next step in ILO/RAP is to create the social protection benefits that are to be administered to the beneficiary population groups created in the previous step.

Benefits are created for one of two reasons: (1) to protect population groups against *existing* situations of vulnerability or (2) to ensure against *future* situations of risk. The former may include, for example, poverty or extreme poverty, disability, malnutrition, or being of old age without financial resources; while the latter refers to death, disability, accidents, illness and so on.

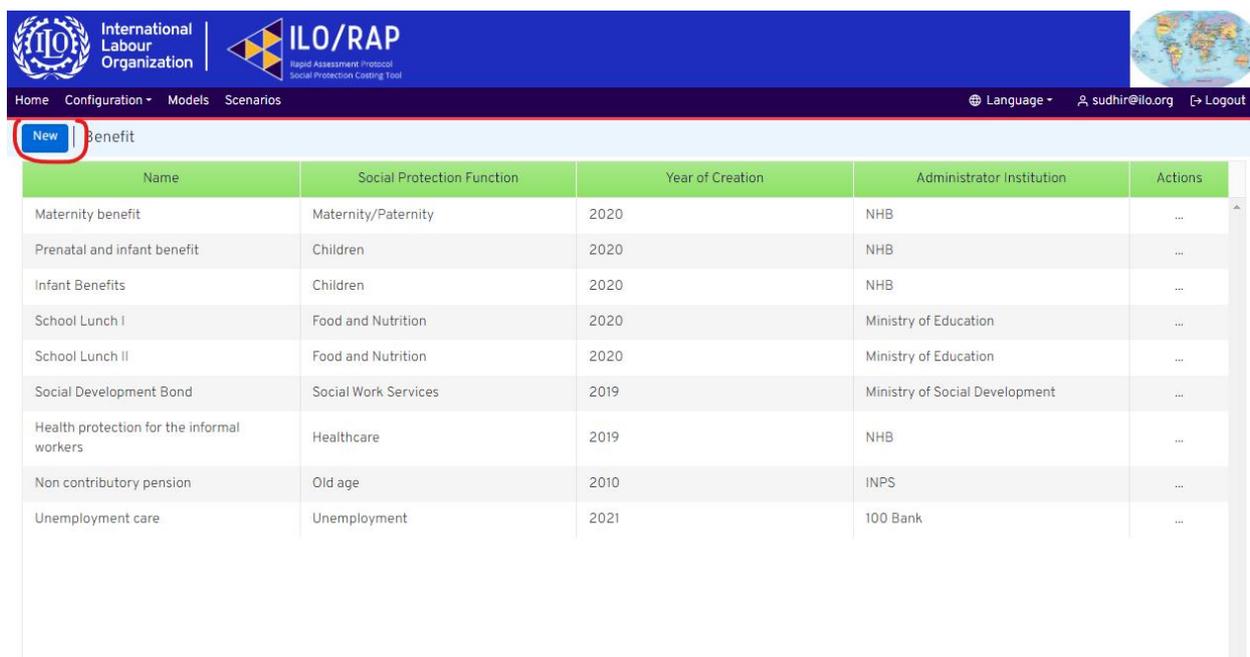
ILO/RAP uses the 17 social protection functions designed to cover such vulnerable or at-risk populations.

Each of these functions may have one or more benefits associated with them that cover many aspects of social protection needs. Examples of benefits include an annuity for older persons that protects against a loss of income-earning capacity in old age (Function 1), or an in-kind midday meal scheme for schoolchildren in government-funded schools (Functions 6 and 15).

In ILO/RAP, a benefit is created by entering the following:

- (a) **initial identifying data**, such as the benefit name, its description, its year of creation, the social protection scheme to which the benefit belongs, and the accompanying legal framework;
- (b) **social-protection-related information**, such as the social protection floor (SPF) guarantee, function and component that the benefit is intended to cover; and
- (c) **other qualitative details**, such as who is administering the benefit, whether the benefit is in cash or in kind, the financing source, and whether it is intended to be temporary or permanent.

The screenshot below shows this initial benefit creation form/table. This is accessed by going to Configuration >> Benefit >> New (see the indicative red circle below), entering the required information and saving it. Once benefits have been created in this way, benefit levels and links to beneficiary population groups who are intended to receive these benefits can be set in the next step, namely model creation.



Name	Social Protection Function	Year of Creation	Administrator Institution	Actions
Maternity benefit	Maternity/Paternity	2020	NHB	...
Prenatal and infant benefit	Children	2020	NHB	...
Infant Benefits	Children	2020	NHB	...
School Lunch I	Food and Nutrition	2020	Ministry of Education	...
School Lunch II	Food and Nutrition	2020	Ministry of Education	...
Social Development Bond	Social Work Services	2019	Ministry of Social Development	...
Health protection for the informal workers	Healthcare	2019	NHB	...
Non contributory pension	Old age	2010	INPS	...
Unemployment care	Unemployment	2021	100 Bank	...

The screenshot displays the ILO/RAP Social Protection Costing Tool interface. The top navigation bar includes the ILO logo, the text 'International Labour Organization', and 'ILO/RAP Rapid Assessment Protocol Social Protection Costing Tool'. A globe icon is visible on the right. The main menu shows 'Home', 'Configuration', 'Models', and 'Scenarios'. The user is logged in as 'sudhir@ilo.org'.

The 'Benefit' configuration form is open, showing the following fields:

- Benefit name ***: Text input field with 'Name' entered.
- Year of creation ***: Text input field with 'e.g. 2006' entered.
- Social protection floor guarantee ***: Dropdown menu with 'Health Care' selected.
- Social protection function ***: Dropdown menu with 'Old age' selected.
- Social protection floor component ***: Dropdown menu with 'Access to essential healthcare' selected.
- In cash or in kind**: Radio buttons for 'In cash' (selected) and 'In kind'.
- Permanent or temporary**: Dropdown menu with 'Permanent' selected.
- Existing benefit**: Dropdown menu with 'Yes' selected.
- Financing source**: Dropdown menu with 'Taxes' selected.
- Scheme/Programme**: Text input field.
- Administrative institution**: Text input field with 'Institution' entered.
- Responsible body**: Text input field with 'Responsible body' entered.
- Description**: Text area.
- Legal framework**: Text area.

At the bottom right of the form are 'Save' and 'Cancel' buttons. A sidebar on the left lists various benefit types, and a table on the right shows 'for Institution' and 'Actions' columns.

Please note that – while benefit names can be edited after creation – once a benefit name is selected, it cannot be changed, as this affects future steps of the configuration process. One solution to changing the name of a benefit (before finalizing the model creation process in the next step) is to delete the original benefit and create a new one to use in the model.

Universal and categorical benefits

The creation of a social protection floor (SPF) is an essential part of the strategy of Recommendation No. 202 to extend social protection coverage to the entire population, or in other words, to attain universal coverage across all residents of a country.

In contrast, categorical schemes, which intend to cover all residents of a country belonging to a particular category, can also be referred to as “universal” in the sense that they aim for universal coverage of everyone belonging to a specific population group.

The ILO definitions of universal and categorical regimes are as follows.

“Universal schemes are non-contributory transfer schemes, which cover all residents and provide benefits for all, whether working or not and irrespective of income. Often the only condition attached to the receipt of the benefit is that the person must be a long-term resident or a citizen of the country.”

“Categorical schemes, which cover all residents belonging to a certain category, are also often referred to as “universal” (such as “universal” old-age pensions covering all elderly men and women above a certain age threshold). These are closely related to universal schemes and fulfil similar functions.”

ILO/RAP is built with the principle of universal social protection coverage in mind. Public policy planners are advised to keep this goal of universality in mind when considering changes to social protection benefits and populations groups. While means-tested or targeted programmes are an option, the ILO recommends – based on the principle of universality – opting for universal schemes or categorical schemes such as those described in this section. ILO/RAP can help simulate this transition from means-tested or targeted programmes (such as conditional cash transfers, or CCTs) towards universal benefits for the entire population or categorical benefits for all members of a particular population group.

3.4 Step 3: Creating a model

- Definition of models in ILO/RAP
- Model Wizard walkthrough – active filling in steps/viewing steps

Models tab

Once population groups and benefits have been created, ILO/RAP users can model the impact of an existing or future social protection system by creating a model.

What is a model?

In ILO/RAP, a model is a simulation of beneficiary population groups and the benefits they receive that allows users to visualize a variety of indicators for an existing system of social protection. These include:

- existing levels of benefit coverage of beneficiary populations;
- existing benefits expenditure and the cost of administering them; and

- any gaps in existing coverage, financing and adequacy.

