

**TRANSITIONING INTO DIGITAL AND
GREEN ECONOMY ECOSYSTEM**
IFG SESSION I MAY 31ST 2022
**PENSION FUND: FINANCING THE AGING
POPULATION**

YVES GUÉRARD, FSA, FICA, HON.FIA, PHD(HC)

ACTUARY

IMPEDIMENTS TO OVERCOME

- **Some features of current environment in Indonesia handicap the growth of coverage of pension funds. In particular, it is unlikely that expanding pillar 3, voluntary private plans can succeed, even for the upper tier of the work force, until many of the difficulties listed below are resolved.**
- **EET approach to pension contributions and benefits produces weak incentives in Indonesia.**
- **Weakness of the regulatory framework resulted in repeated failures that destroyed the trusts in long term promises**
- **Lack of financial education and financial literacy result in lack of appreciation of the risk reduction from pooling and results in financial myopia**
- **Lack of expertise in pension design and lack of a decumulation tool for accumulated assets, whatever the source.**
- **Lack of communication and socialization of the rationale, features and advantages of the public pension program covering private sector workers**
- **Fragmentation in small business units and agricultural property is a hurdle.**

LOW HANGING FRUITS

- **Not possible to create a new retirement policy in 20 minutes but can offer some suggestions considering current legacy and best practices :**
- **Pillar 0 or Pillar 1, add a Demogrant financed by the state, that is a non-contributory basic flat social pension, to protect the vulnerable segments against poverty in old age**
- **Pillar 2: Make use of the Digital infrastructure to expand the current BPJS-TK administered public pension program to employees of small enterprises and the informal workers by promoting voluntary opting in automatic collection of contributions as a piggy-back on PLN current billing system reaching 80 million households. To keep it simple, offer 3 pre-set levels in rupiah with rules to enable opting in or opting out only at pre-determined dates.**
- **The costs Pillars 1 and 2 being predictable, they pre-empt future fiscal space for the financing**
- **Pillar 3: Assuming these reforms are implemented, the main remaining target would be the upper tier of salaries workers, whose replacement ratios need to be supplemented by DB or DC private pension programs under Law 11 of 1992.**

MULTIPLE FINANCING, FUNDING, REPORTING METHODS

Method

- Pay as you go
- Target funding
(partial funding)
- Level percentage of a base
such as payroll or GDP
(partial funding)
- **Projected Unit Credit basis***
- Level entry age
(more than full funding)

Assets required

- No assets required
- Low multiple of annual
benefits
- Lowest assets that stabilize
the percentage
- **Accrued liability (AL)***
- AL plus provision for aging

*** Is also a Reporting Benchmark since assets just sufficient to liquidate the benefit already promised without further contributions**

IDENTIFYING THE PRIORITIES

- **18 years have passed since the adoption of Law 40 of 2004, but since**
 - **it took 7 years to agree on the entity that would collect and manage the contributions and**
 - **a minimum of 15 years of contributions are required for pensions**

thus pension payouts will start only in 2030, building higher assets but delaying delivery of social protection.
- **The age distribution of the population has changed since 2004. Taking into account UN Population projections, various thresholds for the dependency ratios, have become less distant.**
- **We thus interpret the wording of the title of this session as focusing on the challenge of being ready to finance the needs of an ageing population rather than on building up pools of assets**

DIFFERENCES IN OBJECTIVES

Public/national

- **Social security net**
- **Part of national old age policy**
- **No tax advantages for sponsor**
- **Dependency ratio target**
- **Optimized financing path**
- **Sustainability**

Redistributive and generally deemed a public good, like health and education

Private/occupational

- **Part of remuneration**
- **Career and succession planning**
- **Tax advantages for sponsor**
- **Life style choices**
- **Pre-funding compulsory**
- **Solvency**

