

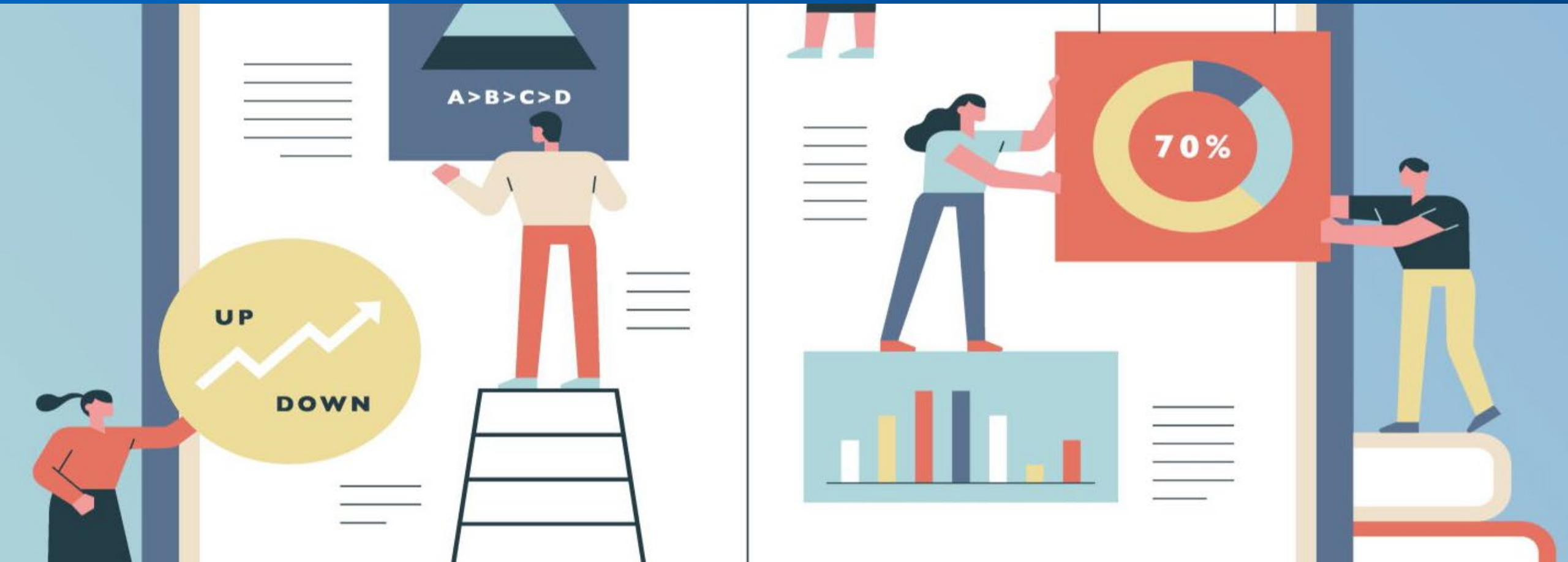


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Presentation of Kazakhstan's Cost Calculation Model SDG 4.2

Nyi Nyi Taung, Programme Specialist, UNESCO Bangkok

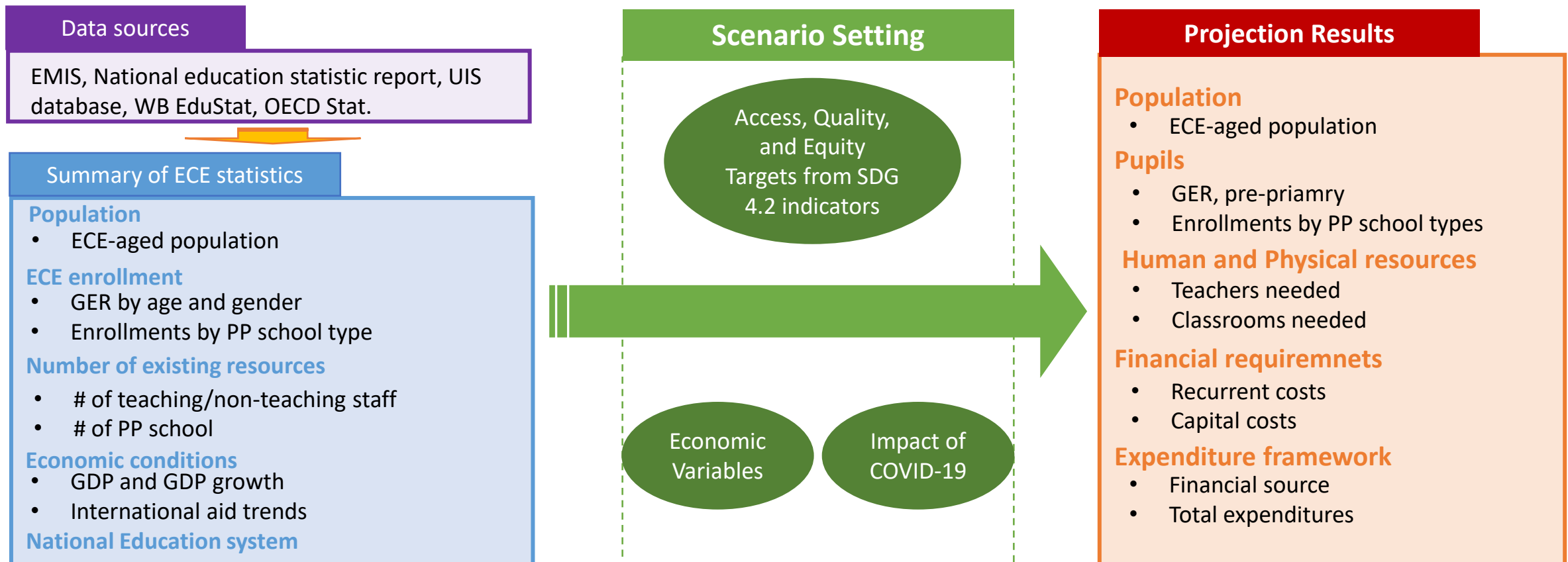
Masaya Noguchi, Consultant, UNESCO Bangkok