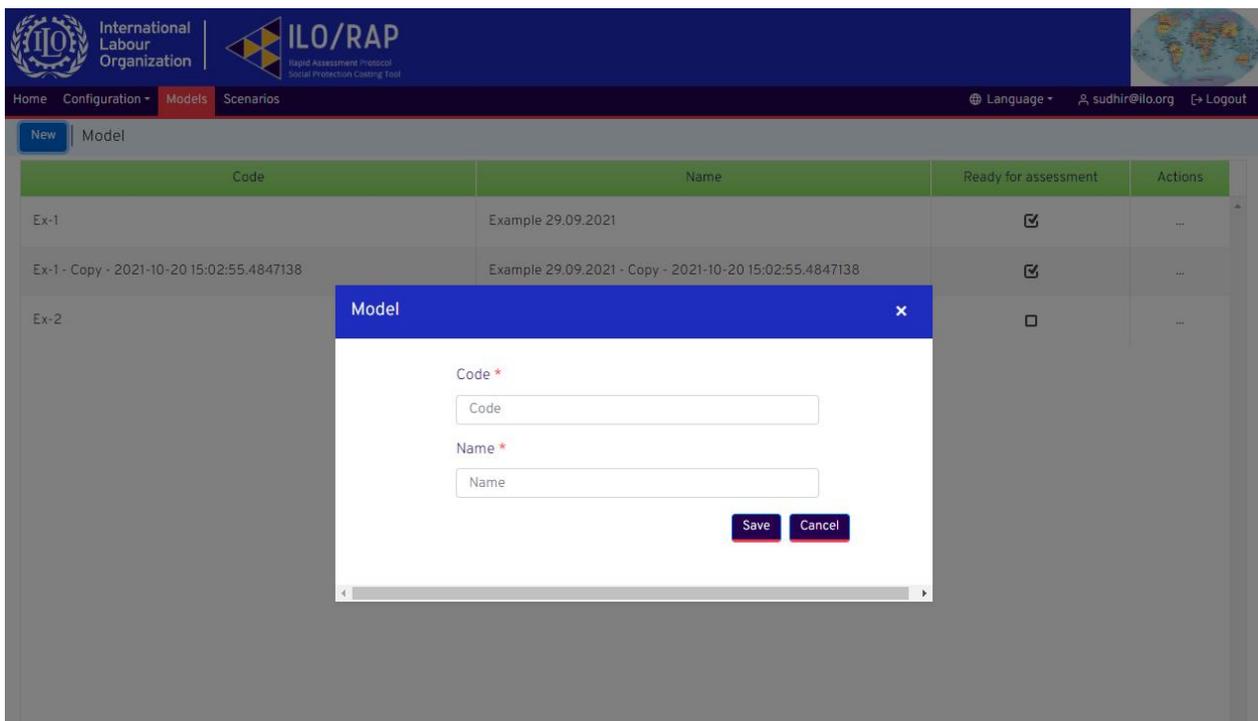
This can be used to evaluate how well the current system of benefits is able to cover the intended beneficiary groups, as well as to predict how changes to the system will affect coverage, financing and gaps that need closing. Therefore, ILO/RAP also enables users to project the following indicators:

- future levels of benefit coverage of beneficiary populations;
- future benefits expenditure and the cost of administering them, including as a percentage of GDP and government expenditure; and
- future gaps in existing coverage, financing and adequacy.

The process of modelling, therefore, gives users an overview of the existing system of social protection benefits and enables them to create a series of comparative future scenarios, so as to assess how different combinations of social protection benefits will affect coverage and financing – with the ultimate aim of closing these gaps, as the system moves towards universal social protection coverage.

How to create a model

To create a model, users can click on the Models tab in the top-left menu bar. In the Models tab, click the New button and give the model a name and an identifying code (for example, its creation date or file number), as shown in the screenshot below. Please consider these options carefully, as they cannot be changed later.



When the newly created model appears in the model catalogue, click on the ellipsis symbol (“...”) in the Actions column and click Edit (see the indicative red circle in the screenshot below). This will lead to the Model Wizard.

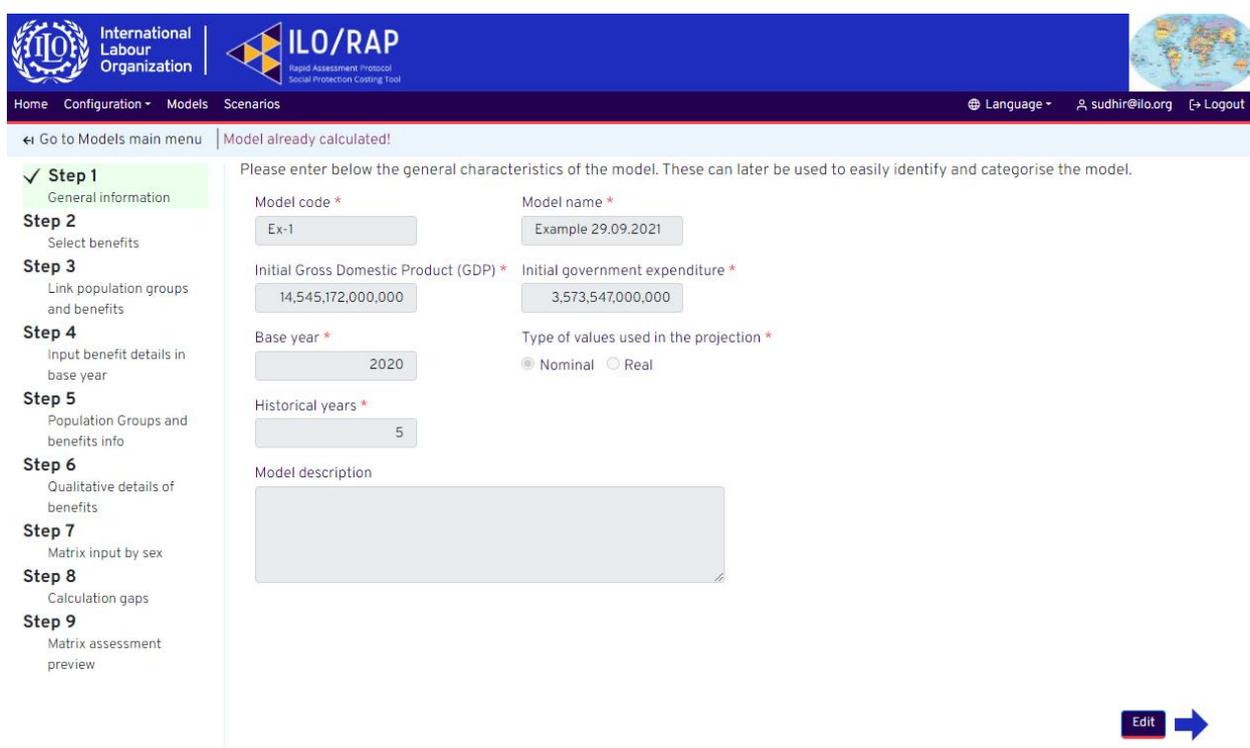


Code	Name	Ready for assessment	Actions
Ex-1	Example 29.09.2021	<input checked="" type="checkbox"/>	...
Ex-1 - Copy - 2021-10-20 15:02:55.4847138	Example 29.09.2021 - Copy - 2021-10-20 15:02:55.4847138	<input checked="" type="checkbox"/>	...
Ex-2	Example 02.11	<input type="checkbox"/>	<ul style="list-style-type: none"> View Edit Copy Reports Delete

The Model Wizard has nine steps that guide users through the process of setting up a model. Details on these sections and hints for how to use them can be found at the top of each web page.

1. Model Wizard Step 1: General information

The first step involves entering general information and parameters for the model, such as (1) the initial GDP and government expenditure in national currency; (2) the base year (namely, the initial year taken as status quo for the model); (3) the number of historic years of information to be input into the model; (4) whether the model will use nominal or real (inflation-adjusted) values and (5) a description space to include any other helpful details and notes for current or future users, especially when working in teams (see the screenshot below). Users will notice that while all the other fields are white in colour, the Model code and Model name fields at the top of this first step are grey, because these have already been input and cannot be changed.



International Labour Organization | ILO/RAP Rapid Assessment Protocol Social Protection Costing Tool

Home Configuration Models Scenarios Language sudhir@ilo.org Logout

Go to Models main menu | Model already calculated!

✓ **Step 1** General information

Step 2 Select benefits

Step 3 Link population groups and benefits

Step 4 Input benefit details in base year

Step 5 Population Groups and benefits info

Step 6 Qualitative details of benefits

Step 7 Matrix input by sex

Step 8 Calculation gaps

Step 9 Matrix assessment preview

Please enter below the general characteristics of the model. These can later be used to easily identify and categorise the model.

Model code * Model name *

Initial Gross Domestic Product (GDP) * Initial government expenditure *

Base year * Type of values used in the projection * Nominal Real

Historical years *

Model description

Edit →

Once all the boxes have been filled, users can click on the forward arrow in the bottom-right corner of the web page in order to move to Step 2.

2. Model Wizard Step 2: Select benefits

In the second step, the user can select which of the benefits created in the Configuration stage are to be used in this model. The Model Wizard does not select all the benefits by default, but enables users to make a selection of benefit combinations and to view how they can be configured or modified so as to cover all beneficiary populations in a move towards universal social protection. It also makes it easier to model the existing or base scenario of benefits and population groups, before any new benefits are added. New models can be created to visualize the impact of additional or extended benefits and of different configurations of population groups served by those benefits, as well as to vary the initial conditions, the benefit rollout period or the projection period. The respective scenarios of each of these models can be compared so as to see the results of different rollout periods side by side.

