

Annex 8. Justification of the Forecast for Creating up to 2 million Green Jobs: Five Interrelated Factors

1. Unprecedented scale of reconstruction

Ukraine's recovery is not a typical post-crisis scenario. Over **30% of the housing stock** has been damaged, and **thousands of kilometres of roads, power lines, water systems, and industrial facilities** have been destroyed. Reconstruction using **green technologies** generates a strong multiplier effect. For comparison, in EU countries, “green” renovation projects create **3–5 jobs per €1 million** of investment, while Ukraine's reconstruction budget amounts to **tens of billions of euros**.

2. Massive environmental clean-up needs

The war has produced more than **200 million tons of debris, toxic waste, and contaminated materials**, and about **30% of Ukraine's territory** requires decontamination, demining, or land reclamation. These are **labor-intensive, localized, and long-term tasks**, particularly when implemented in line with EU environmental standards. This alone can generate **hundreds of thousands of green jobs** in rural and peri-urban areas.

3. Green transformation across all sectors and value chains

The transition involves not only “traditionally green” sectors but also the **greening of the entire economy**, including:

- electrification of transport and logistics;
- modernization of industries to increase energy efficiency and meet ESG standards;
- development of circular agriculture and sustainable food systems;
- creation of green digital professions in environmental monitoring, data management, and climate technologies.

These processes have a **cross-sectoral multiplier effect**: each new green job stimulates additional employment in **education, services, maintenance, and compliance**.

4. Human capital and labor demand

Over **7 million people**, including **5.6 million refugees** and **millions of veterans**, must return or reintegrate into civilian life. If even **one in three** finds employment in the green economy, this would already amount to **over 2 million green jobs**. In addition, Ukraine is experiencing a **generational shift**—its youth seek **meaningful, value-driven work** aligned with **European principles and climate responsibility**. This represents a **cultural and social opportunity**, not just an economic one.

5. Policy and financial levers

The optimal combination of **donor financing, EU integration mechanisms, green credit lines, and tax incentives** can significantly accelerate green economic development across all regions. Depending on sectoral intensity, **each €1 million of investment** in the green economy can create **8–15 direct and indirect jobs**. If at least **€20 billion** of recovery funds are directed toward green projects, the **employment creation effect** could reach or even exceed **2 million jobs**.

Methodological Basis and Calculation Model

The forecast for creating up to **2 million green jobs** is based on a **combined employment estimation model** adapted from methodologies by:

- the **International Labour Organization (ILO Green Jobs, 2023)**,
- the **United Nations Environment Programme (UNEP Green Recovery Model, 2023)**,
- the **European Bank for Reconstruction and Development (EBRD Green Transition, 2024)**, and
- the **Organisation for Economic Co-operation and Development (OECD Employment Multipliers, 2024)**.

The model accounts for **direct, indirect, and induced effects** of investments in green sectors and is grounded in **employment multipliers** and **labor intensity indicators** across construction, energy, land reclamation, logistics, water management, agriculture, and forestry.

Variable Definitions

- **I** — total investment in green projects (million euros)
- **m** — coefficient of direct job creation (number of jobs per €1 million invested)
- **k_indirect** — coefficient of indirect job creation (effects in related sectors)
- **k_induced** — coefficient of induced job creation (consumer spending effect)
- **p** — share of jobs potentially filled by veterans (15–20%)

Formulas

(1) Direct jobs:

$$\text{Jobs_direct} = I \times m$$

(2) Total employment effect:

$$\text{Jobs_total} = \text{Jobs_direct} \times (1 + k_{\text{indirect}} + k_{\text{induced}})$$

(3) Jobs for veterans (15–20% target share):

$$\text{Jobs_veterans} = \text{Jobs_total} \times p$$

where $p = 0.15 \dots 0.20$

Example Calculation

For an investment of €20,000 million in green recovery sectors:

• Direct jobs:

$$\text{Jobs_direct} = 20,000 \times 12 = \mathbf{240,000}$$

• Total effect (assuming $k_{\text{indirect}} = 0.4$, $k_{\text{induced}} = 0.4$):

$$\text{Jobs_total} = 240,000 \times 1.8 = \mathbf{432,000}$$

• Jobs for veterans (15–20%):

$$\text{Jobs_veterans} = 432,000 \times 0.15\text{--}0.20 = \mathbf{65,000\text{--}86,000}$$

Sectoral Employment Multipliers (Scenario Analysis)

Sector / Area	m (jobs/€1 million)	k_indirect	k_induced	Total jobs/€1 million
Construction and renovation	12–19	0.3	0.4	16–26
Renewable energy and energy efficiency	10–15	0.3	0.5	16–24
Water management and waste utilization	8–12	0.4	0.4	14–20
Land reclamation and demining	10–13	0.5	0.3	16–22
Agriculture, forestry, hunting, and fisheries	9–11	0.3	0.5	14–20
Sustainable tourism and green logistics	8–10	0.4	0.5	13–18
Green IT and climate technologies	7–9	0.2	0.4	10–13

Interpretation

Application of this model demonstrates that investments of at least €20–25 billion in green recovery sectors can generate 400,000–500,000 new jobs.

Scaling up to the full national reconstruction investment volume (over €500 billion) provides the potential to create up to 2 million green jobs by 2030, of which 300,000–400,000 could be filled by veterans.

Conclusion

Thus, the analytical model provides a solid evidence base for shaping **national green employment policy** and serves as a **reference tool for donors, government programs, and international financial institutions**.

It demonstrates that the creation of **up to 2,000,000 green jobs by 2030** is a realistic goal, provided that:

- at least **€20–25 billion** is directed toward environmentally sustainable recovery sectors;
- national policies are aligned with the **EU Taxonomy** and the **Do No Significant Harm** principle;
- **targeted retraining and certification programs** for veterans are implemented;
- **international financial institutions and the private sector** play an active role.

Ukraine possesses all the prerequisites to become an example of a “**green transformation with a human face**” — from warriors to builders, from destruction to renewal, from loss to growth.