Education Costing and Financing Models (1/2)

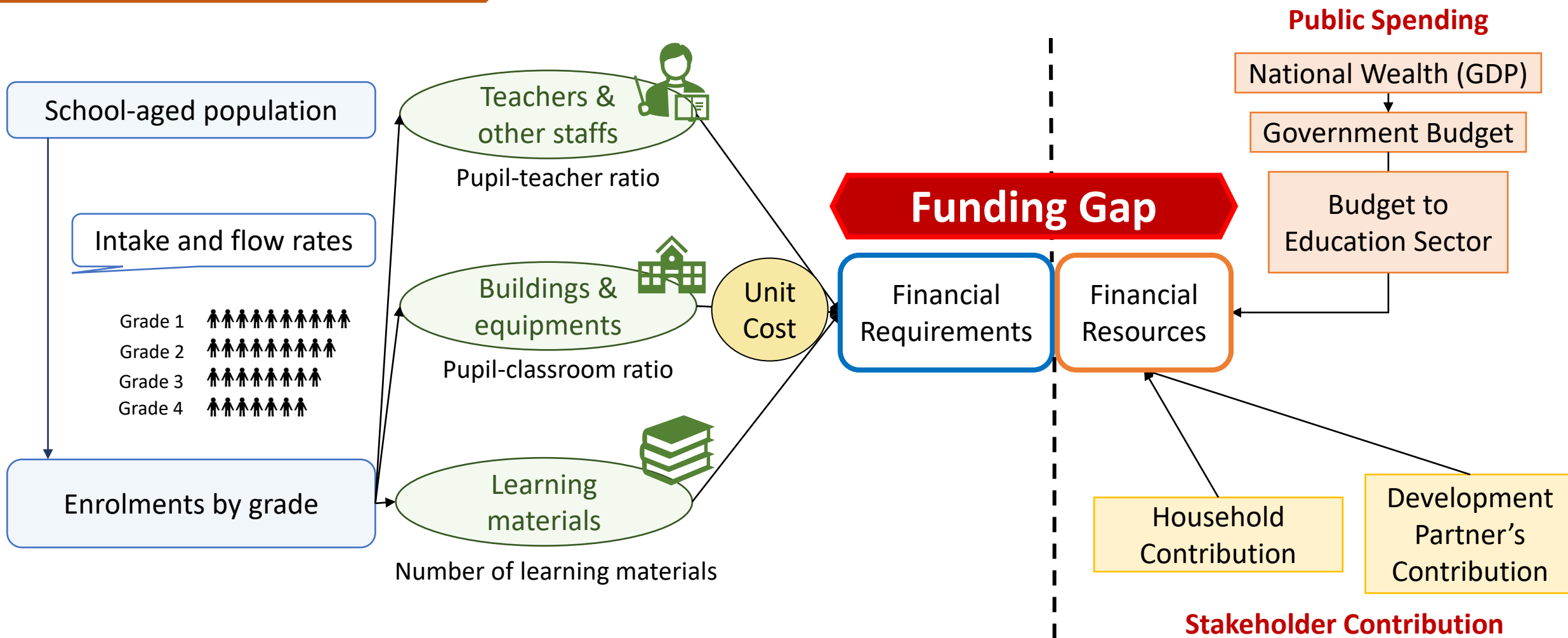
What is Education Costing and Financing Model?