To select an available benefit from the list of those created in the Configuration stage, users can click on its name in the “Available benefits” box, on the left side of the web page (see the screenshot below). Once it is highlighted, click the > arrow to move it to the “Selected benefits” box to the right. The Selected benefits are those that will be used in the model.

Similarly, to remove a benefit from the “Selected benefits” box, users can click on its name, then click on the < arrow to move it back to the “Available benefits” box to the left.

If, at this stage, users realize that they have not yet created a benefit or population group that they wish to include in the model, they can go back to the Configuration tab and create it now.

The screenshot shows the ILO/RAP Model Wizard interface. At the top, there is a navigation bar with the ILO logo, the text 'International Labour Organization', and the ILO/RAP logo with the text 'Rapid Assessment Protocol Social Protection Costing Tool'. Below the navigation bar, there are tabs for 'Home', 'Configuration', 'Models', and 'Scenarios'. A search bar and user information are also present. The main content area is titled 'Step 2: Select benefits' and contains a list of 'Available benefits' and a list of 'Selected benefits'. The 'Available benefits' list includes 'Maternity benefit', 'Infant Benefits', 'School Lunch II', and 'Unemployment care'. The 'Selected benefits' list includes 'Prenatal and infant benefit', 'School Lunch I', 'Social Development Bond', 'Health protection for the informal workers', and 'Non contributory pension'. A blue arrow points from the 'Available benefits' list to the 'Selected benefits' list. At the bottom right, there is a blue arrow pointing left, a red 'Edit' button, and a blue arrow pointing right.

Once all the benefits to be included in the model are in the “Selected benefits” box, users can click on the forward arrow in the bottom-right corner of the web page in order to continue to Step 3.

3. Model Wizard Step 3: Linking population groups and benefits

Once users have selected the benefits that they would like to include in the model, they can choose the relevant beneficiary population groups.

The benefits selected to include in the model are listed in the “Selected benefits” box on the left side of the web page (see the screenshot below). By clicking on each of these benefits individually, users can choose the beneficiary population groups to receive that benefit, using the same mechanism as in Model Wizard Step 2: select a name from the “Available population groups” box and use the arrow to move it to the “Population groups receiving the benefit” box. Similarly, users can remove a population group from their selection by clicking on its name in the “Population groups receiving the benefit” box, then clicking on the arrow to return it to the “Available population groups” box.

If, at this stage, a population group to include in the model has not yet been created, users can return to the Configuration tab and create it.

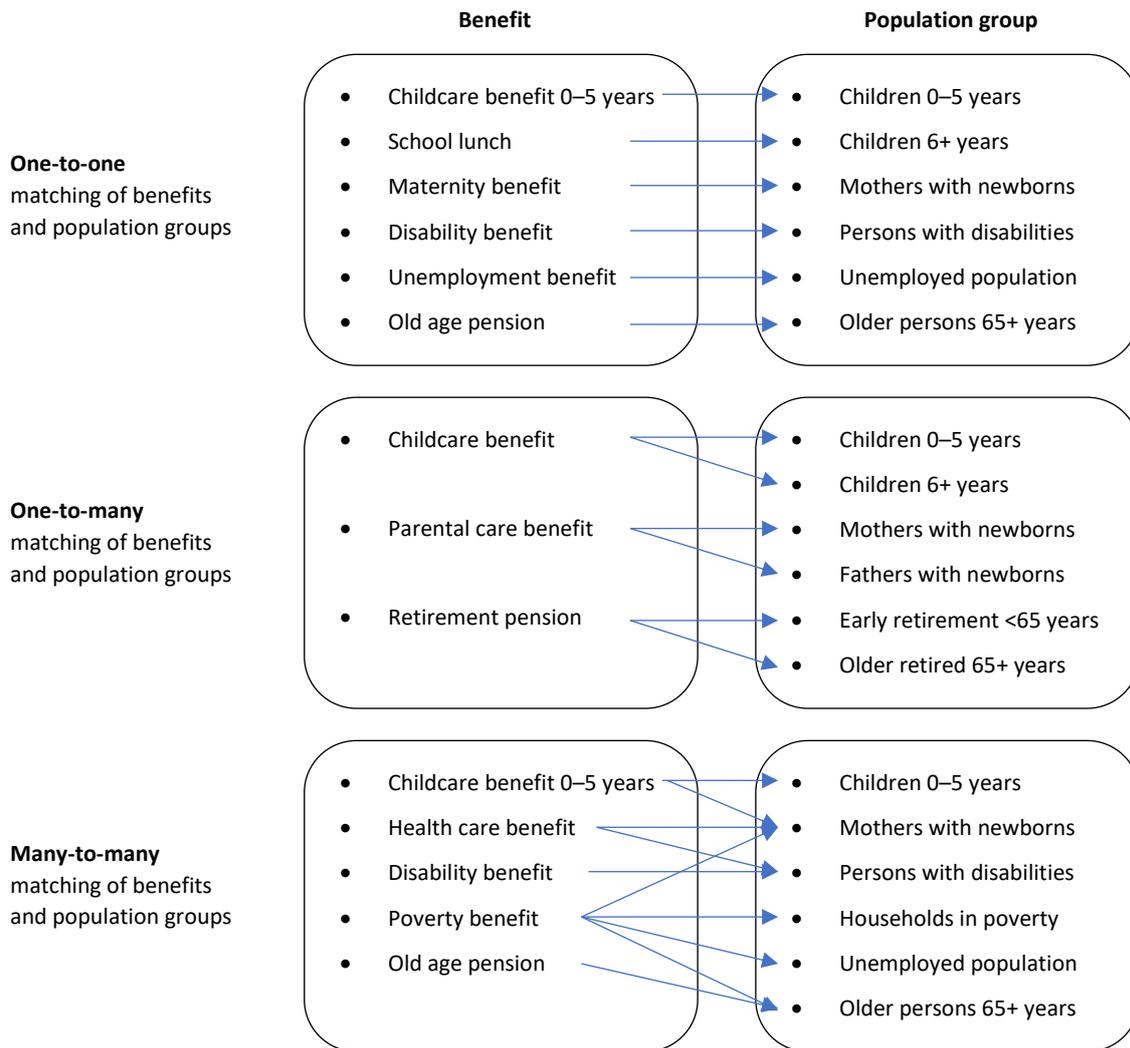
The screenshot displays the ILO/RAP Model Wizard interface at Step 3. The top navigation bar includes the ILO and ILO/RAP logos, a menu (Home, Configuration, Models, Scenarios), a language selector, a user profile (sudhir@ilo.org), and a logout button. Below the navigation bar, a message states "Model already calculated!". The main content area is divided into three columns:

- Selected benefits:** A list of benefits including "Prenatal and infant benefit" (highlighted in red), "School Lunch I", "Social Development Bond", "Health protection for the informal workers", and "Non contributory pension".
- Population groups receiving the benefit:** A list of population groups including "Pregnant women" and "Children under 2 y o".
- Available population groups:** A list of available population groups including "Pre-school children", "Primary school", "Secondary school", "Poor families", "Informal economy workers", "Old age non formally covered", "Disabled", and "Long term unemployed".

Navigation instructions at the top of the main area state: "For each selected benefit (click benefit name to select), use the arrows to move population groups from the list of all available population groups (left) to the population groups you wish to receive benefits in the model (right)." An "Edit" button with left and right arrows is located at the bottom right of the main area.

Users must make sure to click on each of the selected benefits in order to configure the population groups that will receive them. The ILO recommends configuring benefits so that all beneficiary population groups' needs are covered by the set of benefits offered. This can be achieved by either (1) basing benefits on individual population groups' requirements (one-to-one matching of benefits and population groups, such as with old age pension), (2) using a variety of benefits to fulfil the needs of one population group (many-to-one matching), or (3) giving the same benefit to many population groups (one-to-many matching). Most commonly, the complete set of needs of population groups are met by a combination of the above (many-to-many matching) such that each individual benefit in a set of benefits works in complementarity with the others to meet the needs of each population group. Figure 6 outlines these various options.

Figure 6: Options for matching benefits with beneficiary population groups in ILO/RAP



Once users have selected all the population groups that they wish to include in the model, they can click on the forward arrow in the bottom-right corner of the web page in order to continue to Step 4.

4. Model Wizard Step 4: Benefit amounts and other information in the base year

In Step 4, users can set up the benefit amounts, the number of transfers per year, the administrative expenditure and the populations covered in the base year (namely, the year that immediately precedes the projection period). This web page (see the screenshot below) also includes a field titled “Ideal benefit threshold”, which is the ideal amount of money that should be given to each beneficiary per year in order to achieve the aims of the benefit; this field is required for gap calculations that will be seen in later steps.

