

## Module 11 - Instructions on using the RAP to calculate the cost of benefits



1. Participants work in the same groups as for "Jeopardy". Each group has to calculate the cost of implementing the three scenarios they designed.
2. The blank RAP model is circulated to all the groups.
3. The input worksheets in the RAP model - POP, AR, EAP, ECO and GGO - are prefilled and cannot be changed.
4. The output worksheets called "Benefits" and "Summary" are blank and contain some highlighted cells. These cells have to be filled in by the participants.
5. For example, the "Health" group calculates the cost of implementing their scenarios by filling the highlighted cells in the "Benefits" worksheet, which will be titled "Benefits – Health".
6. The final output for each scenario includes:
  - cost in currency value (COD), until 2020;
  - cost as a percentage of GDP, until 2020;
  - cost as a percentage of Government expenditures, until 2020.
7. After filling in the "Benefits" worksheet, groups have to fill in the "Summary" worksheet by linking the cells in the "Summary" worksheet to the "Benefits" worksheet.

Duration: 1.5 hours

## RAP input worksheets

1. **POP:** The "Population" worksheet includes the demographic framework of the country. Historical information on the total number of people of every age is obtained for 2005-2011. Using this and other forecasts, the number of people from 2012-2020 are projected. The population figures are then grouped into five-year age groups, such as 0-4, 5-9, 10-14, and so on until 75 and older. The population figures are also grouped into five-year age groups separately for the male and female populations. The "POP" worksheet is completed prior to distributing the RAP model to the training course participants and cannot be changed.
2. **AR:** The "Activity Rates" worksheet includes the country's labour market participation rates for different age groups and genders. It contains three tables, giving the participation rates for males, females, and the total population in five-year age groups. The data in this worksheet for the years 2012-2020 is projected based on historical information and forecasts. The rates are grouped into five-year age groups, starting with 15-19, 20-24, and so on until 50-54, 55-59, 60-64 and 65 and older. The rates are also grouped into five-year age groups separately for the male and female populations. This worksheet can be used to calculate the figures in the EAP worksheet. The "AR" worksheet is completed prior to distributing the RAP model to the training course participants and cannot be changed.
3. **EAP:** The "Economically Active Population" worksheet includes the number of economically active people in the country, i.e. the people who form the labour force. In Coresia, the legal age to start working is 15 years, while the retirement age is 60 years. The total number of people of 15 years of age and above who form the labour force is calculated based on the data in the "POP" and "AR" worksheets. The figures are grouped into five-year age groups starting with 15-19, 20-24 and so on until 50-54, 55-59, 60-64 and 65 and older. The EAP figures are also grouped into five-year age groups separately for the male and female populations. The "EAP" worksheet is completed prior to distributing the RAP model to the training course participants and cannot be changed.
4. **ECO:** The "Macroeconomic" worksheet contains economic indicators for the country, such as GDP, poverty line, exchange rate, average and minimum monthly wages, labour productivity, unemployment rate, and others. The data from 2005-2011 is collected for each of these parameters and the numbers from 2012-2020 are projected based on historical data and forecasts.
  - Average monthly wage: average wage of all working people in the country, calculated on a monthly basis.
  - Average wage increase: annual percentage increase in average monthly wage.

- GDP at constant price: measures the “volume” part of the production of the country and is determined by employment and productivity. Constant price GDP from 2012-2020 is projected on the basis of the GDP growth rate.
  - GDP at current price: determined by multiplying the GDP at constant price by the GDP deflator. When forecasting the economic situation in the future, economists forecast volumes and prices separately. This enables them to apply different change patterns to both components. Projections of GDP at current price will be obtained from projections of GDP at constant price (volume effect) and projections of the GDP deflator (price effect).
  - GDP deflator (index): calculated as the ratio of current price GDP to constant price GDP.
  - GDP deflator change: annual percentage increase in the GDP deflator (index).
  - GDP growth rate: the percentage increase in the country’s GDP at constant prices.
  - Government’s per capita health expenditure: measures how much the Government spends on health care for an average individual in the country. It is assumed to increase in proportion to the average wage increase.
  - Inflation: increase in the prices of goods and services.
  - Labour productivity: defined as the GDP produced by an hour of labour. An increase in labour productivity indicates greater efficiency of labour.
  - Minimum monthly wage: daily minimum wage rate multiplied by the number of working days in a month. Projections for 2012-2020 are assumed to increase in proportion to annual inflation.
  - National poverty line: amount of earnings below which people are deemed to be living on inadequate resources. Projections for 2012-2020 are assumed to increase in proportion to annual inflation.
  - National poverty rate: the proportion of people in a country living below the poverty line in a particular year.
  - Per capita health expenditure: average amount an individual in a country spends on health care in a year.
  - Unemployment rate: the proportion of the economically active population that is looking for work but unable to find work.
5. **GGO (SQ):** The “General Government Operations (Status Quo)” worksheet includes the major components of the central Government’s revenues and expenditures, as well as sources of deficit financing until 2020. It reflects the Government’s finances prior to the proposal of additional social protection provisions. The financial performance of the Government is used for analysing the fiscal space required to finance the implementation of SPF programmes and schemes.
- Budget surplus (or deficit): If Government revenues are greater than its expenditures, the difference is known as a “budget surplus”. If revenues are less than expenditures, the difference is known as a “budget deficit”.

- Government revenues and expenditures: It is recommended to use official projections of the budget or projections made by preeminent research institutes. When no official projections are available, general government revenues and expenditures can be forecast based on historical data and GDP forecasts.
  - Financing: This gives the sources of funding for the budget deficit. The sources can be broadly classified as domestic and foreign financing.
6. **GGO (BS):** The “General Government Operations (Benefit Status)” is similar to the “GGO (SQ)” worksheet as it provides the central Government’s revenues, expenditures, and budget deficit. However, this worksheet is a financial statement of Government operations including proposed SPF expenditures implemented in the near future. It gives a quick overview of the fiscal impact of implementing proposed SPF programmes and schemes.

## RAP output worksheets

1. **Benefits:** The “Benefits” worksheet is used to calculate the cost of introducing SPF benefits, i.e. the cost of implementing scenarios. The cost of implementing each scenario is calculated as (number of people in the target group) x (cost of benefits per head + administrative cost per head).

The target group is calculated by multiplying the target population (obtained from the POP, EAP, and ECO worksheets) with the coverage and take-up rates. The cost of benefits per head is obtained by adjusting the actual 2011 figure in proportion to inflation, wage increases, and/or other factors, and projecting the cost until 2020. The administrative cost of implementing the scenario may be assumed to be a certain level in 2011 based on the administrative cost for similar existing schemes, and then projected until 2020 in proportion to inflation.

To give a better representation of the financial impact of implementing a scenario, the cost is expressed as a percentage of current price GDP and as a percentage of Government expenditures.

2. **Summary:** The “Summary” worksheet gives a quick overview of the cost of introducing benefits under all the SPF guarantees. In this worksheet, the cost is expressed as a percentage of GDP until 2020. It also summarizes the cost of the low and high scenarios for each guarantee.

A sample solution of the RAP model is attached to the guide for better understanding. The sample solution is one possible solution to the cases, and is not a unique solution.