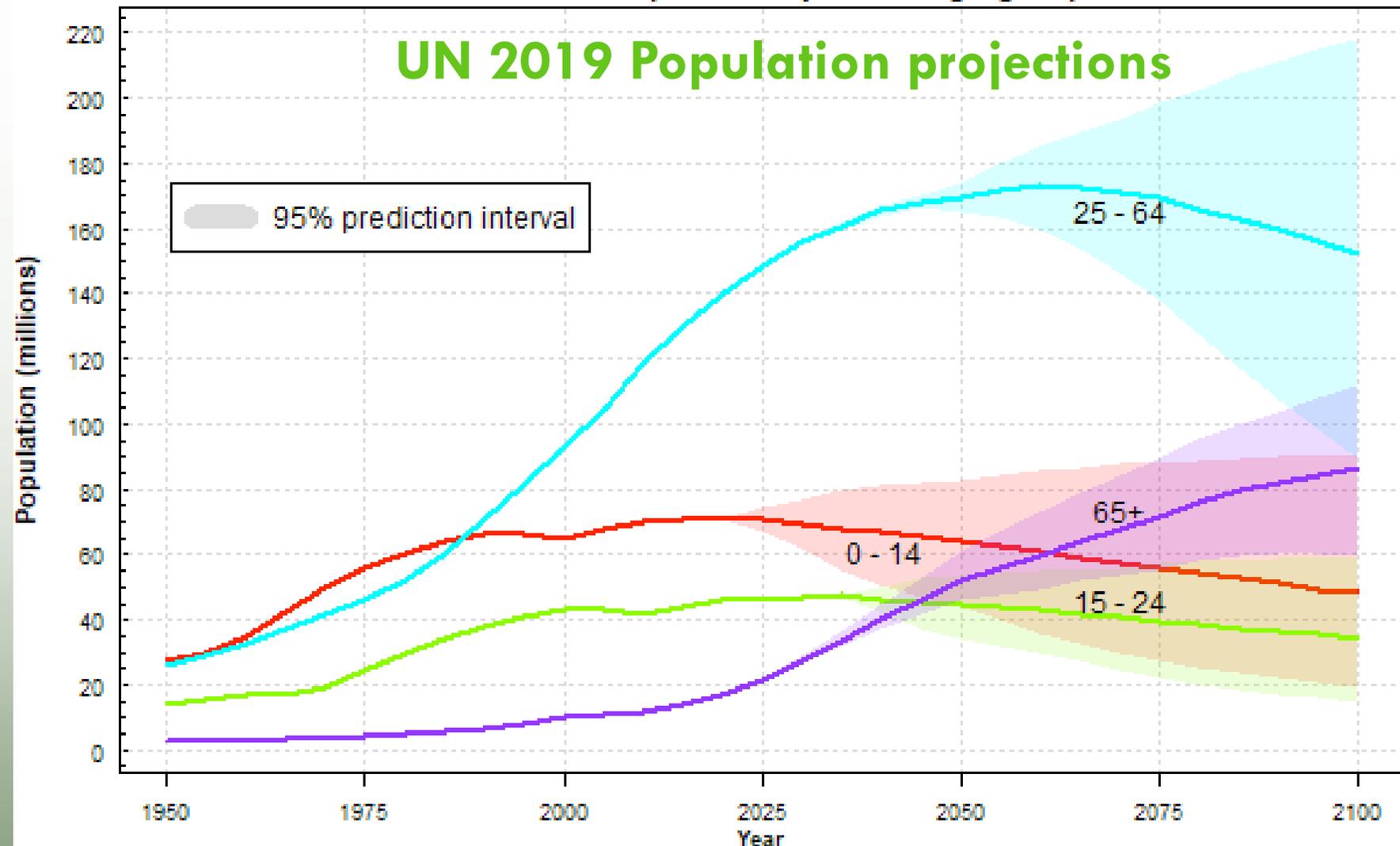
Seen as component of individual wealth thus calling for equity rather than solidarity