The Education Costing and Financing model aims to simulate reality by estimating and assessing future circumstances based on changes in given variables. It takes policy options, technical feasibilities, and financial constraints into account in order to **project future resourcing and budgeting needs** that would serve as a basis for **policy dialogue**.



Education Costing and Financing Models (2/2)

Methodology to project funding gap



Existing Education Costing Models

[Global Level]

UNESCO GMR costing model (2015)

Education Commission Costing model (2016)

[Regional Level]

UNESCO costing model ESCAP version (2018)

AP Regional Costing and Financing Model (2020)

[Country Level]

UNESCO EPSSim v1.0 (2001)

UNESCO EPSSim v2.9b (2012)
UNESCO SimuED (2020)

- BARMM Costing Model
- SDG 4.2 Costing Model

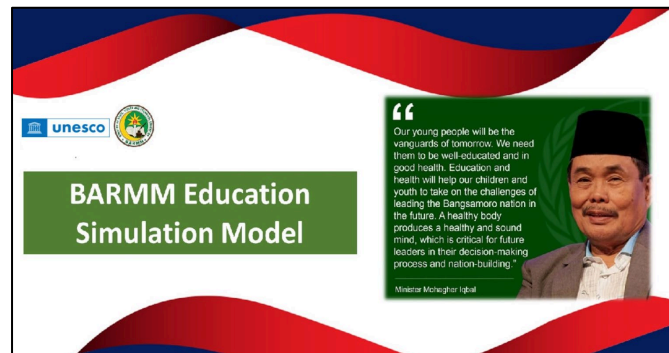
❖ For regional advocacy

Asia-Pacific Regional Education Costing Model



❖ For ESP Development

BARMM Education Simulation Model (Philippine)



❖ For Thematic Analysis

SDG 4.2 Costing Model



How much would it cost to achieve SDGs Target 4.2 in Kazakhstan?

- How many teaching staffs are required to achieve equitable access to ECE?
- How much would financing gap be to achieve equitable access to ECE?
- How much would the government need to spend to compensate financing shortfalls?

Kazakhstan SDG 4.2 Costing Model

Kazakhstan SDG 4.2 Costing Model

The main purposes are:

- To be **used as a projection tool** to estimate the physical / human resources and financial requirements to **facilitate policy discussion** to achieve SDG 4.2 targets, as well as Kazakhstan Education Sector Plan.
- To provide **evidence-based information** on efficient increase in stakeholders' investment for quality ECCE.



Model Type

Excel-based demographic simulation Model

Main objective

To estimate education provision and costing of education to achieve ESP and 4.2 Targets

Coverage: year

2019-2030

Coverage: country

One country (Kazakhstan)