On this web page, the average household size for the population in the base year is also set.

The screenshot displays the ILO/RAP Model Wizard interface for Step 4. The sidebar on the left lists the steps, with Step 4, 'Input benefit details in base year', highlighted. The main content area is titled 'For each selected benefit (click benefit name to select), fill in benefit details in the base year of the model.' It features a list of benefits: 'Prenatal and infant benefit' (selected), 'School Lunch I', 'Social Development Bond', 'Health protection for the informal workers', and 'Non contributory pension'. To the right of this list are input fields for various parameters:

Parameter	Value
Initial benefit amount *	5,000
Number of transfers per year *	8
Total Administrative Expenditure *	121,000,000
Initial ideal benefit threshold *	60,000
Initial covered population - Female *	18,451
Initial covered population - Male *	0
Average household size *	6.1

At the bottom right of the main area, there are two blue double-headed arrows. The page header includes the ILO and ILO/RAP logos, navigation links (Home, Configuration, Models, Scenarios), and user information (Language, sudhir@ilo.org, Logout).

5. Model Wizard Step 5: Population groups and benefits info

Step 5 generates a summary table for all the benefit information added in the previous steps (see the screenshot below). It also shows the total annual expenditure for each benefit, calculated on the basis of data input on benefit amounts and number of transfers per year. Finally, it displays the covered population in terms of individuals or households, depending on the benefit.

This overview serves as a “consistency check” for the benefits included in the model. Benefits are listed by row, and each category of information is a column.

The screenshot shows the ILO/RAP software interface. The header includes the International Labour Organization logo and the ILO/RAP logo. The navigation menu on the left lists steps from Step 1 to Step 9, with Step 5, 'Population Groups and benefits info', highlighted. The main content area displays a message: 'Model already calculated!' and a table with the following data:

Social Protection Benefit	Population Groups	Transfers per year	Benefit amount (per transfer)	Total expenditure	Administrative expenditure	Number of Households
Prenatal and infant benefit	Pregnant women, Children under 2 y o	8	5,000	859,040,000	121,000,000	
School Lunch I	Pre-school children, Primary school	200	109	13,657,220,400	0	
Social Development Bond	Poor families	1	100,000	36,448,100,000	4,754,000,000	3
Health protection for the informal workers	Informal economy workers	12	1,200	233,044,000	2,644,000	
Non contributory pension	Old age non formally covered, Disabled	12	18,000	46,696,000,000	2,200,000,000	

At this stage, if a user needs to edit any of the benefits entered, they can go back and do so. Once users have verified that all the information entered up to this point is correct, they may proceed to Step 6.

6. Model Wizard Steps 6 and 9: Qualitative details of benefits and summary table

Step 6 offers users the opportunity to add descriptive details to the benefits included in the model (see the screenshot below). Whereas the previous steps dealt with quantitative information, this step allows users to enter qualitative information for easy reference by team members, the user themselves or other future users. This includes information on the policy gaps that the benefit is intended to fill, any implementation issues that it may have, policy recommendations concerning it (presently and with respect to changes in the future) and any additional notes to include for future reference.

The fields in Step 6 are optional and can serve as a useful reference point.

The screenshot displays the ILO/RAP web application interface. At the top, there is a navigation bar with the ILO logo and the text 'International Labour Organization' and 'ILO/RAP Rapid Assessment Protocol Social Protection Costing Tool'. Below this is a secondary navigation bar with 'Home', 'Configuration', 'Models', and 'Scenarios' tabs, along with a language selector and a user profile icon for 'sudhir@ilo.org'. The main content area is titled 'Model already calculated!' and contains a sidebar with steps 1 through 9. Step 6, 'Qualitative details of benefits', is currently selected and highlighted in green. The main content area shows a list of benefits: 'Prenatal and infant benefit' (highlighted in red), 'School Lunch I', 'Social Development Bond', 'Health protection for the informal workers', and 'Non contributory pension'. Below the list are four text input fields: 'Policy gaps' (containing 'Basic income security for children'), 'Implementation issues', 'Policy recommendations', and 'Additional notes'. A double-headed arrow is located in the bottom right corner of the interface.

After users have added the optional details to each benefit, they can click the forward arrow in the bottom-right corner of the web page to advance to the next step.

A full summary of benefits filled in Step 6 can be viewed in the summary table in Step 9.

The screenshot shows the ILO/RAP web interface. The header includes the International Labour Organization logo and the ILO/RAP logo. The navigation menu on the left lists steps from Step 1 to Step 9, with Step 9 'Matrix assessment preview' highlighted. The main content area displays a table titled 'The table below provides a summary of the main characteristics of each benefit in detail.'

Benefit name	Main characteristics			Legal basis
	Social Protection Function	Social Protection Component	Population Groups	
Prenatal and infant benefit	Children	Basic income security for children	Children under 2 y o,Pregnant women	
School Lunch I	Food and Nutrition	Basic income security for children	Pre-school children,Primary school	
Social Development Bond	Social Work Services	Combination of the above	Poor families	
Health protection for the informal workers	Healthcare	Access to essential healthcare	Informal economy workers	
Non contributory pension	Old age	Basic income security for older persons	Disabled,Old age non formally covered	

A blue arrow points to the bottom right corner of the table area.

7. Model Wizard Step 7: Population and labour force information

Step 7 allows users to input data on the population and the labour force by sex and age in the base year. In this table (see the screenshot below), age (0–100 years) is represented by row and sex (female/male) by column, under national population and labour force column headers.

Labour force information is only required if one of the population groups uses the labour force as a reference population. If the country in question only has population data by 5-year age groups (0–4, 5–9 and so on), the methodology for calculating single-year-of-age (SYOA) demographics can be found in **Appendix III** Methodology for calculating single-year-of-age demographics from five-year age groups).

The table supports copying and pasting from Microsoft Excel and other spreadsheet software.

The screenshot shows the ILO/RAP software interface. The navigation menu on the left lists steps from Step 1 to Step 9, with Step 7 'Matrix input by sex' highlighted. The main content area displays a table titled 'Fill in national population and labour force details by age and sex below.' The table has columns for Age, National Population (Female, Male), and Labour Force (Female, Male). The data is as follows:

Age	National Population - Female	National Population - Male	Labour Force - Female	Labour Force - Male
0	286,797.0	291,762.0	0.0	0.0
1	277,886.0	283,111.0	0.0	0.0
2	269,647.0	274,895.0	0.0	0.0
3	261,764.0	267,004.0	0.0	0.0
4	254,100.0	259,328.0	0.0	0.0
5	246,846.0	251,795.0	0.0	0.0
6	240,136.0	244,882.0	0.0	0.0
7	209,898.0	222,364.0	0.0	0.0
8	207,070.0	218,971.0	0.0	0.0
9	203,669.0	215,161.0	0.0	0.0
10	199,947.0	211,119.0	0.0	0.0
11	196,069.0	206,834.0	0.0	0.0
12	191,897.0	202,523.0	0.0	0.0
13	187,188.0	197,627.0	0.0	0.0
14	182,457.0	192,722.0	0.0	0.0
15	177,810.0	187,752.0	101,343.0	100,535.5
16	173,084.0	182,603.0	101,343.0	100,535.5
17	168,520.0	177,495.0	101,343.0	100,535.5

At the bottom right of the table area, there is an 'Edit' button with left and right arrow icons.

8. Model Wizard Step 8: Gap calculation

Step 8 reflects the gaps in coverage, financing and adequacy in the base year (namely, the status quo, before additional or extended benefits are modelled) – see the screenshot below. Before calculating the gaps, users are advised to verify the previous steps once more, as well as the population groups and benefits in the configuration stage, in order to ensure that all numbers are reflected correctly. Once the gap calculation is undertaken, the model can no longer be altered.

The coverage gap is defined in ILO/RAP as the gap between the number of beneficiaries covered and the total number of beneficiaries who should receive a benefit. The adequacy gap is defined in ILO/RAP as the gap between the benefit amount that is provided and the ideal benefit threshold. The absolute financing gap is the level of resources needed to close both adequacy and coverage gaps; when this is seen as a proportion of the current budget, it is referred to as the relative financing gap.

To calculate these gaps based on the information entered and verified in previous steps, click on the “Calculate gaps” button in the top-left area of the web page. The gaps summary table will then be completed with an overview of the gaps in each category.

The table below illustrates the gaps in coverage, adequacy and financing for each benefit.

Benefit name	Coverage gap		Adequacy gap		Financing Gap	
	Absolute	Relative	Absolute	Relative	Absolute	Relative
Prenatal and infant benefit	1,953,613.15	99%	20,000	33%	136,863,738,29...	
School Lunch I	3,718,740.95	86%	18,200	46%	160,151,537,600	
Social Development Bond	723,736.22	70%	0	0%	83,229,402,659...	
Health protection for the informal workers	2,096,169.53	99%	0	0%	2,330,645,767.53	
Non contributory pension	585,683.15	74%	0	0%	36,386,606,014...	



