

THE INVASION OF UKRAINE: THE IMPACT, IN NUMBERS

Two years of Russia's war against Ukraine

24 FEBRUARY 2022 - 24 FEBRUARY 2024

Data and analyses collected by the ETF from various sources.

The contents of this document are the sole responsibility of the source institutions and do not necessarily reflect the views of the ETF or the EU institutions.

Overview

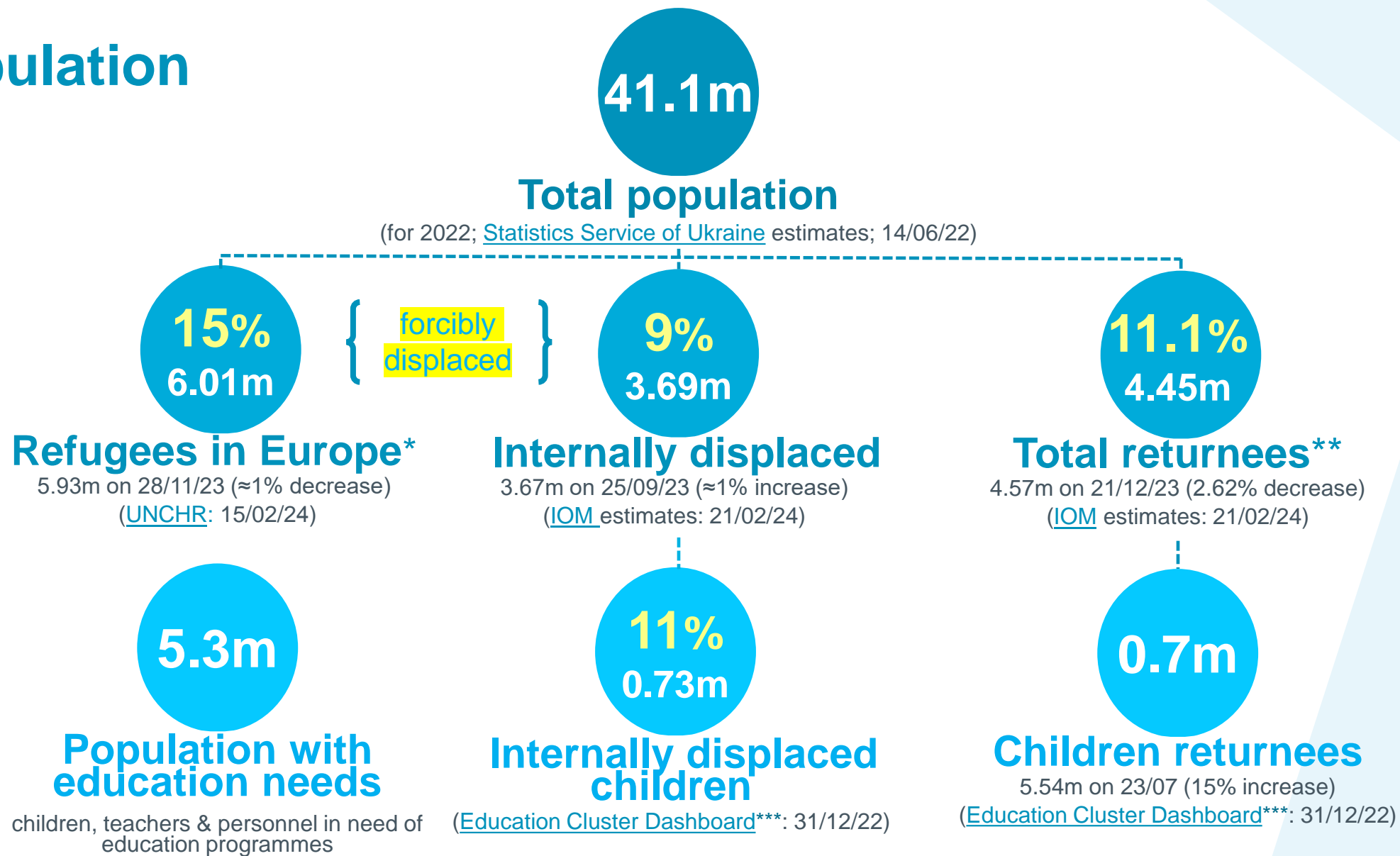


* Individual refugees from Ukraine recorded across European countries, see [UNCHR](#). New methodology estimates provided in June 2023 (incl. refugees from Ukraine who were granted refugee status, temporary asylum status, temporary protection, or statuses through similar national protection schemes, as well as those recorded in the country under other forms of stay) thus not comparable with previous estimates.