Kazakhstan SDG 4.2 Costing Model

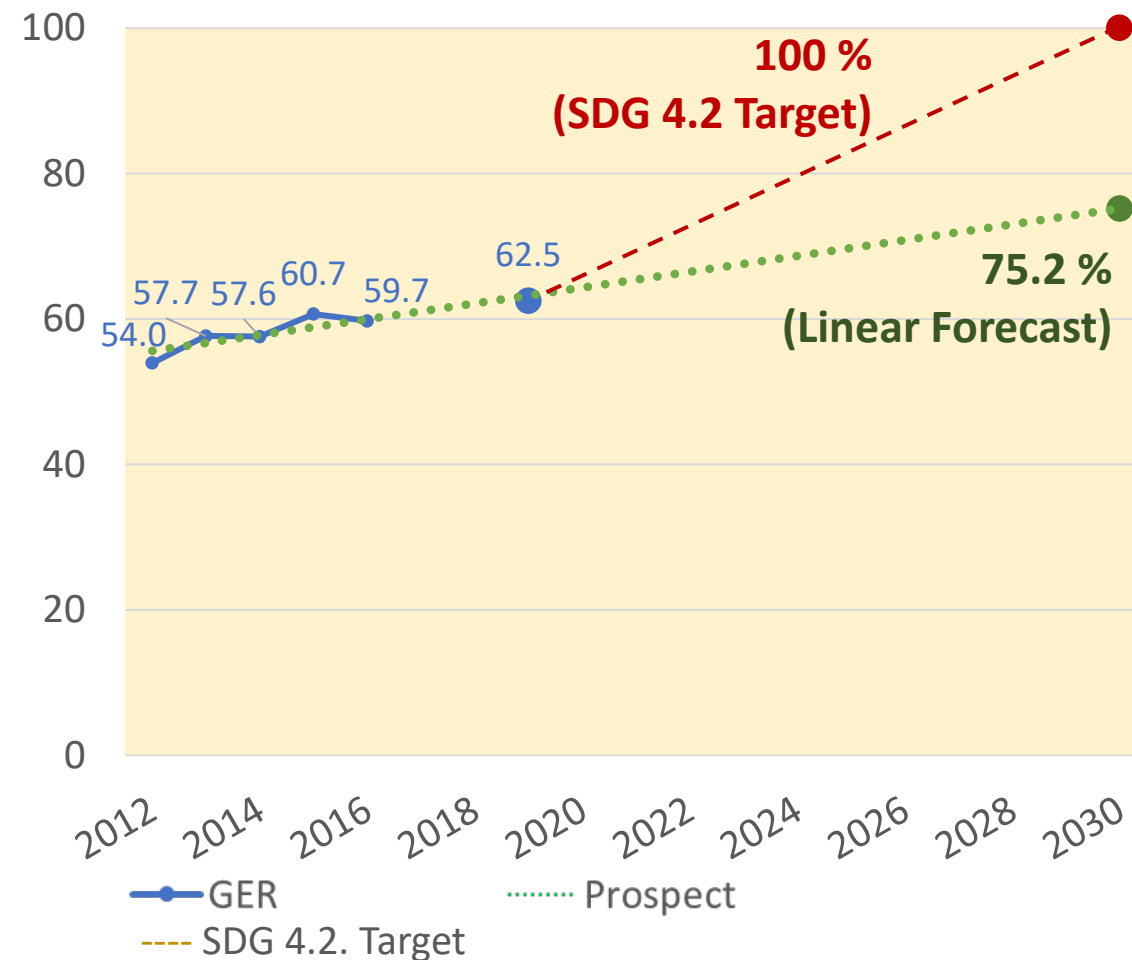
Future prospect to achieve SDG 4.2 Access Target

Access Target

Targets	Baseline 2020	Target 2030
GER forecast with linear trendline estimation	62.5%	75.2 %
Target of Sustainable Development Goal 4.2 (International Target)		100 %

Kazakhstan needs to scale up investments to ECE section to achieve the international access target (100 %: universal access to ECE from SDG 4.2).

GERs of ECE
(Historical trends and its forecast)



Source: Calculated by UNESCO Bangkok based on UNESCO Institute for Statistics data

3 Projection Scenarios to estimate financial requirements to achieve SDG 4.2 target

	Baseline	Scenario 1 (Status Quo)	Scenario 2 (SDG 4.2 - a)	Scenario 3 (SDG 4.2 - b)
Access Target				
Boys				
Age 3	69.1%	69.1%	100 %	100 %
Age 4	68.9%	68.9%	100 %	100 %
Age 5	45.2%	45.2%	100 %	100 %
Age 6	20.4%	20.4%	100 %	100 %
Girls				
Age 3	68.8%	68.8%	100 %	100 %
Age 4	69.0%	69.0%	100 %	100 %
Age 5	42.2%	42.2%	100 %	100 %
Age 6	15.7%	15.7%	100 %	100 %
Financial Target				
Government education expenditure as % of GDP	2.96 %	2.96 %	2.96 %	5 %

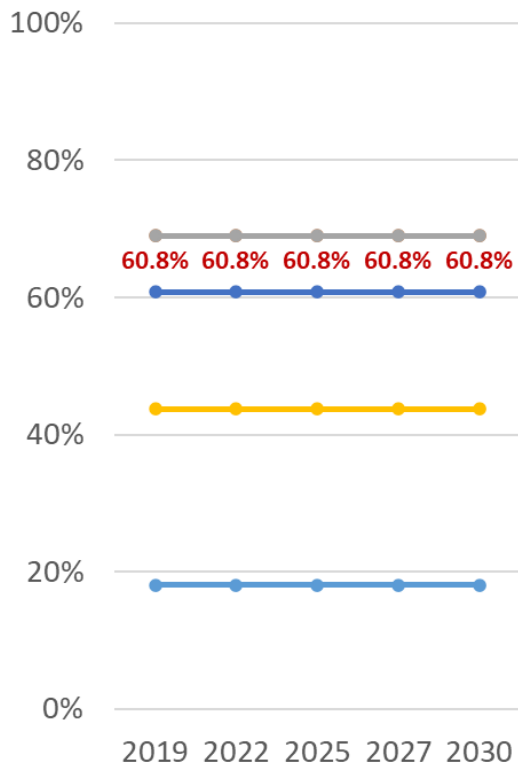
Projection Results From the SDG 4.2 Costing Model

How many teaching staffs are required to achieve equitable access to ECE?