As has been shown in this subsection, in the Model tab, users can set parameters such as:

- which benefits to include in a social protection system;
- which population groups the chosen benefits go to;
- benefit amounts, eligibility thresholds and other legal and descriptive information on benefits;
- the initial year and the duration of the model; and
- population and labour force size, GDP and government expenditure, and household size in the initial year.

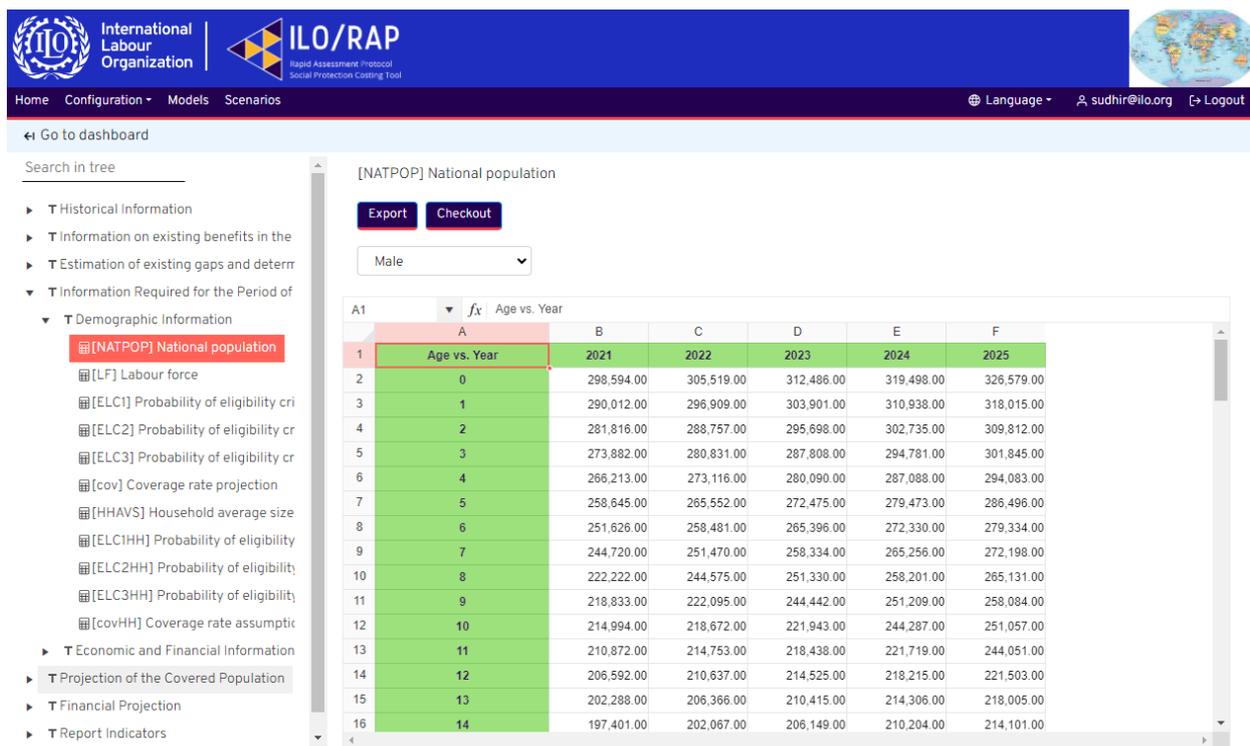
To add further information on the benefits over the course of the projection period, users can go to the Scenarios tab.

3.5 Step 4: Creating scenarios and viewing outputs

- Definition of scenarios in ILO/RAP
- The usefulness of multiple scenarios
- Which matrices are pre-filled, which get calculated, and which to fill in Scenarios view

Scenarios tab

The Scenarios view consists of a navigation tree of matrices on the far left side of the web page, and the matrix detail on the right side (see the screenshot below). The navigation tree can be used to access input and output matrices. When a matrix name is selected, it opens on the right side and the user can see a detailed view of the different dimensions of indicators that it involves, such as sex, age, time, cost/expenditure, among others. Some input matrices have already been edited in previous steps and come pre-filled in the Scenarios view; others need to be edited in order to fill information for calculations. When all input matrices have been filled in, the scenario can be run and output matrices generated by clicking the “Run” button in the previous Scenarios menu.



The screenshot displays the ILO/RAP web interface. The top navigation bar includes the ILO logo, 'International Labour Organization', and 'ILO/RAP Rapid Assessment Protocol Social Protection Costing Tool'. The main content area is divided into a left navigation tree and a right matrix detail view.

Navigation Tree (Left):

- Historical Information
- Information on existing benefits in the
- Estimation of existing gaps and deterr
- Information Required for the Period of
 - Demographic Information
 - [NATPOP] National population** (highlighted)
 - [LF] Labour force
 - [ELC1] Probability of eligibility cri
 - [ELC2] Probability of eligibility cr
 - [ELC3] Probability of eligibility cr
 - [cov] Coverage rate projection
 - [HHAVS] Household average size
 - [ELC1HH] Probability of eligibility
 - [ELC2HH] Probability of eligibility
 - [ELC3HH] Probability of eligibility
 - [covHH] Coverage rate assumptic
 - Economic and Financial Information
 - Projection of the Covered Population
 - Financial Projection
 - Report Indicators

Matrix Detail View (Right):

Matrix: [NATPOP] National population

Buttons: Export, Checkout

Dropdown: Male

A1	fx	Age vs. Year				
	A	B	C	D	E	F
1	Age vs. Year	2021	2022	2023	2024	2025
2	0	298,594.00	305,519.00	312,486.00	319,498.00	326,579.00
3	1	290,012.00	296,909.00	303,901.00	310,938.00	318,015.00
4	2	281,816.00	288,757.00	295,698.00	302,735.00	309,812.00
5	3	273,882.00	280,831.00	287,808.00	294,781.00	301,845.00
6	4	266,213.00	273,116.00	280,090.00	287,088.00	294,083.00
7	5	258,645.00	265,552.00	272,475.00	279,473.00	286,496.00
8	6	251,626.00	258,481.00	265,396.00	272,330.00	279,334.00
9	7	244,720.00	251,470.00	258,334.00	265,256.00	272,198.00
10	8	222,222.00	244,575.00	251,330.00	258,201.00	265,131.00
11	9	218,833.00	222,095.00	244,442.00	251,209.00	258,084.00
12	10	214,994.00	218,672.00	221,943.00	244,287.00	251,057.00
13	11	210,872.00	214,753.00	218,438.00	221,719.00	244,051.00
14	12	206,592.00	210,837.00	214,525.00	218,215.00	221,503.00
15	13	202,288.00	206,366.00	210,415.00	214,306.00	218,005.00
16	14	197,401.00	202,067.00	206,149.00	210,204.00	214,101.00

1. Inputs

To fill in an input matrix, click on its name, then on the matrix bar on top of the open matrix, and on the “Checkout” button, to make the matrix editable. Users can fill the blank boxes with information, and once they have completed filling the matrix, they can click on the “Check In” button to save their progress and proceed to the next matrix. This can be thought of as borrowing a book from a library: one must check out the book in order to read it, and check it in when one is done with it; while one has a

book checked out, no other library member may borrow it. Similarly, while one user has a matrix checked out, no other user can edit it. This is to prevent the loss of work that could otherwise occur if multiple users were to unintentionally edit the same matrix simultaneously.

ILO/RAP supports the copy-and-paste functionality; so users can export the matrix into spreadsheet software such as Microsoft Excel using the Export CSV function, edit the matrix in that software using more complicated formulas, and import the saved CSV file into an open (checked out) matrix by simply copy-and-pasting or using the Import CSV function. If users choose this way of working, they must take care not to change the CSV file's format or its dimensions while working on it (for example, by saving the file as XLS or XLSX, or by adding columns or rows); otherwise, the tool will not accept the file import.

As mentioned, if users have followed all the steps of the Model Wizard while creating a model, the matrices under the folders "Information on existing benefits in the base year" and "Estimation of existing gaps and determination of possible adjustments to reach the desired Social Protection Floor" should appear pre-filled, and in the Scenarios tab they will only need to fill the matrices for historic information and information required for the projection, found in the folders "Information Required for the Period of Projection", and optionally, "Historical Information". In order to facilitate this and the projection of outputs, users should keep at hand projections on total and beneficiary populations, scheme finances (costs and expenditure), and benefits for the period of the projection.

When all the matrices are filled, users can select the "Calculate" button in the top-left area of the page in order to use these inputs to generate projections.

2. Outputs

Projections are found in three folders – "Projection of the Covered Population", "Financial Projection" and "Report Indicators" (see the screenshot below) – which differ in the level of detail in the intermediate calculations. All of these matrices can be exported individually by using the "Export" button at the top-left of each matrix.

