



ONLINE

SOCIAL PROTECTION

ACTUARIAL TRAINING

IMPROVING CHINA'S INSTITUTIONAL CAPACITY TOWARDS UNIVERSAL SOCIAL PROTECTION

15 – 24 JUNE 2020

Information Note

BACKGROUND AND OBJECTIVES

This document sets out the detailed training schedule and approach for the first training session planned to take place online from 18th – 24th June 2020 with a pre course learning phase from 15th – 17th June 2020. This work is part of the phase developed in consultation with MOHRSS to assess immediate training needs, produce a detailed agenda, and develop and deliver a training course of five days. The aim is also to contribute to a plan for the delivery of future training sessions. The training will be delivered remotely over 5 consecutive half days.

TRAINING OUTLINE

This E-Learning course will focus on the essential elements of actuarial work in social security. It will highlight the role of actuarial work in supporting the development of social insurance and focus on the processes of the actuarial valuation as well as the experiences and practices of the application of actuarial valuation results to policy making and financing decisions. Technical topics include basic theories of actuarial practice in social security, the principles of actuarial modelling techniques, approaches to managing data and setting assumptions, risk analysis, financing approaches, management of social insurance funds and the link from investment policy to liabilities and actuarial report writing.

TRAINING APPROACH: E-LEARNING CENTRED

This e-learning course consists of a blend of online resources on good practices and case studies, 'real time' interactive sessions and individual and collaborative group exercises using the ILO's own eCampus platform. There will also be a test at the end of the course and successful candidates will receive confirmation that they have passed this test. The training will be focused around the provision of a set of PowerPoint slides and excel spreadsheets used for exercises

Use of Sli.do application (for questions to the presenters and voting systems to assess the level of knowledge of the classroom through quizzes and voting)

- It will include a number of good practice examples from around the world.
- It will provide a base for further training and link to professional actuarial examinations.
- Testing of knowledge at the end of the course would be incorporated in the training.

The course is broken down into three phases:

PHASE I: INTRODUCTION AND PRE-COURSE LEARNING:

The initial phase would allow participants to get to know the learning platform, fill in a pre- course survey to assess level and start background reading and preparation including material on the role of the actuary and the ISSA-ILO Actuarial Guidelines.

It would consist of self-guided online learning on eCampus and an end of phase assessment, **5 learning hours**

- On boarding on the eCampus
- Pre-course survey
- Pre-recorded technical video
- Preliminary assessment

PHASE II: 'REAL TIME' LEARNING:

Live interactive sessions and engaging video presentations by highly experienced trainers, blended with individual and collaborative group exercises, peer-to-peer assessment and online technical forums on eCampus, **15 learning hours (3 hours per day for 5 days)**

- Daily live technical sessions delivered via appropriate technology with simultaneous interpretation into Chinese
- On site interactive sessions overseen by ILO technical experts
- Online quizzes
- Group exercise and case studies (some of which will be set as homework)

PHASE III: END OF COURSE TEST AND ASSIGNMENT:

During the week, an assignment will be set to be completed in groups and for presentation on the fourth or fifth day of the course. There will also be a short end of course test assessing **knowledge acquired** and application to the participants' organization. Participants who successfully complete the test will receive a Certificate of Participation.

The training will be structured as follows:

- **Day 1** The importance of actuarial valuations and the role of the actuary
- **Day 2** Actuarial models; data and assumptions
- **Day 3** Actuarial models: Producing results, implications for policy and reporting
- **Day 4** Financing and investment and policy reform issues
- **Day 5** Internal actuarial capacity, professional development, training and next steps

DELIVERY OF TRAINING

The delivery of training will be managed by the International Expert who will present the technical sessions and oversee the breakout and interactive sessions. These interactive sessions set out in the detailed agenda below will allow training participants to share experiences and apply technical knowledge learnt to their everyday working experience. At the same time, the sessions will also provide valuable additional information to the trainer allowing him to adapt and tailor future sessions to the realities of the situation in China.

The detailed agenda of training is set out below and uses symbols to highlight the different types of sessions:



These are technical sessions prepared and delivered by the ILO Senior Actuary. They will be interactive (eg open questions, Slido etc) and seek to include relevant examples from China and other countries to back up learning,



These are sessions which are interactive breakout sessions allowing exchange amongst participants and at the end of the session a reporting back to the course manager. Their focus is to apply the knowledge learnt to the context in China, test understanding and share demographic, economic, actuarial and data knowledge.

Each day will start with a summary of the issues to be covered and finish with a summary of a day and any preparatory work to be undertaken for the following day.

DETAILED TRAINING PROGRAMME

DAY 1: THE IMPORTANCE OF ACTUARIAL VALUATIONS AND THE ROLE OF THE ACTUARY

Learning objectives:

- Highlighting the importance, key steps and processes of an actuarial valuation and link to financing, policy and management
- Defining the role of the actuary and details of their roles and responsibilities
- Understanding the importance of data in undertaking an actuarial valuation and ensuring accurate results in the Chinese context

Technical sessions

- Introduction of course, 30 minutes



- Introduction and outline of training including tools
- Participants thoughts
- Quiz: what do we already know? What do we need to know ?