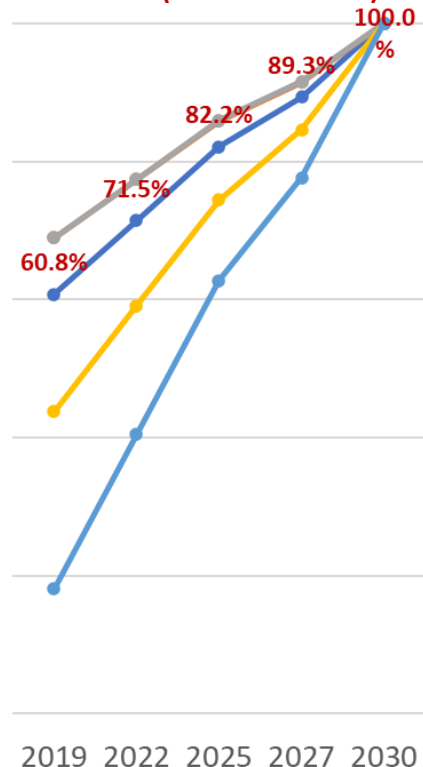
Required number of human resources to achieve national and international scenarios.

Access target

Status quo (Scenario 1)

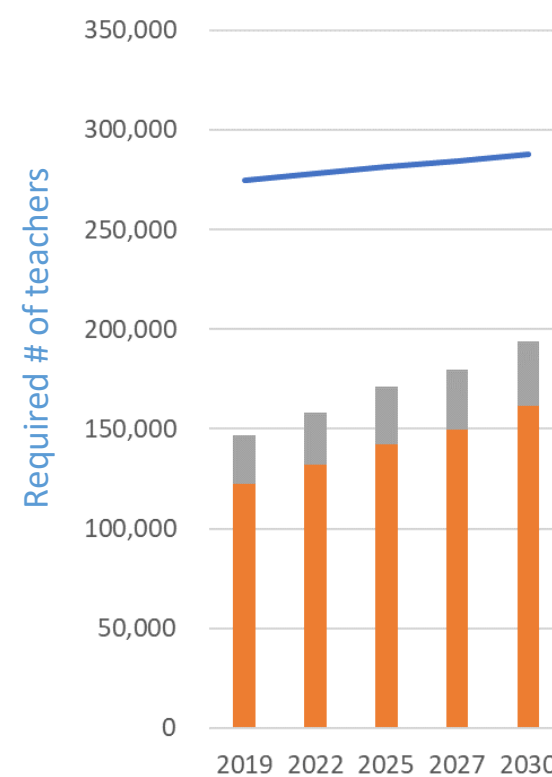


SDG 4.2 Target (Scenario 2 and 3)

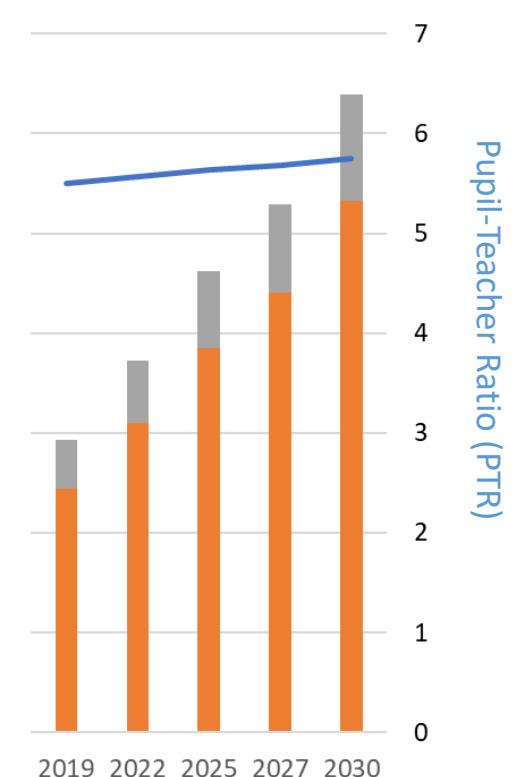


Required number of ECCE teachers

Status quo (Scenario 1)



SDG 4.2 Target (Scenario 2 and 3)