The screenshot displays the ILO/RAP software interface. At the top, there are logos for the International Labour Organization and ILO/RAP. Below the logos is a navigation bar with 'Home', 'Configuration', 'Models', and 'Scenarios'. A search bar and user information are also present. The main content area shows a report titled '[CPb_at] Covered population (by benefit and sex)'. On the left, a search tree lists various indicators, with '[CPb_at] Covered population (by benefit and sex)' selected. The main table shows data for 'Benefit/Sex vs Year' from 2020 to 2025. The table is organized into sections for different benefits: Prenatal and infant benefit, School Lunch I, Health protection for the informal workers, Non contributory pension, and Maternity benefit. Each section lists Male and Female data points.

A1:B1	A	B	C	D	E	F	G	H
	Benefit/Sex vs Year		2020	2021	2022	2023	2024	2025
1	Benefit/Sex vs Year							
2	Prenatal and infant benefit							
3	Male		0.00	0.00	0.00	0.00	0.00	0.00
4	Female		18,451.00	19,298.92	45,868.26	82,959.01	121,916.25	162,761.52
5	School Lunch I							
6	Male		313,239.00	493,421.99	762,522.96	1,178,791.84	1,822,948.18	2,820,219.01
7	Female		313,239.00	476,356.63	739,070.39	1,146,942.53	1,780,324.79	2,764,264.66
11	Health protection for the informal workers							
12	Male		8,000.00	141,724.32	285,328.44	437,767.12	598,884.36	770,357.60
13	Female		8,000.00	201,705.86	406,087.12	623,041.91	852,348.27	1,096,393.57
14	Non contributory pension							
15	Male		103,000.00	101,677.45	201,513.68	228,812.84	257,914.26	311,116.12
16	Female		103,000.00	110,492.72	218,823.98	248,375.49	279,941.76	337,778.00
17	Maternity benefit							
18	Male		0.00	0.00	0.00	0.00	0.00	0.00
19	Female		0.00	0.00	0.00	0.00	0.00	0.00

Although the tool allows for multiple models to be created in order to enable users to create exploratory training and testing models before agreeing upon a final version, the ILO recommends using just one final model per country. This model should include all the benefits and population groups currently existing and planned in future years in the country within the scope of the model. With a common base-year population and financial parameters, users can then create different scenarios within this model to enable comparisons – between benefit amounts, benefit scale-up amounts over time, population group changes over time, and so on – to view how changes to each variable will affect beneficiaries and expenditures. The option to create multiple models is useful if users have created a model to which they would like to add another benefit that they had forgotten to add previously; in this case, they can duplicate an existing model and use the Model Wizard to add or remove those benefits before completing the model creation process. Table 2 clarifies this process.

Table 2: Choosing between a model and scenario

Situation	Create a Model	Create a Scenario
Initial exploration and testing	✓	✓
Modification of an existing model before it is run	✓ Model Wizard allows addition or removal of benefits	
Inclusion of benefits, population groups and financial parameters in the base year	✓ Model should include all current and future benefits and population groups	
Changes to benefits, population groups and		✓ Scenarios can change benefit allocations and population

financial indicators over the modelling time period		group coverage over time
Adding or removing a benefit after the model has been run (and scenarios created)	✓ Users can duplicate an existing model	✓ Scenarios enable changes to be made within a model

Scenarios of the same model are comparable by default; but models, owing to the differences in their base-year parameters and the assumptions behind them, are not.

4. Next steps

Suggested steps for a consultant or government employee after carrying out the RAP analysis:

1. Draft an initial report with findings from the RAP analysis, ideally in a team
2. Discuss results with government stakeholders and policymakers
3. Use their feedback to modify the model/scenarios and redo the exercise
4. Repeat steps 2 and 3 until a satisfactory set of results and recommendations is reached
5. Draft a final report with the analytical findings and final recommendations

Frequently Asked Questions

- **What is required to learn how to use the model?**

- This user manual
- Initial training session with the ILO (1–1.5 hours)
- Follow-up sessions while filling in the model

- **What is required *before* starting to use the model?**

- **Data:** Basic population statistics and projections for the modelling period (single-year-of-age demographics, disaggregated by sex), basic labour market and macroeconomic statistics (GDP, government expenditure and others) for the period of the projection, and so on
- **Team roles:** administrator, data cleaning and entry, consistency checks, discussion and presentation, liaison with ministries for data
- Information on **beneficiary groups and benefits** to be included in the model, whether currently existing or potential (to be decided through group consultation between relevant stakeholders including teams from the social security ministry, labour ministry, health ministry, education ministry, academics and others)
- **Optional:** In the case that population data are only available by 5-year age groups, please see **Appendix III** (Methodology for calculating single-year-of-age demographics from five-year age groups).

- **What are the potential uses or use scenarios of the model?**

- Rapid analysis of existing social protection systems and their coverage and financing gaps
- Projection of financing needs for maintaining a set of social protection benefits
- Ex ante costing analysis of future social protection systems (by adding a new benefit, modifying or removing an existing benefit, merging two benefits, or adding new beneficiary population groups, for example) and comparisons of scale-up of coverage and financing towards universal social protection
- Quick costing of one or more social protection benefits (though system-wide costing is recommended)

See also section 1.

- **What to do if one has already used RAP Excel? What are the differences between RAP Excel and online?**

The data requirements are the same. The way the data entry process is sorted is slightly different, for ease of use.

- **What is the process flow in ILO/RAP?**

See Figure 5.

Glossary of terms

Attributes of social protection benefits that are taken into consideration by ILO/RAP include the following:

- **Benefit in cash or in kind:** Although the benefit may be granted in cash or in kind, its monetary value or its cost will need to be entered.
- **Source of financing:** Only non-contributory benefits are considered for the purposes of this model.
- **Lump sum (one-time payment) or periodic benefit:** The model allows any number of payments per year, so that, for example, monthly or bimonthly benefits can be defined.
- **Eligibility conditions:** Different eligibility conditions can be defined for each benefit – for example, the eligible age range or the age at which one becomes eligible, the fulfilment of a risk or vulnerability condition and so on.
- **Objective population:** The population that should be covered according to the regulations.
- **Covered population:** The population receiving benefits.
- **Benefit function:** The main purpose for which social protection benefits are provided; to be chosen from the 17 functions derived from Recommendation No. 202 (see subsection 3.3).
- **Social protection guarantee:** The guarantee corresponding to the benefit, according to the four guarantees of Recommendation No. 202 (essential healthcare, protection of children, protection of persons of working age and protection of the elderly).

Appendix I Standard population groups

The following list is non-exhaustive and includes examples of potential population groups that can be included in the model.

General by age and sex

- Population
- Nationals
- Non-nationals
- Population in rural areas
- Population in urban areas
- Population living below the poverty line
- Persons covered by health insurance (including dependants)
- Persons contributing to health insurance programmes

Children

- All children below a certain age
- Children of a certain age
- Children enrolled at school
- Children living in poor households
- Households with poor children
- Households with children
- Households with children living in rural areas
- Households with a certain number of children
- Children with HIV/AIDS
- Children with disabilities
- Orphans
- Children with tuberculosis/malaria/other

Working age population

- Women who are pregnant
- Women in employment who are pregnant
- Women in informal employment who are pregnant
- Women in paid employment who are pregnant
- Self-employed women who are pregnant
- Women in rural areas who are pregnant
- Unemployed women who are pregnant
- Women in poor households who are pregnant
- Labour force
- Employed
- Self-employed

- Paid employed
- Unemployed persons
- Unemployed youth
- Registered unemployed
- Informal employment
- Migrant workers
- Domestic workers
- Working-age population contributing to a pension/maternity/unemployment/other scheme
- Working-age population neither contributing to a pension scheme nor receiving a pension benefit
- Persons covered by pension scheme
- Persons covered by maternity protection scheme
- Persons covered by unemployment insurance
- Survivors
- Victims of work injuries
- Persons with disabilities
- Survivors (below pensionable age)
- Persons engaged in public works programmes

Old age

- Old-age persons above a certain age
- Old-age persons not receiving a contributory pension
- Old-age persons receiving a contributory pension
- Old-age persons receiving a social pension
- Veterans
- Old-age persons with disabilities
- Survivors (above the pensionable age)

Appendix II Calculation of the annual adjustment of benefits in real and nominal terms

$adjben_{b,g,t}$: Annual adjustment of the benefit b , population group g in year t .

$grealr_{b,g,t}$: Real benefit growth of benefit b , population group g in year t .

$gnomr_{b,g,t}$: Nominal benefit growth of benefit b , population group g in year t .

inf_t : Inflation rate in year t .

The model requires the input of the assumption for annual adjustment of the benefit. The value is provided by the user based on their observed experience and expectations of future development.

The user must define whether they want projections to be calculated in real terms or in nominal terms. If the first option is chosen, the user must define whether the annual adjustment is to be provided in real terms directly or calculated with inflation rate and the nominal growth. If the second option is chosen, the user must define whether the annual adjustment in nominal terms will be provided directly or whether it will be calculated with the real growth and inflation rate. In both cases, when the calculation is chosen, the formulas are as follows:

$$grealr_{b,t} = \frac{1 + gnomr_{b,t}}{1 + inf_t} - 1$$

$$gnomr_{b,t} = (1 + grealr_{b,t})(1 + inf_t) - 1$$

In any case, the growth rate, whether directly introduced or calculated with one of the two formulas, will be assigned to the variable $adjben_{b,g,t}$.