- An overview of the actuarial valuation, 60 minutes



- Why conduct an actuarial valuation
- Key elements of an actuarial valuation
- Link to policymaking and financing decisions
- Resources to carry out an actuarial valuation

- Overview of current actuarial services and capacity in China, 60 minutes



- The role of central social security administration support services,
- The number of in house actuaries and their level, experience, geographical distribution current roles etc,
- Current models used for actuarial analysis and review of social security funds
- Use of actuarial expertise and analysis for financial decision making within the social security administration; legal requirements for actuarial valuations (if existing), frequency, internal versus external actuarial resources etc.
- Other actuarial projections and reports by leading universities and research centres in China

- The role of the actuary, 30 minutes



- The role of the actuary

DAY 2: ACTUARIAL MODELS, DATA AND ASSUMPTIONS

Learning objectives:

- The actuarial model
- Highlighting key steps and processes of the actuarial valuation and the role and importance of good data and appropriate assumptions
- Defining data requirements for an actuarial valuation: what is needed and how can appropriate data be secured
- How to set assumptions for an actuarial valuation (demographic, labour, economic and benefits)

Technical sessions

- Actuarial model, 60 minutes



- The Building Blocks of an actuarial valuation: demographic and labour market model (basic spreadsheet model to be provided for exercises)

- Data and assumption requirements, 60 minutes



- Actuarial valuations: what data is needed?
- Data management including collection, verification, reconciliation and sensitivity analysis
- Setting assumptions and their importance
- Checklist for setting assumptions: information needed and factors to consider (breakout session)
- Exercise: the impact of missing data and sensitivity of assumptions

- Data and assumptions in China and implications for the actuarial valuation, 60 minutes



- Data availability and sources in China, using social security fund administrative databases
- Use of data in actuarial models

DAY 3 ACTUARIAL MODELS: PRODUCING RESULTS, IMPLICATIONS FOR POLICY AND REPORTING

Learning objectives:

- The actuarial model: focus on economic and benefits modules
- Demonstrating the link from valuation results to policy and financing decision making
- Review of actuarial work in China
- Highlighting reporting good practices

Technical sessions

- The actuarial projection model: producing results, 60 minutes



- Actuarial valuation model: economic and benefit modules (basic spreadsheet model to be provided for exercises)
- Producing and verifying results using a valuation model (including peer review processes)
- Financing issues

- Actuarial work in China, 60 minutes



- Presentation overview of structure, methodology, different components and overall results from models currently in use in selected provinces/cities/funds
- Challenges and issues

- Reporting, implications of results for policy (60 minutes)



- Reporting good practices and checklist
- The actuarial valuation results and link to policy and reforms
- Sensitivity analysis
- Examples of policy decisions based on analysis, highlighting actuarial work (including automatic adjustment mechanisms)

DAY 4 FINANCING AND INVESTMENT AND POLICY REFORM ISSUES

Learning objectives:

- Highlighting the link between financing requirements and investment
- An overview of investment and funding issues
- A brief overview of pension reforms

Technical sessions

- Actuarial projection model and link to financing, 30 minutes



- The actuarial projection model: finance module
- Different financing options: pay-as-you-go, partial funding, full funding
- Funding policy and investment governance

- Financing and other issues from China, 45 minutes



- Special topics in China: regional social and economic imbalances and inter fund compensation, role of the National Social Security (stabilization) fund and its relation to the actuarial function, impact of ageing etc

- Investment and funding issues, 30 minutes



- Investment trends globally – an overview of key issues including the impact of Cov-id 19 on asset prices
- Country examples

- Investment issues in China, 30 minutes



- Review of investment environment in China (investment governance and management structures, asset allocation, investment performance etc)

- Review of Pension reform issues 45 minutes



- Highlighted reforms including pillar overviews
- Reference to supplementary provision and role of actuaries
- Links and resources

DAY 5: INTERNAL ACTUARIAL CAPACITY, PROFESSIONAL DEVELOPMENT, TRAINING AND NEXT STEPS

Learning objectives:

- Developing an actuarial service function in social security institutions, resources required, international examples and good practice
- Peer review processes
- Continuing professional development, peer review and professional examinations
- Next steps for training and development

Technical sessions:

- Developing an actuarial service function in social security institutions , 30 minutes



- Resources required, peer review, international examples and good practice

- Current and future actuarial capacity in China, 30 minutes
 - Assessment of current actuarial capacity in China and gap analysis from current capacity to required capacity, 30 minutes
- Training and development of actuarial staff, 30 minutes
 - Professional examinations, ILO Support, Continuing Professional Development
 - ILO actuarial work in the region and the Regional Actuarial Services Unit
- Summary of the course and testing knowledge, 30 minutes
- Feedback from participants, 30 minutes
- Next steps for training – discussions of the aims of the project in follow up training activities with participants and the future role of local trainers, 30 minutes



INFO

**FOR FURTHER INFORMATION
PLEASE CONTACT**

International Training Centre of the ILO

Programme on Social Protection,
Governance and Tripartism (SPGT)
Viale Maestri del Lavoro, 10
10127 Turin – Italy

Mr. Charles Crevier
Programme Manager
T +39 011 693 6766
spgtitcilo.org
www.itcilo.org

COURSE CODE: A3713411

Made of paper awarded the European Union Eco-label, 
reg.nr FR/011/002, supplied by International Paper.