Legend for Access target: ● Total ● age 3 ● age 4 ● age 5 ● age 6

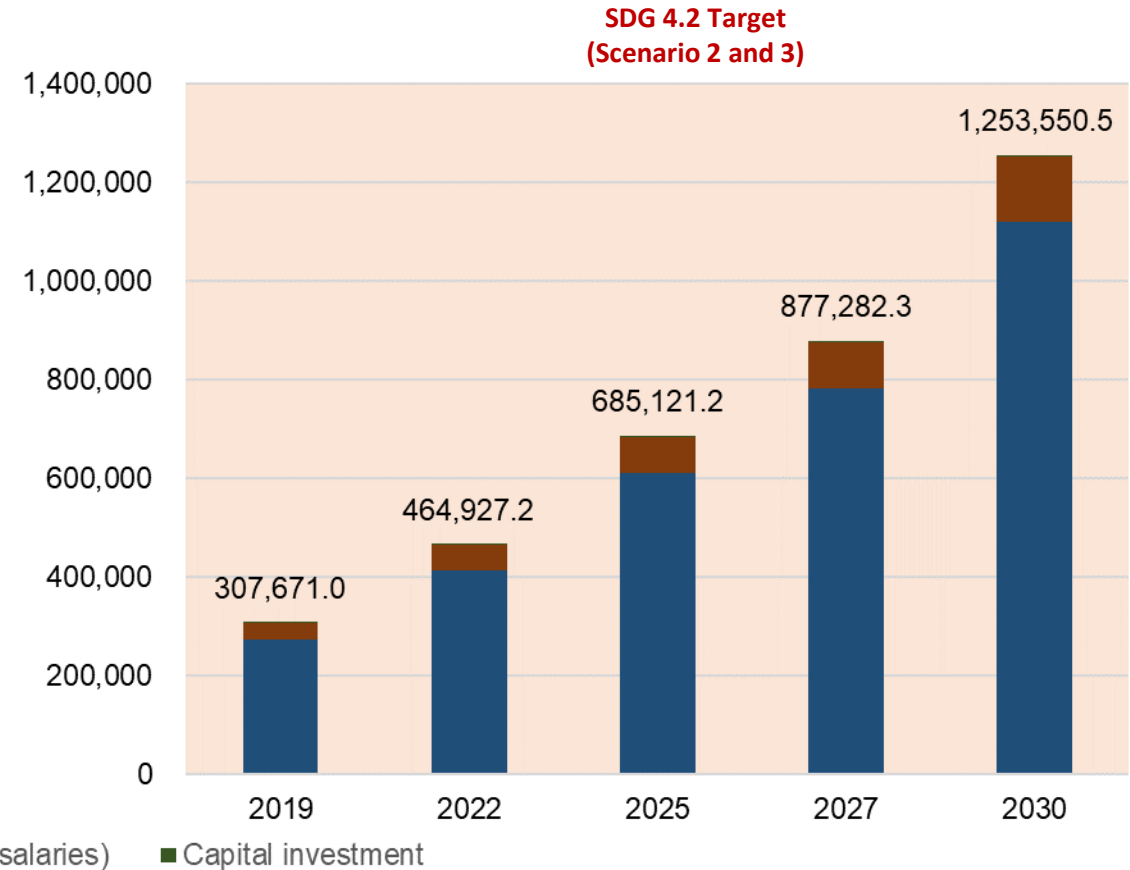
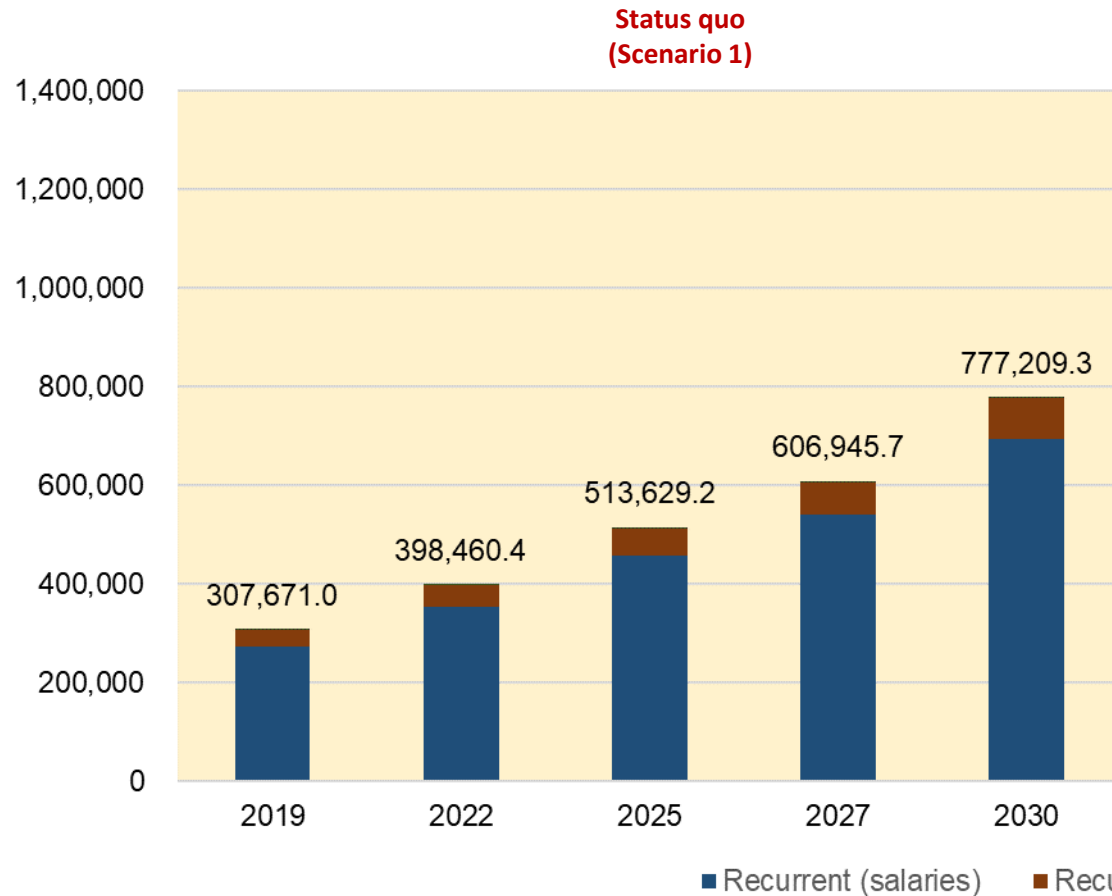
Legend for Required number of ECCE teachers: ■ Teaching staff ■ Non-teaching staff — Pupil/teacher ratio