DEPENDENCY RATIO OR FINANCING METHODS

- **NICHOLAS BAR and PETER DIAMOND analysis shows that it does not matter if the rupiahs come from a DB or DC formula, were pre-funded by accumulated contributions or pay-as-you go current cash flows. Their utility function depends on the current capacity of the economy to deliver in real time the goods and services to be consumed by retirees**
- **Prices spiral up when supply cannot meet demand, causing hyperinflation. Then no financing method will work**
- **Current disruptions caused by Covid19 and the Ukraine war illustrated dramatically the critical importance of supply chains, providing a reality check!**
- **In normal times the “supply chains” are the cohorts still active, producing the goods and services that retired cohorts will consume.**
- **What is critical is the dependency ratio, not the financing method!**
- **In all cases a productive economy and good fiscal management are prerequisites**

Indonesia: Population by broad age groups

UN 2019 Population projections

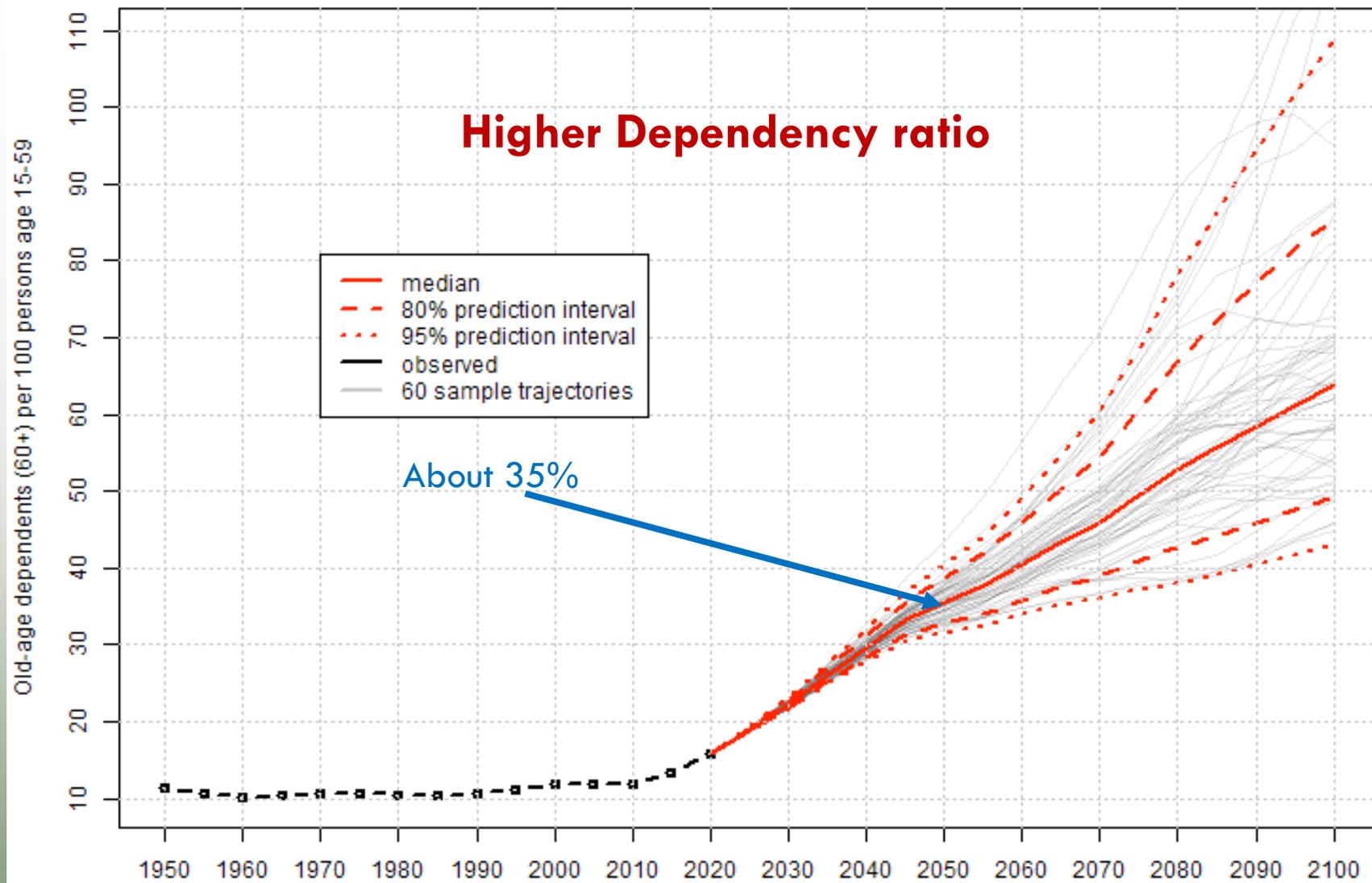


© 2019 United Nations, DESA, Population Division. Licensed under Creative Commons license CC BY 3.0 IGO.
United Nations, DESA, Population Division. *World Population Prospects 2019*. <http://population.un.org/wpp/>