** Ukrainian citizens who are beneficiaries of temporary protection in EU MS, at the end of the indicated month.

*** See source for an updated note on the calculation of the estimates.

Population

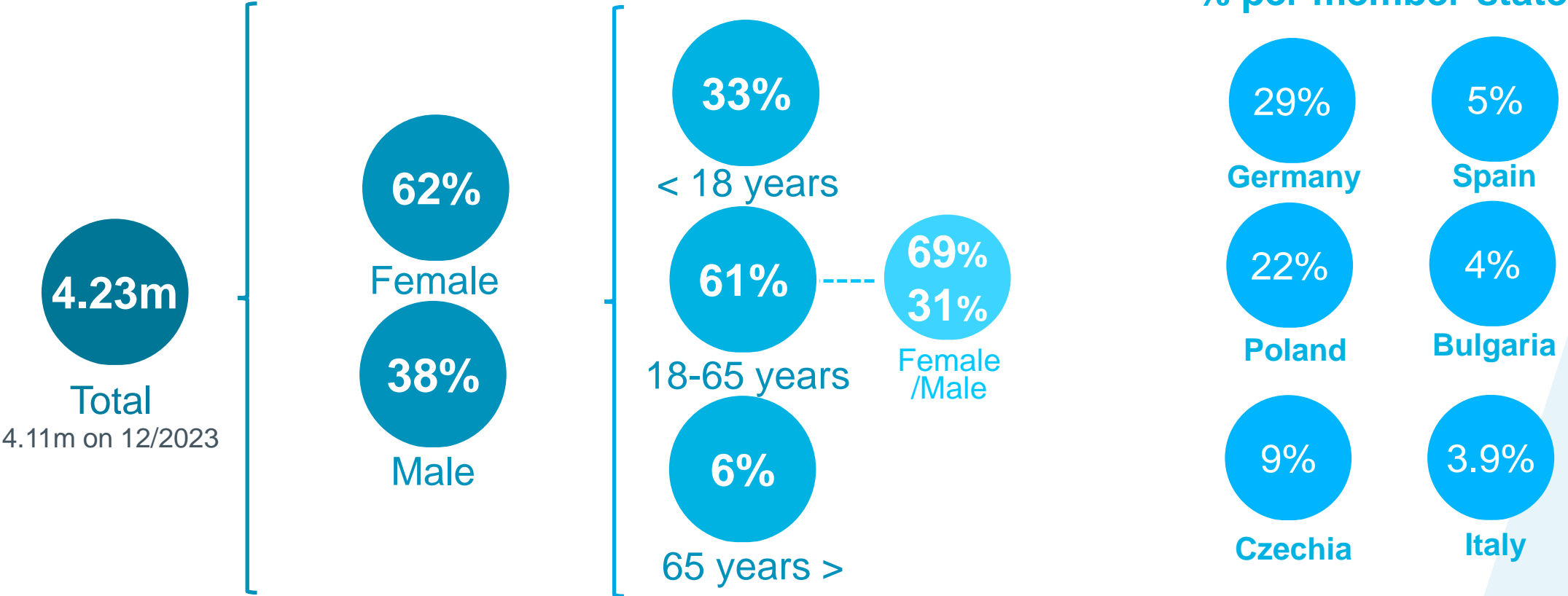


* Individual refugees from Ukraine recorded across European countries, see [UNCHR](#).

** Note: Including returns of former IDPs from other locations within Ukraine, as well as self-reported returns from abroad (16%). See p.1 of [IOM](#)

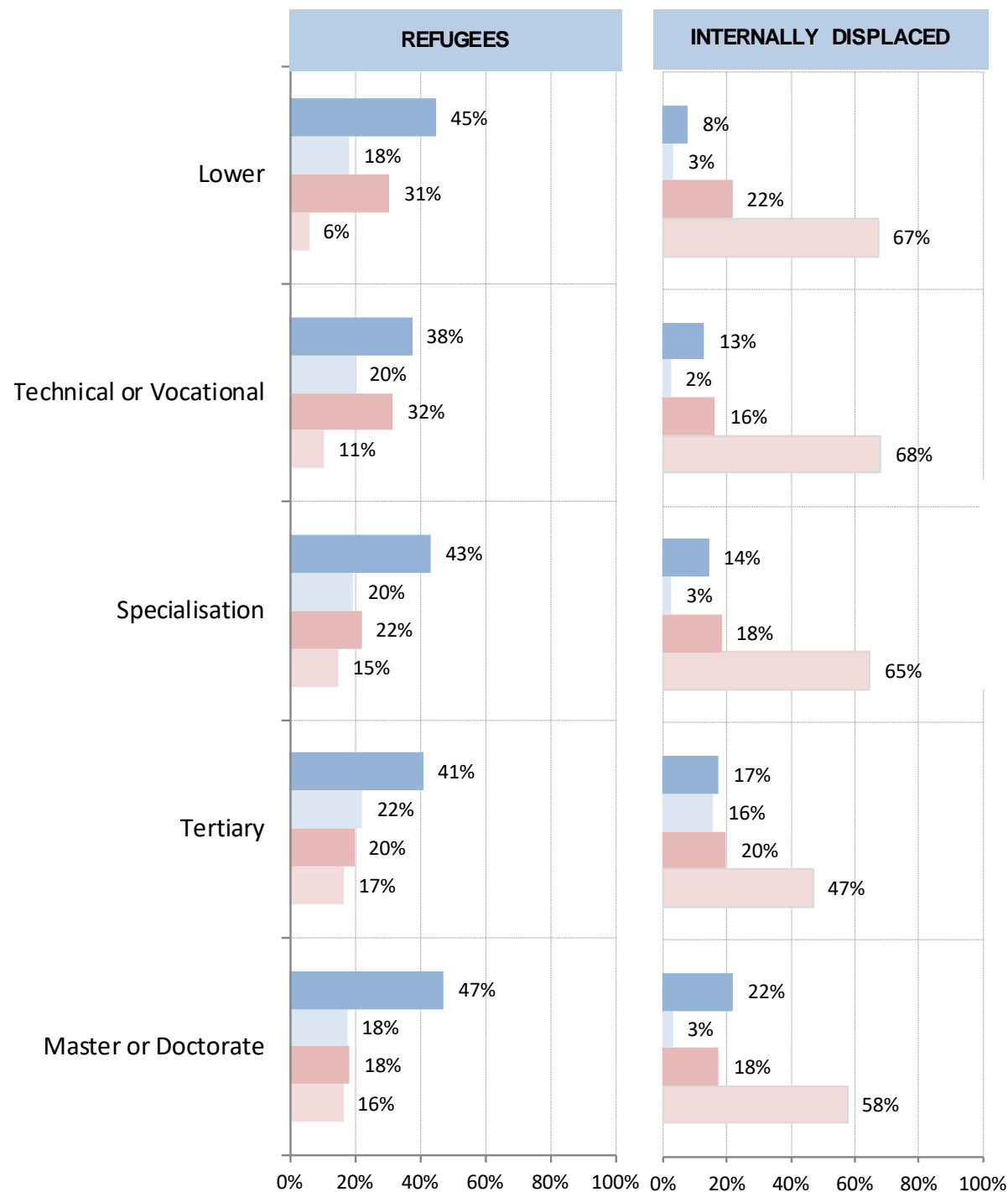
*** Analytical figures available in [OCHA](#) (Aug Revision 2022) and its [annex](#).