Projection Results From the SDG 4.2 Costing Model

How much would financing gap be to achieve equitable access to ECE?

- Financial requirements would rise to achieve equitable access to ECE (SDG 4.2 target) in Kazakhstan.

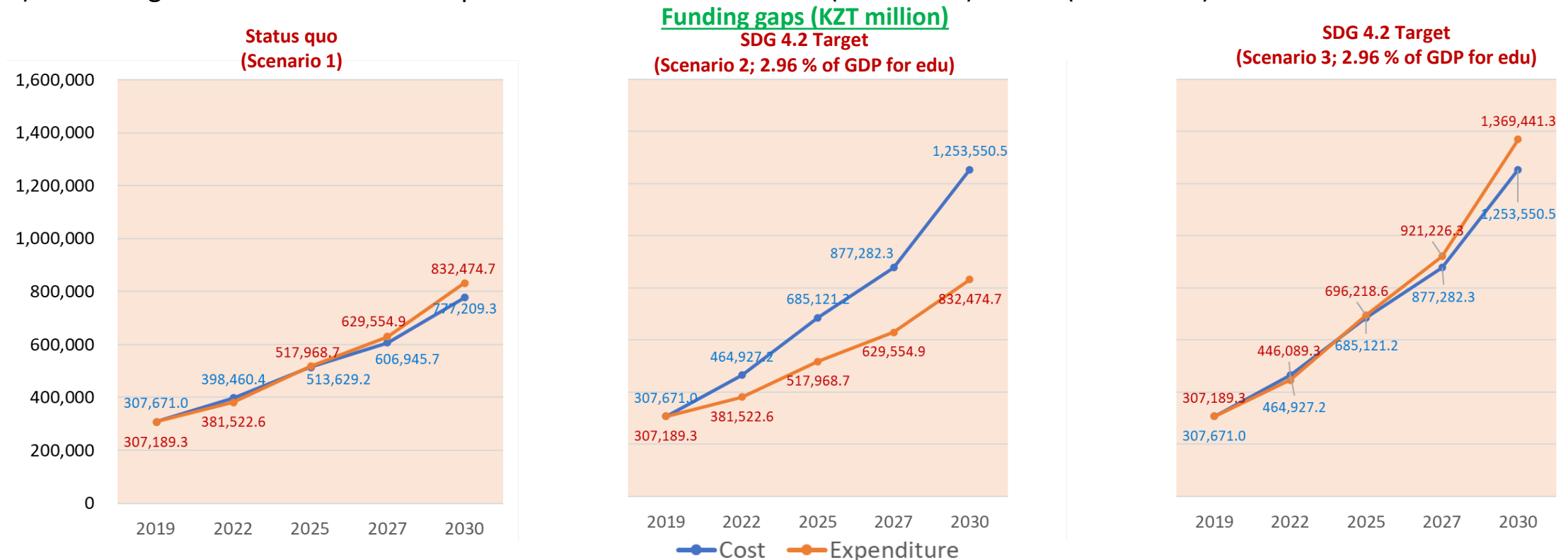
Financial requirements to achieve scenario targets (million KZT)



Projection Results From the SDG 4.2 Costing Model

How much would financing gap be to achieve SDG 4.2 targets?