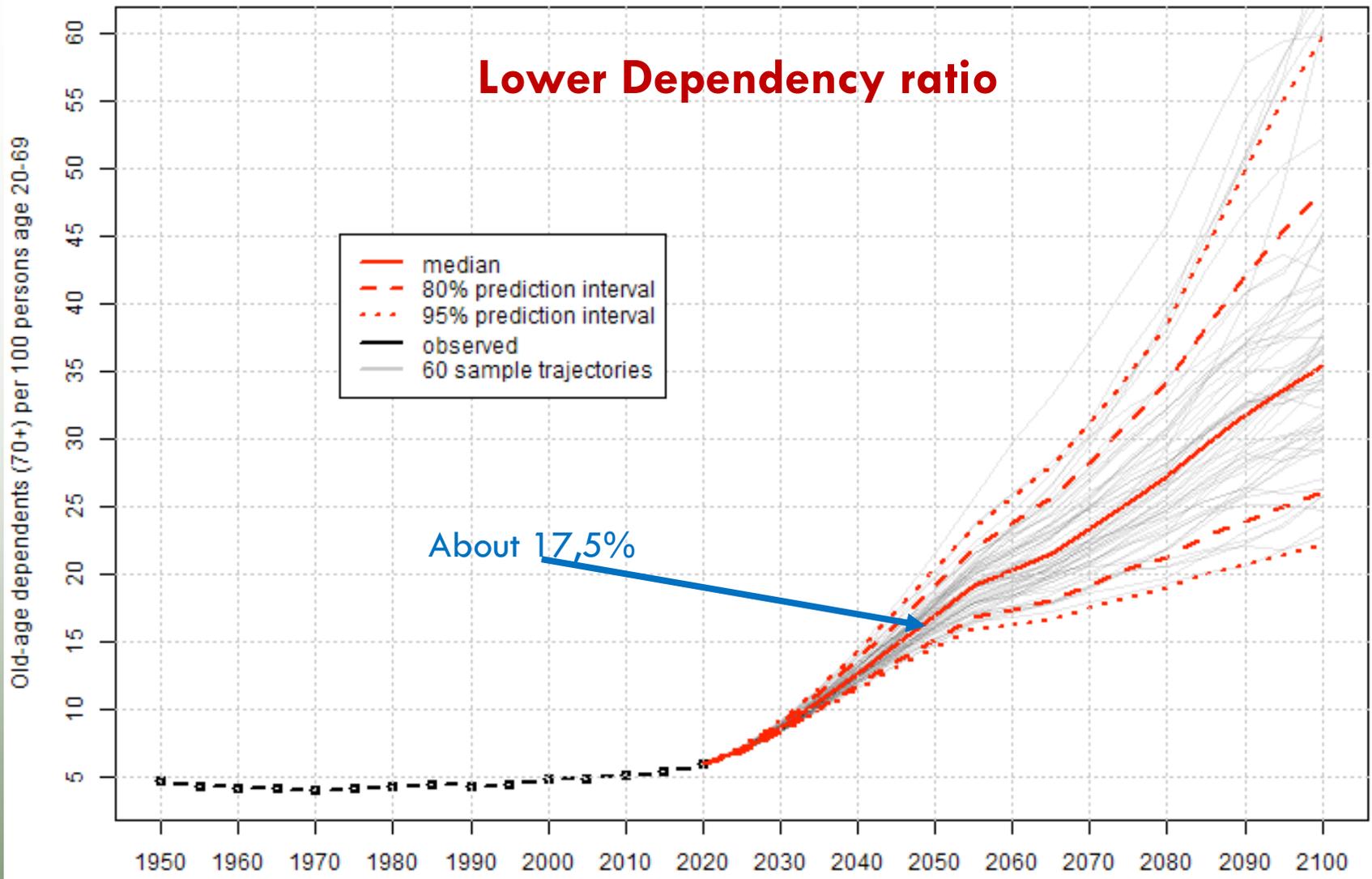
CONTROLLING THE DEPENDENCY RATIOS

- **Curves for the population below 25 are relatively flat and not critical**
- **The difficulty is the relationship between the 25-64 and the 65+ segments**
- **Working age population still growing but within a few decades will flatten and start to decrease while the 65+ have started to increase. The two trends combine to produce increasing dependency ratios**
- **An obvious solution is to increase the age at which people leave the work force . A secondary remedy would be to increase the proportion of women that stay in the work force**
- **But more importantly it means a concerted effort to extend careers: living longer should mean working longer! A first step would be to replace mandatory retirement by more flexible options**

Indonesia: Old-age Dependency Ratio $\left(\frac{\text{Age 60+}}{\text{Age 15-59}}\right)$



Indonesia: Old-age Dependency Ratio $\left(\frac{\text{Age 70+}}{\text{Age 20-69}}\right)$



© 2019 United Nations, DESA, Population Division. Licensed under Creative Commons license CC BY 3.0 IGO. United Nations, DESA, Population Division. *World Population Prospects 2019*. <http://population.un.org/wpp/>

OPTIMIZE RETURNS ON ASSETS

- **Mandating compliance with ESG criteria can add beneficial effects**
- **Avoid setting a fixed target return for asset managers, use benchmark that is market driven, enabling monitoring of manager's performance**