Appendix III Methodology for calculating single-year-of-age demographics from five-year age groups*

Introduction

The growing demand for information on the population by precise age and calendar year, which also enables the generation of five- or ten-year age group aggregates, calls for alternative solutions using the available data. Although it is possible to produce population projections by single year of age and calendar year, this option is, in the short term and for most countries, a difficult task to solve due to the amount of information needed for its generation.

Population projections at the national level are generally made using the component method with information on fertility, mortality and migration, and this methodology can also be applied to lower-level administrative units (departments) when such information is available. In the case of Latin American countries, population projections have been obtained through PRODEX, a programme using Microsoft Excel and developed by the United Nations Population Division CELADE (Centro Latinoamericano y Caribeño de Demografía), which uses information by five-year age groups – consequently the results correspond to populations by five-year age groups and for every five years.

The procedure proposed here is based on interpolation techniques that make it possible to solve this type of problem in a fairly simple manner, even though the mathematical procedures involved are not so simple. In summary, this methodology uses Sprague Multipliers² to break down the five-year age groups into single years of age, of men and women, in each of the country's departments. In order to disaggregate the group 0–4 years of age, a special methodology (developed at CELADE³), and another for the population over 70 years old, are proposed.

Disaggregation of the population by single year of age

The use of Sprague Multipliers to break down the population by single year of age is applied to the population of 5 years of age and over, imposing the condition that the groups to be disaggregated correspond to the central group of Sprague Multipliers (they use five age groups), differentiating those that correspond to the extreme (two), semi-extreme (two) and central groups.

In addition, because the projection programme reaches only the five-year age group 75–79, the population in the open group 80 years of age and above is disaggregated into the groups necessary to meet the condition that the group to be disaggregated is the central one. The 0–4 group is exposed to fertility changes and therefore requires a different approach.

* Centro Latinoamericano y Caribeño de Demografía (CELADE). “*Un procedimiento para obtener la población por edades simples y años calendario, a partir de poblaciones por grupos quinquenales de edad y para cada cinco años*”. Unedited.

² Shryock Henry S., Jacob S. Siegel and Associates, *The Methods and Materials of Demography* (New York: Academic Press, 1976).

³ Moya, Oscar. “*Descomposición del grupo de menores de 5 años en edades simples en base a las proyecciones de población*”. *Notas de Población* No. 45, December 1987.

Disaggregation of the population between 5 and 69 years of age

Given the Sprague Multipliers (ms_{ij} , table 1) y , the population of the five-year age group between x and $x+4$ (N_i), the single-year-of-age population x , $x+1$, $x+2$, $x+3$, and $x+4$ is obtained, using the following relationship:

$$N_{x+(j-1)} = \sum_{i=1}^5 [N_i * ms_{ij}] \quad \text{with } j = 1, 2, 3, 4 \text{ and } 5$$

For groups 5–9, the multipliers corresponding to the semi-extreme group are used; in this case the group to be disaggregated is (N_2) with i varying from 1 to 4.

Sprague Multipliers for disaggregating five-year age groups to single-year-of-age groups

Age groups (i)	Single years of age (j)				
	1	2	3	4	5
Semi-Extreme					
1	0.0336	0.0080	-0.0080	-0.0160	-0.0176
2	0.2272	0.2320	0.2160	0.1840	0.1408
3	-0.0752	-0.0480	-0.0080	0.0400	0.0912
4	0.0144	0.0080	0.0000	-0.0080	-0.0144
Central					
1	-0.0128	-0.0016	0.0064	0.0064	0.0016
2	0.0848	0.0144	-0.0336	-0.0416	-0.0240
3	0.1504	0.2224	0.2544	0.2224	0.1504
4	-0.0240	-0.0416	-0.0336	0.0144	0.0848
5	0.0016	0.0064	0.0064	-0.0016	-0.0128

Disaggregation of group 0–4

To disaggregate the group 0–4 of year t , the group 5–9 is rejuvenated, already disaggregated by single years of age of year $t+5$, that is:

$$N_x^t = \frac{N_{x+5}^{t+5}}{5P_x}$$

where:

N_x^t : is the population of age x at time t ;

N_{x+5}^{t+5} : is the $x+5$ population at time $t+5$, and;

$5P_x$: is the probability that people of age x , of the stationary population, will survive five years.

To rejuvenate the population between 5 and 9 years of age, single-year-of-age-specific survival ratios for five-year intervals ($5P_x$) are calculated from the time lived between ages x and $x+1$ of the stationary population in the mortality table (L_x). The mortality tables of the population projections contain the time lived of the group 0–4 disaggregated into 0–1 and 1–4, and the rest by five-year groups. Consequently, the L_x from 1 to 9 years should be calculated, which is generated in the following way:

- a) Group 5–9 is disaggregated with the Sprague Multipliers for the semi-extreme group, namely:

$$L_{5+(j-1)} = \sum_{i=1}^4 [L_i * ms_{ij}] \text{ where } j = 1, 2, 3, 4 \text{ and } 5$$

- b) Group 1–4 is broken down on the basis of the structure implicit in the Coale and Demeny mortality model tables, the western model, and a linear interpolation of the level of the model tables corresponding to the time lived L_{1-4} of the available tables.

- c) The survival ratios sought are given by:

$${}_5P_x = \frac{L_{x+5}}{L_x} \text{ with } x = 0, 1 \dots 4$$

If, when the last year of the series under study is broken down, the 5–9-year-old population at time $t+5$ is not available, and the mortality tables do not correspond to the period $t, t+5$, then the distribution of the previous year is taken.

Breakdown of the population corresponding to age groups of 70–74, 75–79 and 80–84 years

Although the projections of the national and departmental population were generated by five-year age groups up to 100 years, the application of this methodology to break down by single year of age from 80 years onwards may give inconsistent results. For this reason, the open group is considered to be ≥ 80 years of age and must be broken down into five-year age groups (80–84, 85–89, 90–94 and ≥ 95 years), so that the last group to be broken down, 80–84 years of age, is the central group.

Let t_{15} be the year for which you want to disaggregate the population from age 70 onwards, and ${}_5P_{70-74}$ be the survival ratio for the 70–74 group.

To open the group ≥ 80 years of age, obtain the ${}_5P_{75-79}$; ${}_5P_{80-84}$ y ${}_5P_{85-89}$, by linear interpolation in the Coale and Demeny model mortality tables, determining the level with the ${}_5P_{70-74}$ of the country's mortality tables; this is done for the five-year periods between t_0 and t_{15} . Knowing the survival relationships, the population of the age groups is projected from 75–79 of t_0, t_5 and t_{10} to the time t_{15} , thus obtaining the age groups of 80–84, 85–89 and 90–94 years, for this year. Then the Sprague Multipliers are applied to disaggregate the groups 70–74, 75–79 and 80–84.

When no information is available for periods prior to t_0, t_5 and t_{10} , to disaggregate the groups 70–74, 75–79 and 80–84, the structure of year t_{15} to year t_{10} , the structure of year t_{10} to year t_5 and finally the structure of year t_5 to year t_0 , are applied. Thus, the population is obtained by five-year groups between 70 and 95 years of age, allowing then to disaggregate the age groups of 70–74, 75–79 and 80–84 years, using the Sprague multipliers for the central group.

Conclusions and recommendations

The disaggregation of the population by single years of age and calendar years from populations in five-year age groups and every five years as proposed in these notes represents a solution based primarily on mathematical methods; consequently, it will not meet the requirements of a projection by single years of age and calendar years, in which the demographic variables have been used with the necessary level of disaggregation for an exercise of this nature.

The proposed procedure was designed to be applied generally to the five-year projections for each of the 20 Latin American countries and has been found to be quite satisfactory. However, the behaviour of the age structures of the population should always be observed, as well as their evolution over time, and adjustments should be made when and where necessary.