Ukrainian refugees in EU-27 MS*



* Beneficiaries of temporary protection at the end of the month by citizenship, Sep 2023; see [Eurostat](https://ec.europa.eu/eurostat) accessed 21/02/2024

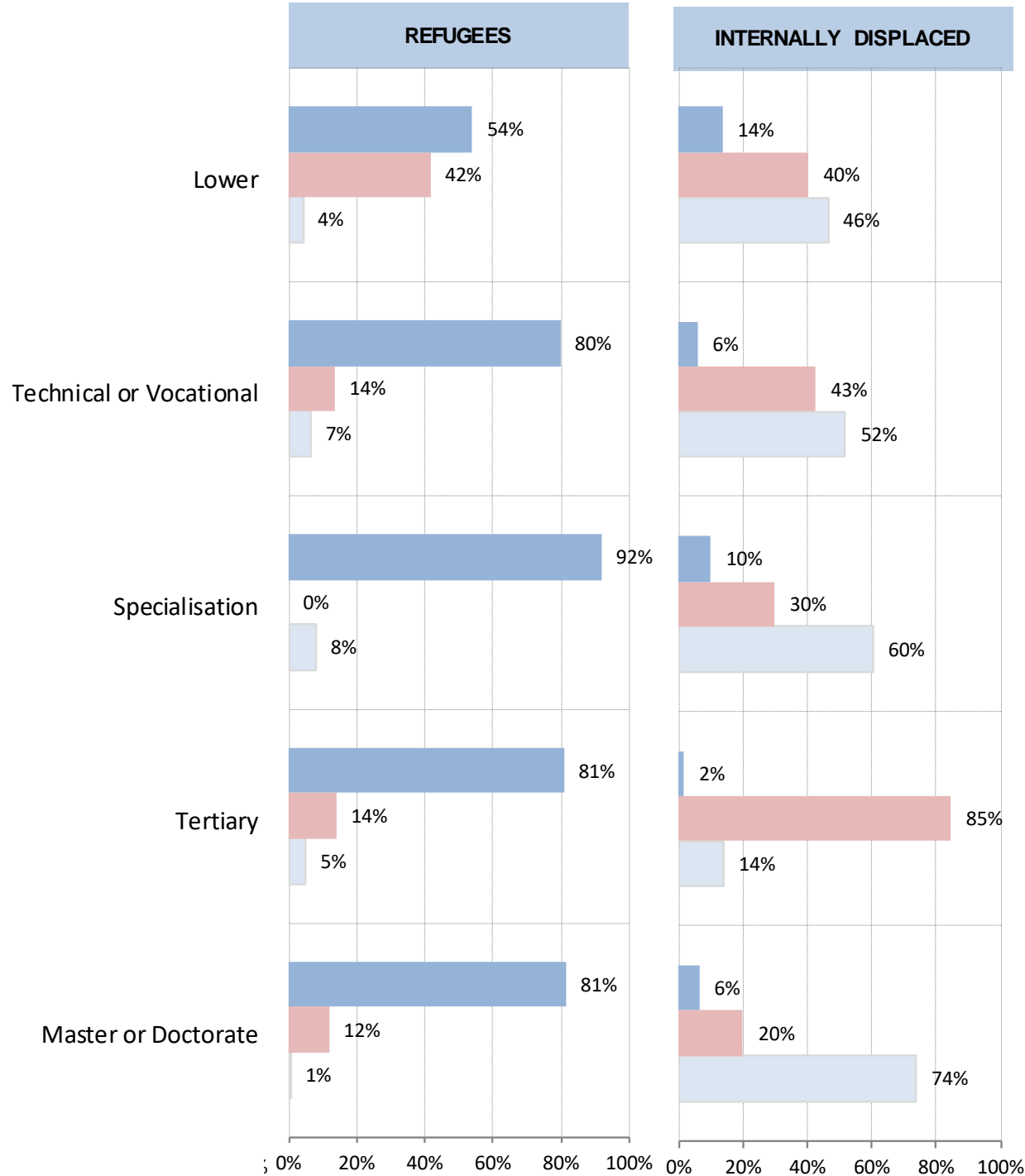
Refugees and Internally Displaced People (IDPs): activity - by education level



- Working
- Education/Training
- Unemployed
- Not active

Source: ETF analysis, based on UNHCR surveys on the Intentions and Perspectives of Refugees (3rd Round) and IDPs (2nd Round). For an overview see UNHCR (2023) [“Lives on Hold: Intentions and Perspectives of Refugees and IDPs From Ukraine” Regional Intentions Report #4 , July.](#)