- Financial gaps would rise to **KZT 421,076 million for SDG 4.2 target (Scenario 2)**.
- To compensate for financial shortfall, the government need to increase government expenditure on education as % of GDP **or** government education expenditure on pre-primary education as % of education expenditure by 2030
- EX) Increase government education expenditure from 2.96% of GDP (Scenario 2) to 5 % (Scenario 3).



Utilize SDG 4.2 Costing Model for Policy Dialogue

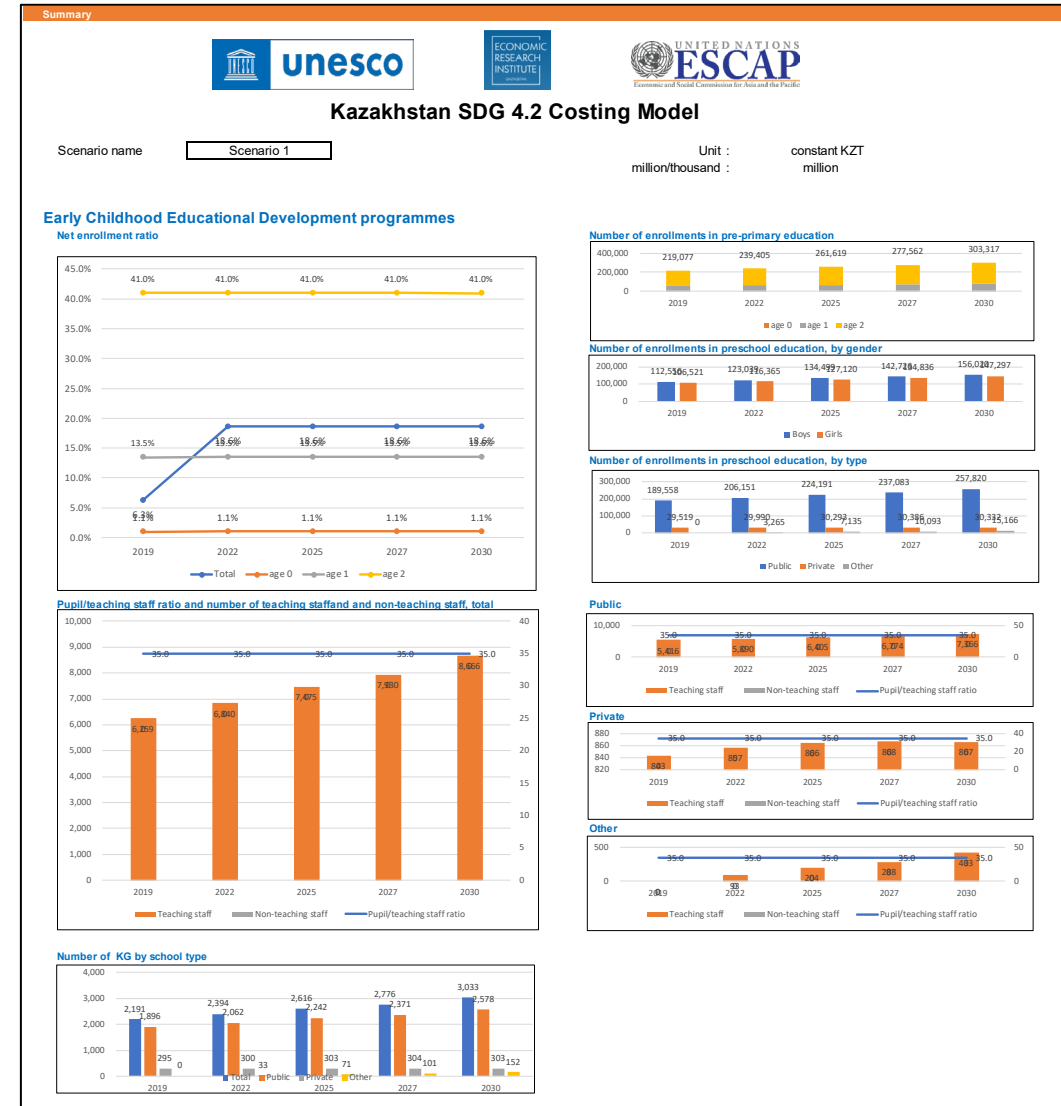
Identify cost items and unit costs required for ensuring expanded access to inclusive quality ECCE.

Make projections of costs using a simulation model.

Plan for more equitable distribution of education resources between regions and identity groups.

Identify funding gaps and resources.

Policy dialogues for mobilizing adequate resources.



Demonstration