Appendix IV List of variables

n°	matrixcode	name
1. Historical Information		
(a) Information in the base year		
1	ILF	Initial labour force
2	liaRP	Initial age of the reference population in the base year
3	lfaRp	Final age of the reference population in the base year
4	IELC1	Probability of eligibility criteria 1 in the base year (for individuals)
5	IELC2	Probability of eligibility criteria 2 in the base year (for individuals)
6	IELC3	Probability of eligibility criteria 3 in the base year (for individuals)
7	ICP	Initial covered population (individuals)
8	IBAM	Initial benefit amount (for individuals)
9	ITHR_ABAM	Initial threshold for the annual benefit amount (for individuals)
10	Iantrans	Initial number of annual transfers (for individuals)
11	IELC1HH	Probability of eligibility criteria 1 in the base year (for households)
12	IELC2HH	Probability of eligibility criteria 2 in the base year (for households)
13	IELC3HH	Probability of eligibility criteria 3 in the base year (for households)
14	ICHH	Initial covered population (households)
15	IBAMHH	Initial benefit amount (for households)
16	ITHR_ABAMHH	Initial threshold for the annual benefit amount (for households)
17	IantransHH	Initial number of annual transfers (for households)
18	INATPOP	Initial national population
19	IADM	Initial administrative expenditure
20	ITEXP	Initial total expenditure
21	IOP	Initial objective population group
22	IRPOP	Initial reference population
23	IOPb	Initial objective population by benefit (the population that should receive the benefit)
24	IABAM	Initial annual benefit amount (for individuals)
25	IBEXP	Initial benefit expenditure (for individuals)
26	IOHH	Initial objective households (the households that should receive the benefit)
27	ITNHH	Initial total number of households
28	IABAMHH	Initial annual benefit amount (for households)
29	IBEXPHH	Initial benefit expenditure (for households)
30	Icovgaps	Initial coverage gap (by sex)
31	ICovgapPcts	Initial coverage gap relative to the objective population (by sex)
32	Icovgap	Initial coverage gap (total)
33	ICovgapPct	Initial coverage gap relative to the objective population (total)
34	Ifingap	Initial financing gap
35	IFingap_PctGDP	Initial financing gap as a percentage of GDP
36	IFingap_PctGEX	Initial financing gap as a percentage of government expenditure

n°	matrixcode	name
1. Historical Information (continued)		
(a) Information in the base year (continued)		
37	ladmr	Initial administrative expenditure relative to total expenditure
38	ladqgap	Initial adequacy gap
39	IAdqgapPct	Initial adequacy gap relative to the benefit threshold
40	ICovgapHH	Initial coverage gap (for households)
41	ICovgapHHPct	Initial coverage gap relative to the objective population (for households)
42	IFingapHH	Initial financing gap (for households)
43	IFingapHH_PctGDP	Initial financing gap as a percentage of GDP (for households)
44	IFingapHH_PctGEX	Initial financing gap as a percentage of government expenditure (for households)
45	IAdqgapHH	Initial adequacy gap (for households)
46	IAdqgapHHPct	Initial adequacy gap relative to the benefit threshold (for households)
(b) Historical demographic information		
47	HNATPOP	Historical national population
48	HLF	Historical labour force
49	HOP	Historical objective population (the population that should receive the benefit)
50	HELC1	Historical probability of eligibility criteria 1 (for individuals)
51	HELC2	Historical probability of eligibility criteria 2 (for individuals)
52	HELC3	Historical probability of eligibility criteria 3 (for individuals)
53	HCP	Historical covered population (individuals)
54	HHHAVS	Historical household average size
55	HOHH	Historical objective households (the households that should receive the benefit)
56	HELC1HH	Historical probability of eligibility criteria 1 (for households)
57	HELC2HH	Historical probability of eligibility criteria 2 (for households)
58	HELC3HH	Historical probability of eligibility criteria 3 (for households)
59	HCHH	Historical covered population (households)
60	HcovHH	Historical coverage rate (households)
(c) Historical financial information		
61	HBAM	Historical benefit amount (for individuals)
62	HABAM	Historical annual benefit amount (for individuals)
63	Hantrans	Historical number of annual transfers (for individuals)
64	HBEXP	Historical annual benefit expenditure (for individuals)
65	HBAMHH	Historical benefit amount (for households)
66	HadjbenHH	Historical annual adjustment rate (for households)
67	HABAMHH	Historical annual benefit amount (for households)
68	HantransHH	Historical number of annual transfers (for households)
69	HTBEXP	Historical total annual benefit expenditure
70	HADM	Historical administrative expenditure

n°	matrixcode	name
1. Historical Information (continued)		
(c) Historical financial information (continued)		
71	HTEXP	Historical total annual expenditure
72	HGDP	Historical Gross Domestic Product (GDP)
73	HGEXP	Historical government expenditure
(d) Benefit information		
74	NATPOP	National population
75	LF	Labour force
76	ELC1	Probability of eligibility criteria 1 (for individuals)
77	ELC2	Probability of eligibility criteria 2 (for individuals)
78	ELC3	Probability of eligibility criteria 3 (for individuals)
79	cov	Coverage rate projection
80	HHA VS	Household average size
81	ELC1HH	Probability of eligibility criteria 1 (for households)
82	ELC2HH	Probability of eligibility criteria 2 (for households)
83	ELC3HH	Probability of eligibility criteria 3 (for households)
84	covHH	Coverage rate assumption of households
85	<i>adjben</i>	Annual adjustment rate (for individuals)
86	<i>antrans</i>	Number of annual transfers (for individuals)
87	<i>adjbenHH</i>	Annual adjustment rate (for households)
88	<i>antransHH</i>	Number of annual transfers (for households)
89	<i>admr</i>	Administrative expenditure rate
90	<i>infrate</i>	Inflation rate
91	<i>gdp</i>	GDP growth rate
92	<i>gex</i>	Government expenditure as a percentage of GDP
2. Projections		
(a) Demographic projections		
93	RPOP	Reference population
94	OP	Objective population (the population that should receive the benefit)
95	CPb	Covered population (individuals)
96	CP	Protected population
97	TNHH	Total number of households
98	OHH	Objective households (the households that should receive the benefit)
99	CHH	Covered population (households)
(b) Financial projections		
100	BAM	Benefit amount (for individuals)
101	ABAM	Annual benefit amount (for individuals)
102	THR_ABAM	Threshold for the annual benefit amount (for individuals)
103	BEXP	Annual benefit expenditure (for individuals)
104	TBEXP	Total benefit expenditure (for individuals)

n°	matrixcode	name
2. Projections (continued)		
(b) Financial projections (continued)		
105	BAMHH	Benefit amount (for households)
106	ABAMHH	Annual benefit amount (for households)
107	THR_ABAMHH	Threshold for the annual threshold benefit amount (for households)
108	BEXPHH	Annual benefit expenditure (for households)
109	ADM	Administrative expenditure per benefit
110	TEXP	Total annual expenditure
111	PGDP	Gross Domestic Product (GDP)
112	GEXP	Government expenditure
113	TEXP_PctGDP	Total annual expenditure as a percentage of GDP
114	TEXP_PctGEXP	Total annual expenditure as a percentage of government expenditure
(c) Report indicators		
115	TNATPOP	Total population
116	TNATPOPs	Total population (by sex)
117	TLF	Total labour force
118	TLFs	Total labour force (by sex)
119	OP_at	Objective population
120	OPs	Objective population (by sex)
121	OPb_at	Objective population (by benefit)
122	OPbs	Objective population (by benefit and sex)
123	TCPb	Covered population (by benefit)
124	CPb_at	Covered population (by benefit and sex)
125	covr	Coverage rate of objective population
126	covrs	Coverage rate of objective population (by sex)
127	BAM_at	Benefit amount (per capita)
128	<i>adjben</i>	Annual adjustment rate
129	TBEXP_at	Total benefit expenditure
130	BEXP_at	Total benefit expenditure (by sex)
131	TEXP_at	Total annual expenditure
132	TEXP_PctGDP_at	Total annual expenditure as a percentage of GDP
133	TEXP_PctGEXP_at	Total annual expenditure as a percentage of government expenditure
134	COVGAP	Coverage gap
135	COVGAPs	Coverage gap (by sex)
136	COVGAP_PctOP	Coverage gap relative to objective population
137	COVGAP_PctOPs	Coverage gap relative to objective population (by sex)
138	IFINGAP_ab	Financing gap in base year
139	IFINGAP_PctGDP_ab	Financing gap in base year as a percentage of GDP
140	IFINGAP_PctGEX_ab	Financing gap in base year as a percentage of government expenditure

n°	matrixcode	name
2. Projections (continued)		
(c) Report indicators (continued)		
141	IncFin	Incremental financing needs
142	IncFin_PctGDP	Incremental financing needs as a percentage of GDP
143	IncFin_PctGEXP	Incremental financing needs as a percentage of government expenditure
144	AdqGAP	Adequacy gap
145	AdqGAP_PctTHR	Adequacy gap relative to the benefit threshold
146	HHAVS_at	Average household size
147	TNHH_at	Total number of households
148	OHH_at	Objective population (number of households per population group)
149	OHHb_at	Objective population (number of households per benefit)
150	CHH_at	Covered population (households)
151	covHH_at	Coverage rate of objective population (for households)
152	BAMHH_at	Benefit amount (for households)
153	rpt12_OP	Objective population (by benefit)
154	rpt12_covr	Coverage rate
155	rpt13_CP	Covered population (aggregate)
156	rpt13_TBEXP	Benefit expenditure (aggregate)
157	rpt13_TEXP	Total annual expenditure (aggregate)
158	rpt13_TEXP_PctGDP	Total annual expenditure as a percentage of GDP (aggregate)
159	rpt13_TEXP_PctGEXP	Total annual expenditure as a percentage of government expenditure (aggregate)