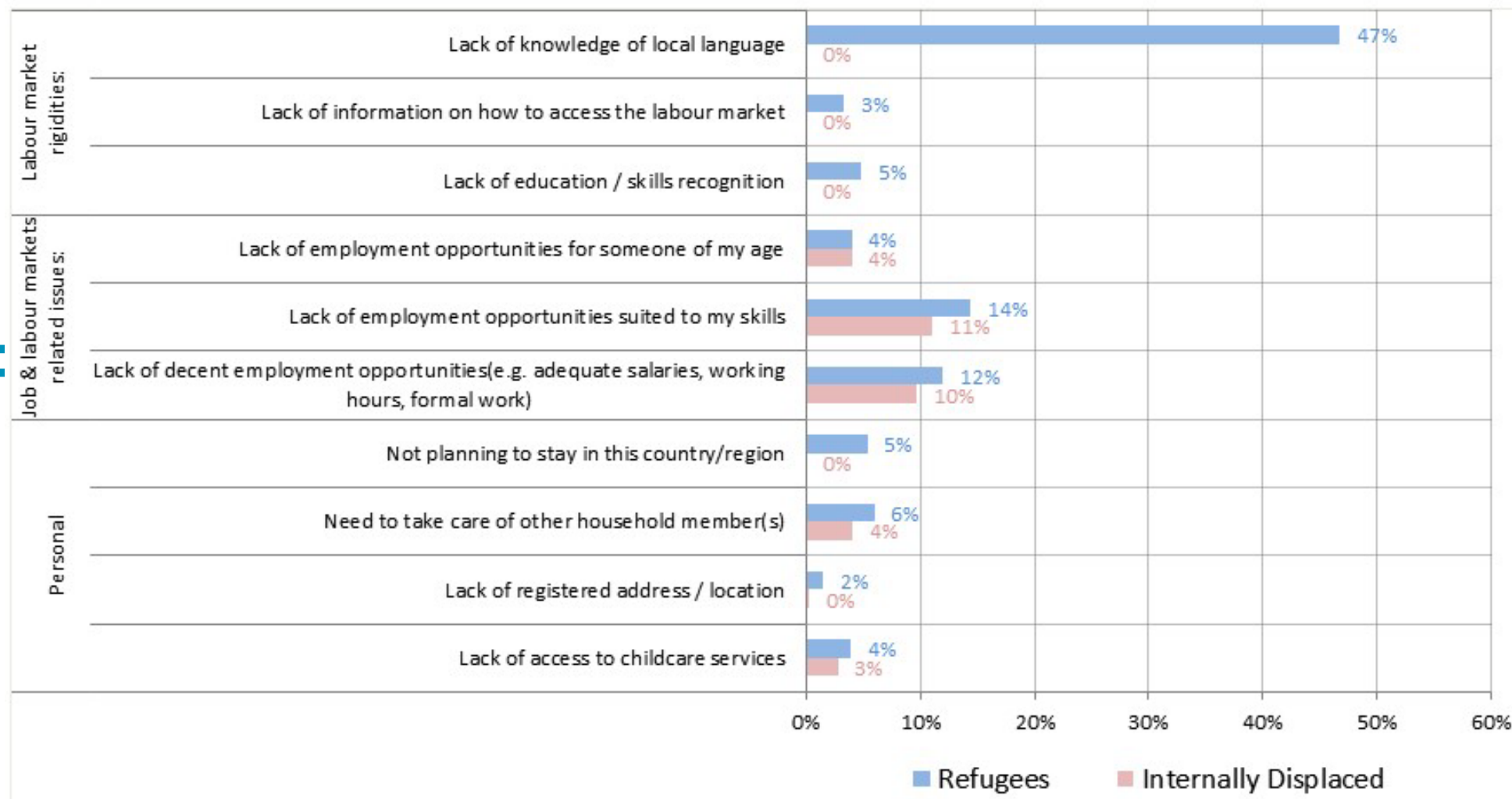
Refugees and Internally Displaced People (IDPs): education & training activities - by education level



- Professional training / courses
- Full-time student
- Apprentice / Intern / Volunteer

Source: ETF analysis, based on UNHCR surveys on the Intentions and Perspectives of Refugees (3rd Round) and IDPs (2nd Round). For an overview see UNHCR (2023) [“Lives on Hold: Intentions and Perspectives of Refugees and IDPs From Ukraine” Regional Intentions Report #4](#), July.

Refugees and Internally Displaced People (IDPs): difficulties encountered in finding work



Source: ETF analysis, based on UNHCR surveys on the Intentions and Perspectives of Refugees (3rd Round) and IDPs (2nd Round). For an overview see UNHCR (2023) [“Lives on Hold: Intentions and Perspectives of Refugees and IDPs From Ukraine” Regional Intentions Report #4](#), July.

Human capital & education: impact on infrastructure

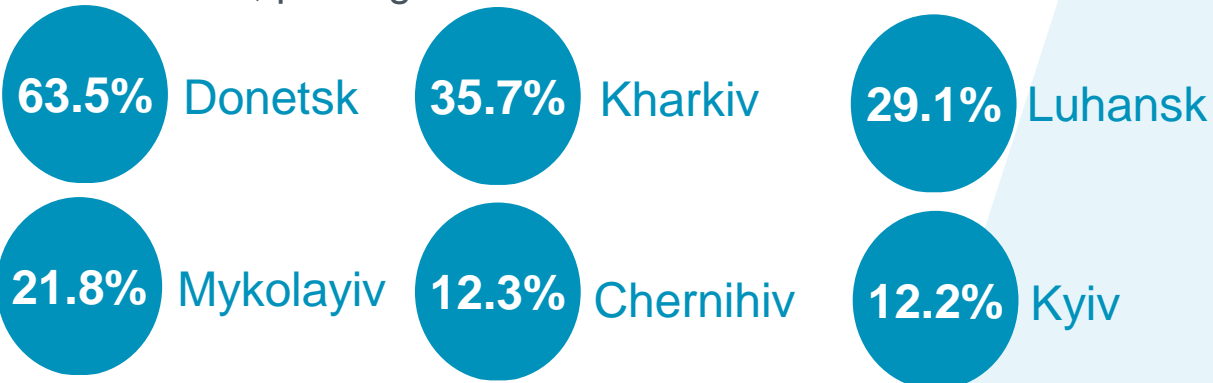
3,798 Damaged & destroyed education facilities ($\approx 12.1\%$ of total)*