- **Total expected return= $\Sigma (W_i \times H_i)$**
 - **Total actual return= $\Sigma (T_i \times A_i)$**
 - **Benchmark return= $\Sigma (W_i \times R_i)$**
 - **W_i = series of benchmark percentages,**
 - **H_i = series of historical returns by category,**
 - **R_i = series of index market returns**
 - **T_i = actual asset mix achieved by the manager**
 - **A_i = series of actual returns on the invested portfolios**
- **Manager value added (or subtracted)**
 - **Difference due to asset mix: $\Sigma (W_i - T_i) \times R_i$**
 - **Difference due to securities selection: $\Sigma T_i \times (R_i - A_i)$**
- **Market fluctuation: Expected returns $\Sigma (W_i \times H_i)$ - Benchmark returns $\Sigma (W_i \times R_i)$**



LOW CARBON
DEVELOPMENT
INDONESIA



GHG emissions reduced nearly
43%
by 2030

GDP growth of
6%
per year
between 2019-2045



Over
US\$5.4 trillion
added to GDP in 2045



40,000 deaths
avoided each year in 2045



Extreme poverty
reduced to 4.2%
of population in 2045



15.3 million
additional jobs in 2045, which are
greener and better paid



Prevents the loss of nearly
16 million ha
of forestland in 2045



Improved
air quality



Improved
living conditions



Closing of gender/regional
opportunity gaps



Lower investment-
to-GDP ratio

**Orderly
transition to
Green
economy
is beneficial**