UKRAINE: Post-war strategic planning for green reconstruction

FINANCING THE GREEN AND NET-ZERO TRANSITION IN THE EU EASTERN PARTNER COUNTRIES AND CENTRAL ASIA

September 19, 2023
UKRAINE'S LOSSES FROM THE RUSSIA'S WAR OF AGGRESSION

As a result of the largest military invasion since the Second World War, Ukraine has suffered and continues to suffer large-scale destruction of infrastructure and enormous environmental damage.

### DAMAGED, DAMAGED AND DESTROYED INFRASTRUCTURE FACILITIES

<table>
<thead>
<tr>
<th>Category</th>
<th>Quantity</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Residential buildings</td>
<td>153,900</td>
<td></td>
</tr>
<tr>
<td>Private cars</td>
<td>207,000</td>
<td></td>
</tr>
<tr>
<td>Vehicles of public transport</td>
<td>16,000</td>
<td></td>
</tr>
<tr>
<td>Healthcare facilities</td>
<td>1,216</td>
<td></td>
</tr>
<tr>
<td>Educational institutions</td>
<td>3,170</td>
<td></td>
</tr>
<tr>
<td>Cultural institutions</td>
<td>1,800</td>
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For a total of more than **USD 143,8 bn**

### DAMAGE TO THE ENVIRONMENT

<table>
<thead>
<tr>
<th>Category</th>
<th>Quantity</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Direct CO2-eq emissions</td>
<td>33 mln t</td>
<td>worth more than <strong>USD 27.1 bn</strong> as a result of hostilities</td>
</tr>
<tr>
<td>Destroyed water infrastructure facilities</td>
<td>744</td>
<td>worth over <strong>USD 8.1 bn</strong></td>
</tr>
<tr>
<td>Contaminated and littered land</td>
<td>64 thousand hectares</td>
<td>unique species of animals and flora and fauna may disappear</td>
</tr>
<tr>
<td>Species of flora and fauna</td>
<td>750</td>
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For a total of more than **USD 54 bn**
THE IMPACT OF THE WAR ON CLIMATE CHANGE

POST-WAR GREEN RECOVERY & CLIMATE CHANGE ADAPTATION

FORESTS AND PROTECTED AREAS
- Fires of 60,279 ha
- 63,447 ha flooded
- Violation of protected areas 1,240,113 ha
- Emerald network 2.9 mln ha
- Cutting/felling 281,223 ha

REDUCING THE ABSORPTION OF GREENHOUSE GASES BY FORESTS

WATER RESOURCES
- Water infrastructure facilities destroyed/damaged - 744
- Explosion of the Kakhovka hydroelectric power station
- Water volume reduced 14.775 bn km3
- Wetlands 3,000 ha

REDUCED PRECIPITATION, DUST STORMS, RISING TEMPERATURES, INCREASED RISK OF DROUGHT IN THE FIELDS, INCREASED GREENHOUSE GAS EMISSIONS

SOILS
- Waste pollution 1,594,840 m²
- Mined territory 30%

DEGRADATION OF SOIL QUALITY, DISTURBANCE OF SOIL COVER, REDUCTION OF FERTILITY, SPREAD OF EROSION PROCESSES

GREEN RECOVERY, REGIONAL ADAPTATION ACTION PLAN,
PROGRAMMES FOR REFORESTATION, RESTORATION OF WATER INFRASTRUCTURE

EMISSIONS OF MLN T CO2EQ:
- Ukraine = 50
- Europe = 27

(increase in the length of air routes, Nord Stream 1, 2, other)

Emissions of mln t CO2eq:
- Fires = 17.7
- Military actions = 21.9

A conservative estimate of GHG emissions for the reconstruction of the country is ~50 mln t of CO2

Source:
- * data for the year of the war from the report "The impact of the Russian war in Ukraine on climate" https://ecozagroza.gov.ua/
- ** data from the EcoZagroza website

https://ecozagroza.gov.ua/
DAMAGE TO THE ENVIRONMENT

AS A RESULT OF RUSSIA'S FULL-SCALE INVASION OF UKRAINE

> 2507 CASES OF ENVIRONMENTAL DAMAGE RECORDED

56 bn USD ACCOUNTED LOSSES, OF:

- 947 bn UAH land contamination with waste
- 13 bn UAH soil contamination
- 1075 bn UAH damage from air pollution
- 60 bn UAH pollution, contamination of water bodies and marine waters
ON THE WAY TO GREEN RECOVERY OF UKRAINE:

DEVELOPMENT AND ADOPTION OF A CLIMATE LAW – will include the introduction of key principles of climate neutrality for green recovery in all sectors of the economy.

IMPLEMENTATION OF UKRAINE’S AMBITIOUS NATIONAL DETERMINED CONTRIBUTION TO THE PARIS AGREEMENT – adaptation of the NDC implementation action plan to the green recovery and reconstruction plan, adoption of an action plan to reduce anthropogenic methane emissions under the Global Methane Pledge.

DEVELOPMENT AND ADOPTION OF A NATIONAL ENERGY AND CLIMATE PLAN – along with the National Energy Strategy adopted by the Government of Ukraine, it will form the basis for a green recovery of the energy sector based on a significant increase in the share of renewable energy.