6.8b US\$ Direct damage estimates in education infrastructure***

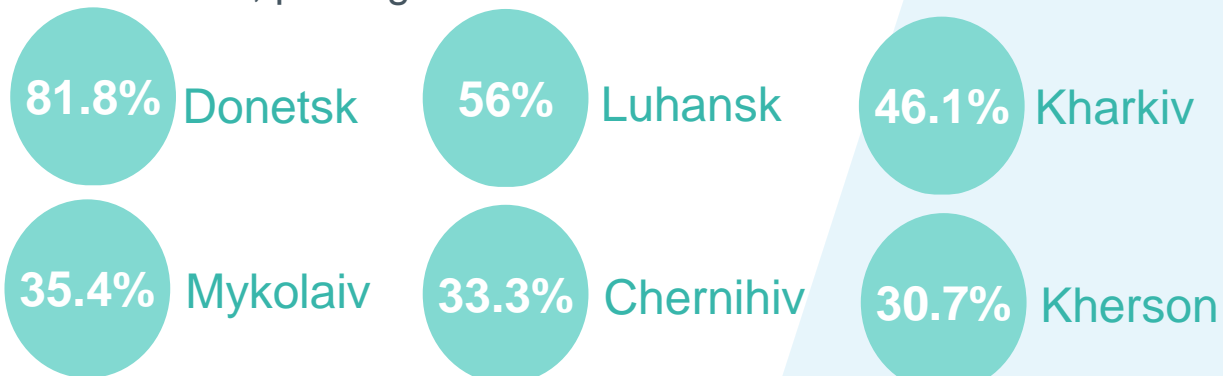
23 Destroyed VET schools

128 Damaged VET schools (damaged + destroyed = 18.3% of total**)

Damaged & destroyed education facilities as % of total, per region*



Damaged & destroyed VET education facilities as % of total, per region**



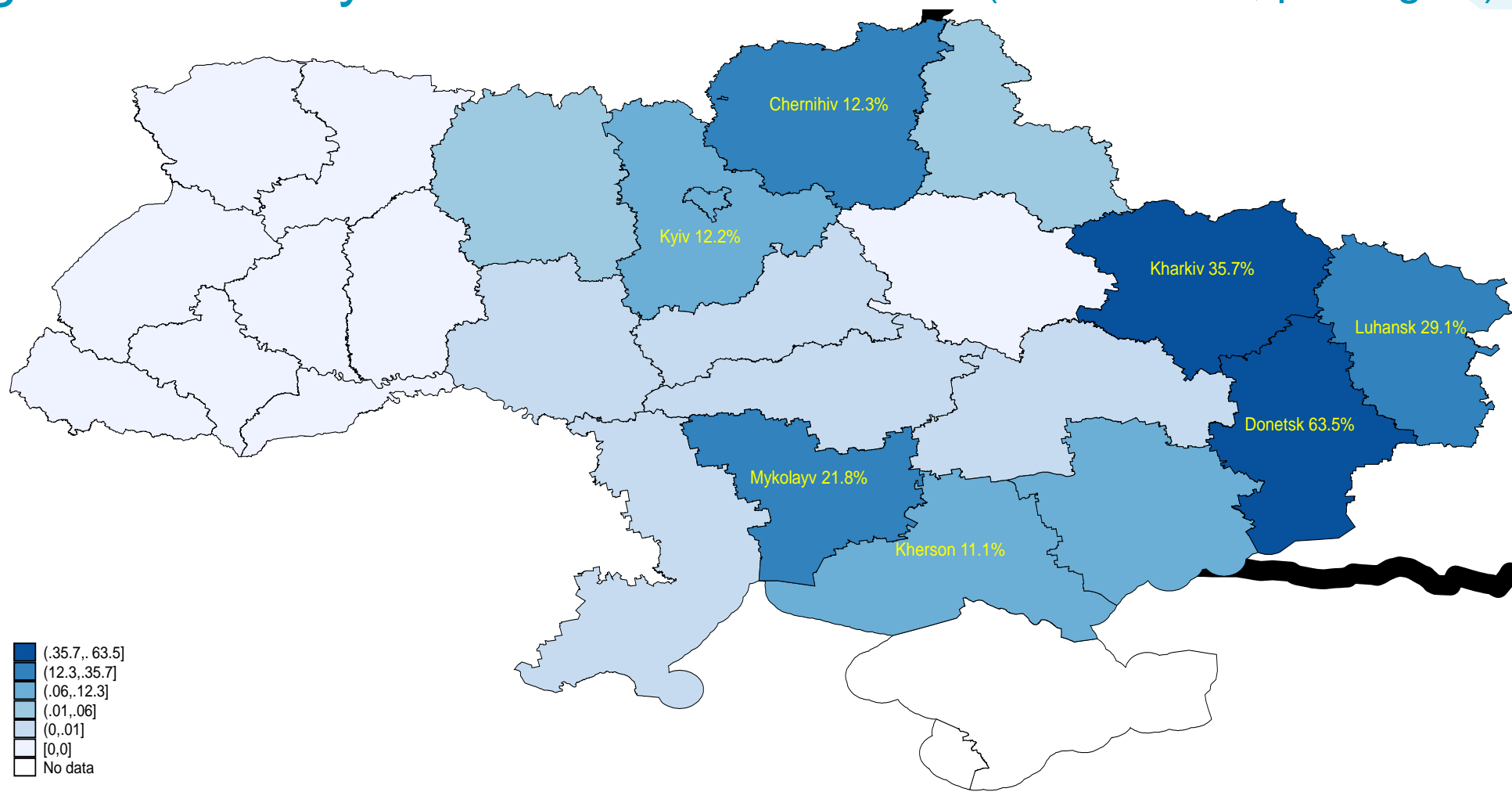
Note: * % of total education facilities; incl. pre-primary, primary, secondary, TVET and tertiary ones only;
** % of total VET education facilities.

Sources: [Ukrainian MoES](#) for the damaged & destroyed education facilities (accessed 17/11/2023); ; Statistics Service of Ukraine, [Statistical Yearbook \(2020\)](#) for the (national and regional) number of institutions; data accessed 06/10/23.

*** Note: estimates include kindergartens and secondary & higher education infrastructure. See source for an updated note on the calculation of the estimates.
Source: [Kyiv School of Economics](#); updated 12/02/2023).

Human capital & education: impact on infrastructure

damaged & destroyed education facilities (as % of total, per region)



Human capital & education: how and where teaching is being delivered

164k

IDP learners

4,000

Education institutions used for other purposes

of Municipalities

general education

1050

Distance / Online

5

In person

32

Mixed

Teaching Modalities

preschool

478

Distance/ Online

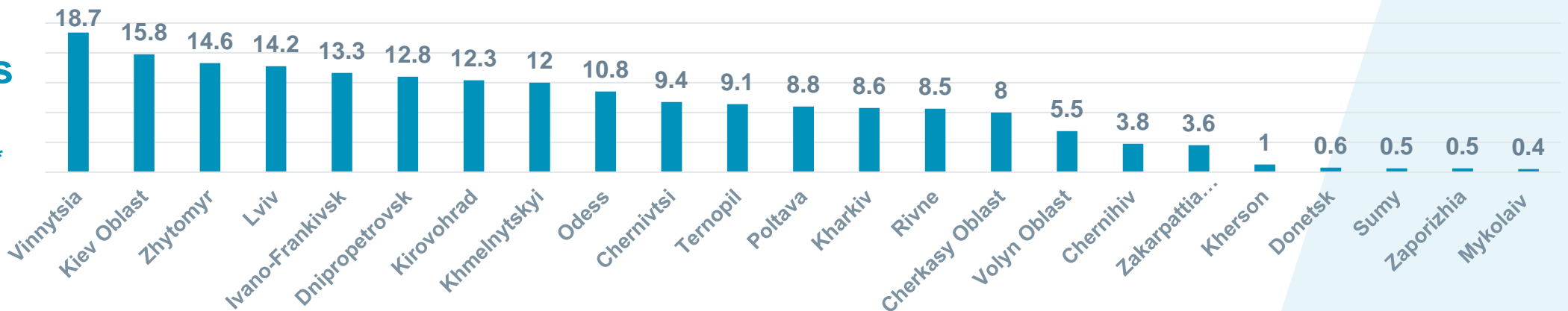
57

In person

94

Mixed

IDP learners per region (in thousands)*

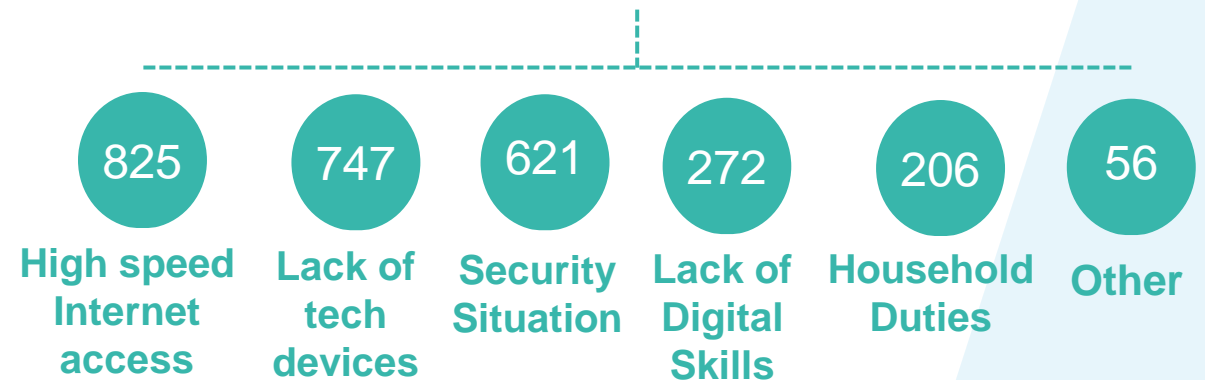


Human capital & education: challenges to education delivery

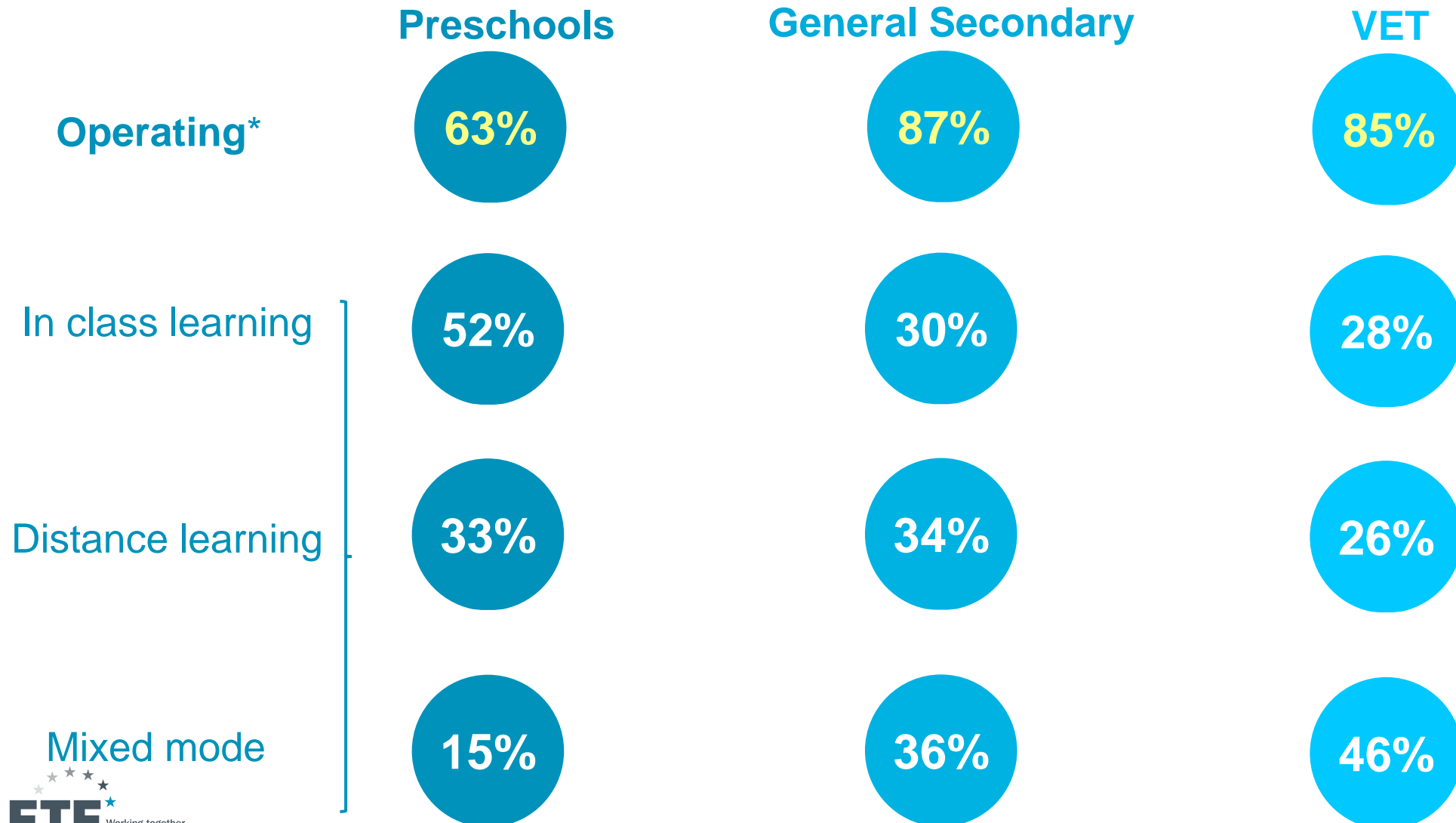
Needs & challenges for continuation of education services