PARTICIPATION IN THE UN CONFERENCE ON CLIMATE CHANGE (COP28) – promotion of the initiative to create a Global Platform for just assessment of environmental damage caused by hostilities, the "aggressor pays" initiative and the recognition of ecocide as an international crime.
DEVELOPMENT AND IMPLEMENTATION OF THE CLIMATE LAW

THE CLIMATE LAW IS AN INTEGRATED ELEMENT OF CLIMATE POLICY, WHICH IS A COMPONENT OF:

- POST-WAR RECOVERY OF UKRAINE
- EUROPEAN INTEGRATION OF UKRAINE (AS A EU GREEN DEAL PARTNER)
- INTERNATIONAL COOPERATION OF UKRAINE (CONFERENCE OF THE PARTIES TO THE UNFCCC AND OTHERS)

- Setting a carbon (climate) neutrality goal
- Creating a climate governance framework in Ukraine
- Transposition of European legislation as a party to the EU and the European Green Deal
- Preconditions for the integration of climate change issues into other policies
- Introduction of a policy tracking and climate change forecasting system
### SUMMARY ANALYSIS OF IMPLEMENTATION RESULTS
OF THE UPDATED NATIONAL DETERMINED CONTRIBUTION

<table>
<thead>
<tr>
<th></th>
<th>2030</th>
<th>2021</th>
<th>2018</th>
<th>1990</th>
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<tbody>
<tr>
<td>Прогноз</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2030</td>
<td></td>
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<tr>
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<tr>
<td>1990</td>
<td></td>
<td></td>
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<table>
<thead>
<tr>
<th></th>
<th>Виробництво енергії та тепла</th>
<th>Будівлі</th>
<th>Видобуток та постачання енергоресурсів</th>
<th>Сільське господарство</th>
<th>Відходи</th>
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<tr>
<td>2030</td>
<td>68.1</td>
<td>19.08</td>
<td>40</td>
<td>89.5</td>
<td>44.5</td>
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<tr>
<td>2021</td>
<td>85.24</td>
<td>19.8</td>
<td>50.36</td>
<td>79.37</td>
<td>47.02</td>
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<tr>
<td>2018</td>
<td>98.8</td>
<td>28</td>
<td>45.7</td>
<td>74.9</td>
<td>4424.9</td>
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<tr>
<td>1990</td>
<td>277</td>
<td>102</td>
<td>111.8</td>
<td>127.5</td>
<td>229.5</td>
</tr>
</tbody>
</table>

#### Прогноз
- 2030
- 2021
- 2018
- 1990
REFORM OF ENVIRONMENTAL FINANCE

ENVIRONMENTAL FINANCE REFORM provides for the establishment of independent financial institutions with the status of separate legal entities to effectively finance environmental protection measures:

- The National Environmental Fund - at the national level
- Independent regional environmental funds - in each region of Ukraine.

The Funds will be established on the basis of an updated legal framework and will be overseen by independent Supervisory Boards, which will include representatives from the State, and managed by executive bodies.

- The Supervisory Board is responsible for formulating the Fund's policy and finalising the list of programmes and projects to be financed.
- The Management Board (or Directorate) will perform the executive functions of the Fund.

THE GOAL OF THE ENVIRONMENTAL FINANCE REFORM is to create an effective mechanism for financing environmental protection measures and projects, including those within the framework of Ukraine's post-war green recovery.
ON THE WAY TO GREEN RECOVERY OF UKRAINE

UKRAINE IS ALREADY ACTIVELY RESTORING THE DESTROYED INFRASTRUCTURE ON THE BASIS OF FINANCING THE GREEN AND NET-ZERO TRANSITION, however, to increase the efficiency and accelerate the recovery process, we need further financial and institutional support from our international partners to enable us to:

- ensure that the aggressor fairly compensates for all damages and payments caused to Ukrainian infrastructure and the environment, and pays reparations
- ensure the reconstruction of the destroyed infrastructure based on the principles of climate neutrality and energy efficiency, applying the best international practices
- strengthen the institutional capacity of government agencies and organisations to implement and finance green recovery projects
- make a significant contribution to the energy, food and environmental safety of Europe and the world
Ukraine's economic growth in 2024 - 2027/2033 will be based on three strategic priorities: recovery, sustainability, and economic growth.

- **RECOVERY** - the restoration of damage and losses of people, the private sector, and public infrastructure.
  - Physical restoration of destroyed and damaged infrastructure, restoration of supply chains.
  - "Soft recovery" through the implementation of educational programmes, labour market integration programmes for the unemployed, veterans, return of refugees, rebuilding social and housing infrastructure, poverty reduction, and promotion of a green transition.

- **RESILIENCE** – the people of Ukraine, the economy, defence, and strong critical infrastructure.
  - Resilience of critical infrastructure, improvement of energy efficiency, reduction of energy intensity of all sectors of the economy.
  - Stimulating the economy through the growth of the defence sector (including exports), stimulating innovation.

- **ECONOMIC GROWTH** – reforms, investment attraction, EU membership, and improved living standards.
  - Reforms to attract additional investment, develop business, education, healthcare, and improve the quality of human capital.
  - Integration into the EU, access to foreign capital markets, sustainable growth, launch of an international register of losses and determination of the legal basis for the creation of a commission and a compensation fund.