Challenges for teachers to facilitate online learning (# of municipalities)



Human capital & education: back to school teaching modes



Damages, losses and reconstruction & recovery needs Feb 2022 – Feb 2023



Note: **Damages** : Direct costs of destroyed or damaged physical assets and infrastructure, valued in monetary terms. Costs are estimated considering the replacement price prevailing before the invasion; **Losses** Changes in economic flows resulting from the war, valued in monetary terms. Examples include disrupted services, increased operating costs, loss of revenue for authorities/private sector, and debris removal; **Needs, Repair, Reconstruction:** Costs for repair, restoration, and reconstruction, considering a build back better premium, such as improvements for energy efficiency (EE), modernization, and sustainability standards, as well as factors such as inflation, surge pricing due to volume of construction, higher insurance, and so forth. Needs do not equal the sum of damage and losses. **Productive Sectors** include Agriculture, Commerce and industry, Irrigation and water resource management and Finance and banking.

Source: Joint Government of Ukraine, World Bank, European Commission & United Nations [Third Rapid Damage and Needs Assessment \(RDNA3\)](#); 14/02/2024

Looking ahead: institutional forecasts

		2021	2022	2023	2024
GDP (% change)	<u>World Bank</u>	3.4%	-29.1%	2.0% ^f	
	<u>IMF</u>	3.4%	-29.1%	2.0% ^f	3.2% ^f
	<u>EBRD</u>	3.4%	-29.1%	1.0% ^f	3.0% ^f
	<u>Statistics Services of Ukraine</u>		-29.1%	QIII: 9.3%	
Employment Losses**	<u>ILO</u>		-30.2% (based on current situation) -43.5% (based on military escalation) -8.9% (based on hostilities cessation & withdrawal)		
Poverty rate***	<u>World Bank</u>	5.5%	24.1%	22.0% ^e	..
	<u>UNDP</u>	2.5%	4.2% - 28%	..	
Vulnerable population ^	<u>UNDP</u>	46.4%	49.7% - 62.5%	..	

^e Refers to estimates for 2022 and 2023; ^f refers to forecasts or projections; except for Statistics Service Ukraine referring to 2023Q3 *Real GDP change compared to Q1 & Q2 2021, respectively (seasonally adjusted).

** % changes compared to pre-conflict period; scenarios for next three months;

*** Upper middle-income poverty rate (\$5.5 in 2011 PPP); UNDP: range of four crisis scenarios projections based on initial partial equilibrium analysis and GDP shocks ranging from 7% to 60% decrease.

^ Vulnerable population to income poverty is defined if an individual's income is above \$5.50 a day but below \$13 a day.

Looking ahead: proposals

Estimates:

- **Learning losses** due to a combination of extended pandemic-related closures and the war are estimated to **be more than 1 (schooling) year**. Also, the **loss of future earnings per student** is estimated to be **more than 10%** ([Angrist, Djankov, Goldberg & Patrinos, 2022](#)).

Demographic & labor market shock

- Ukraine's population has been **ageing fast**; the (median) age was 35 in 1990, reaching 41 at the start of the war. Proposed policies include: i) incentives for Ukrainians to **return from abroad**, incl. monetary rewards to rebuilding homes and businesses, ii) priority support in the form of welfare payments for refugees who have **lost their family**, iii) **child support policies** to increase fertility rates (lower cost childcare) ([Blinov & Djankov, 2022](#))
- Set up a plan for the reconstruction of post-war Ukraine; including support measures to **encourage the return of those migrants** currently flooding out of the country ([WiiW](#), April 2022).
- In the **reconstruction process**, foreign firms with functioning supply chains and organisational capital can be utilized to address shortages of **expertise and workforce**, while encouraging the **use of local labor force** ([CEPR](#), April 2022).

Looking ahead: proposals

Long-term cost of wars on wartime children

- There is little doubt that the trauma and fear Ukrainian children are experiencing will have a tremendous effect on their **physical and mental health**, an effect that may last for life.
- A number of studies provide mounting and alarming evidence on the potential impact that the Russian invasion may have on the **human capital and physical and mental health outcomes** of the Ukrainian children who are being exposed to war and large-scale destruction.
- Findings from historical episodes underscore **the importance of policies that prioritise the child**. Such policies are essential not only to improve the wellbeing of wartime children and their children, who are also impacted by warfare, but also to facilitate peacekeeping operations (for a review see [Akbulut-Yuksel](#), May 2022)
- According to historical lessons on displacement in Europe, **refugees, and by extension their children**, will be keen to make the most of a traumatic experience. **Access to education can be a silver lining of forced migration**, allowing refugee children to invest in a brighter future (see [Becker](#), March 2022)

Looking ahead: proposals

Technology & education:

- Build back better: **R&D reversing - brain drain actions**, including the use of EU educational and research programs (Erasmus, ERC), while attracting **modern technologies and skill-intensive capital investment** ([CEPR](#), April 2022).
- Upholding **Ukraine's 'intellectual sovereignty'**: ensuring the on-going presence of the country's research and educational sector within the worldwide scientific community and, providing reach and profile to the country's intellectuals, teachers and researchers in the global community (Cooper, Brik, Shapoval, [LSE Policy Brief](#), 2022).
- Recent [OECD](#) report on **Rebuilding Ukraine** highlight the need of developed/host countries to promote genuine brain circulation and the establishment of sustainable and productive long-term partnerships with **Ukrainian scientific and education institutions**. This includes:
 - Digital tools and open access to scientific data and publications;
 - **Individual mobility and international networks** can provide the basis for productive future partnerships;
 - Policy measures for **refugee specialists and scientists** from Ukraine to ensure to maintain strong links with home, so that the current brain exodus can be rapidly reversed once the war is over;
 - The **Ukrainian scientific diaspora** should be considered as a strategic asset both for their country of origin and their country of destination, in brokering or building partnerships.

THE INVASION OF UKRAINE: THE IMPACT, IN NUMBERS:
REVIEW OF REPORTS, STUDIES & LITERATURE (Updated: 23 FEB 2024)

IMPACT								
POPULATION		Internal Displacement Report [IOM, 1/2023]	Refugees From Ukraine Recorded Across Europe [UNHCR]	Humanitarian Response Plan [OCHA, 2/2023]	IDP Area Baseline Assessment [IOM, 03/23]	Ukraine Situation Flash Update [UNHCR, 5/2023]	Ukraine Humanitarian Situation Report [UNICEF, 3/2023]	
SCHOOLING & LEARNING OUTCOMES		Overview of the current state of education and science in Ukraine [MoES, 2/2023]	Save Schools – Children of War in Ukraine [MoES]	Education: Impact of the War in Ukraine [WB, 05/2022]	The Loss of Human Capital in Ukraine [Patrinos et. al, 4/2022]	Education on Hold [UNCHR, 9/2022]		
COST, SUPPORT & ASSESEMENT		Rapid Damage & Needs Assessment [WB et al; 03/2023]	Higher Education Needs Assessment [WB et al, 12/2022]	Ukraine Support Tracker Data: Military, Financial & Humanitarian Aid [IFW, 2023]	Report on Damages and Losses to Infrastructure from the Destruction [KSE & UKR, 06/2023]			
POVERTY & ECONOMY		Global Economic Prospects [World Bank, 1/2023; p.62]	World Economic Outlook [IMF, 2023; p.36]	Europe & Central Asia Economic Update [World Bank, 2023; p.105]				
LABOR MARKETS EFFECTS								
In UKRAINE	FIGURES & FINDINGS	How The War Changed Me and The Country [RAPID, 02/2023, p.50]	Impact of the crisis on employment, incomes, and social protection [ILO, 2/2023]	Ukraine’s Wages and Job Loss Trends During the War [CEPR, 11/2022]	Ukraine’s Labour Market in Wartime [EBA, 3/2023]			
	IMPACT & POLICIES	The Impact of the Ukraine Crisis on the World of Work: [ILO, 5/2022]						
In EU	FIGURES & FINDINGS	Intentions & Perspectives of Refugees from Ukraine [UNHCR, 2/2023]	What We Know About the Skills & Early Labour Market Outcomes of Refugees From Ukraine [OECD, 1/2023]	The Potential Contribution of Ukrainian Refugees to The Labour Force In EU Countries [OECD, 6/2022]	What Are the Integration Challenges of Ukrainian Refugee Women? [OECD, 2023]	Teaching Opportunities and Support for Ukrainian Educators [OECD, 2023]		
	IMPACT & POLICIES	How Ukrainian Migrants Affect the Economies of European Countries [CEPR, 03/2022]	Labour Market Access for Ukrainian Refugees [CEPR, 1/2023]	Policies to Address the Refugee Crisis in EU [IMF, 09/2022]	The Impact of the Influx of Ukrainian Refugees on the Euro Area Labor Force [ECB, 4/2022]	Displacement, Integration, and Return: What Remote Work Possibilities for Ukrainians? [ICMPD, 2/2023]	How to Create Better Labor Market Conditions for Migrant Ukrainians? [Support Ukraine, 2023]	Vocational Training in Ukraine. In “The Effects of the Ukraine War on the German Labour Market” [IAB, 2023]
REBUILDING UKRAINE								
REFORM PLANS		Education and Science Reforms to 2027 – National Strategy [Ukrainian Government]	Ukraine Recovery Plan Materials of the “Education and Science” Working Group [National Recovery Council, 7/2022]	Ukraine Recovery Plan Materials “Economic Recovery & Development” WG [National Recovery Council, 7/2022]	Ukraine’s National Recovery Plan [National Recovery Council, 6/2022]	Ukraine Rapid Damage & Needs Assessment-RDNA2 [WB, Gov. Ukraine, EU, & UN, 3/2023]	Relief, Recovery & Resilience Reconstruction [WB, 5/2023]	Strategy: Financial Stability and Reconstructing [National Bank of Ukraine, 6/2023]
ACCESSION REPORTS		Commission Opinion on Ukraine’s Application for Membership of the EU [COM(2022) 407 final]	Ukraine – Europe. Report on the implementation of the Association Agreement [Cabinet of Ministers of Ukraine, 2022]					
DEMOGRAPHY & GENDER		Ukraine’s Deepening Population Challenge [Djankov & Blinoc, 6/2022]	The Gender Dimension of the Reconstruction Process [FROGEE, 2023]	Depopulation In Ukraine: Low Fertility, High Mortality & Emigration [CPC, 2023]				
EDUCATION & LABOUR MARKET		Education Reforms During & After the War [CEPR, 2022; p.323]	The Labor Market in Ukraine: Rebuild Better [CEPR, 2022; p.283]	Recovering Lost Learning Opportunities In Ukraine: Key Education Policy Strategies [OECD, 5/2023]				
ANALYSIS		Why the West Needs Ukraine and its IT business [CEPR, 2023; p.101]	The Future of Science in Ukraine. Actions Now Will Affect Post-War Recovery [OECD, 9/2022]	Democracy Needs Ukraine to Win [Acemoglu & Johnson, 2023; p.7]	Challenges & Opportunities of LRA’s & the Reconstruction of Ukraine [European Committee of the Regions, 2022]	Reconstructing Ukraine: Economic History Insights [EBRD, 5/2023; p.18]	Quantifying War-Induced Crop Losses in Ukraine [World Bank, 2022]	The Impact of the War on Human Capital & Productivity in Ukraine [CEPR, 2023]
ECONOMY & SECTORAL		Financing democracy: Why and how partners should support Ukraine [CEPR, 2023]						