

## Annexes

### Annex 1

#### Status of Key Strategic Indicators under the Sustainable Development Strategy “Ukraine - 2020”

Strategic performance indicators of the Strategy	Target value	Actual result	
		2019	2020
World Bank Doing Business Ranking	Top 30	71	64
Global Competitiveness Index of the World Economic Forum (WEF), rank	Top 40	85	n/a
S&P Foreign Currency Credit Rating, category	BBB or higher	B	B
GDP per capita, PPP (according to World Bank), US\$	16,000	13,350.5	13,056.7
Foreign direct investment, net inflows in 2015-2020 (according to World Bank), bln US\$	> 40	18	18,8
Corruption Perceptions Index of the Transparency International	Top 50	120	122
Life expectancy at birth, years (according to World Bank)	Raise by 3 years	Raised by 1 year over 2015-2019	-
INSEAD Global Talent Competitiveness Index	Top 30	63	66
Level of public trust in law enforcement agencies (according to Razumkov Center), %	70	43...61	37...63
Level of trust of the expert community in court (according to USAID Justice Sector Reform Program “New Justice”), %	70	41*	27
Energy intensity in oil equivalent, per \$1000 of GDP (according to the International Energy Agency)	0.2 t	0.25 t*	n/a
The share of local budgets in the consolidated state budget, %	65 or more	21	21
The Ratio of Government Debt to GDP in Ukraine (according to IMF), %	3 or less	2.3	5.2
The total public debt and government-guaranteed loans to GDP (according to IMF), %	60 or less	49	60
Defense and security expenditure, % of GDP	3 or more	5.5	5.9

Note: \* - data as of 2018

Source: Compiled by the author based on the information of the State Statistics Service of Ukraine, Ministry of Finance of Ukraine, IMF, WEF, World Bank, International Energy Agency, Razumkov Center, USAID Justice Sector Reform Program “New Justice”, INSEAD, Standard and Poors, and Transparency International.

## Annex 2

### The National Threat and Emergency Response Systems of Ukraine Based on the Interagency Cooperation

Purpose	Organization subsystems/specifics	Major objectives
<b>Unified State Civil Protection System of Ukraine</b>		
<p>To provide the implementation of national policy for civil protection in peacetime, crisis or wartime</p>	<p>Functional and territorial subsystems.</p> <p><i>Major actors:</i></p> <p>1) permanent command authorities for civil protection (Cabinet of Ministers of Ukraine, State Emergency Service of Ukraine and its territorial units, authorized central executive authorities, local state administrations, executive committees of local authorities, heads of enterprises, organizations, etc.);</p> <p>2) coordinating bodies (state, regional, local, and object commissions for technogenic and ecological safety and emergencies);</p> <p>3) civil protection forces of functional and territorial subsystems</p>	<p>To take measures to:</p> <p>a) ensure the readiness of state and local authorities as well as any of their subordinated means and forces to prevent and respond to emergencies;</p> <p>b) prevent the emergencies;</p> <p>c) support the continuous operation of enterprises, institutions, and organizations as well as reduce the possible material losses.</p> <p>To analyze the information on emergencies; forecast and assess the impacts of emergencies, and determine the need for use of forces, means, and material and financial resources.</p> <p>To teach the population about the proper response to emergencies.</p> <p>To spread the information on the protection of population and territories from the impacts of emergencies; to warn the population on the risk or occurrence of emergencies; to report on the actual situation and measures taken in a timely and accurate manner.</p> <p>To provide for the establishment, rational conservation, and use of material and financial reserves required to prevent or respond to emergencies.</p> <p>To protect the population in case of emergencies, to undertake the rescue and other immediate operations designed to mediate the impacts of emergencies; to ensure the life support services for the affected population, etc.</p>

<b>National counter-terrorism system</b>		
<p>To prevent, respond, and terminate the terrorist acts as well as to mitigate their impacts</p>	<p>Functional and territorial subsystems.</p> <p><i>Major actors:</i></p> <p>1) For territorial subsystem – coordination groups of the Anti-Terrorist Center at regional offices of the Security Service of Ukraine and their HQs;</p> <p>2) For functional subsystem – structural units of the counter-terrorism agencies and the Interdepartmental Coordination Commission of the Anti-Terrorist Center at the Security Service of Ukraine.</p>	<p>To prevent terrorist activity through timely identification and elimination of causes and conditions that promote terrorism.</p> <p>To inform the population of the threat level and committed terrorist acts.</p> <p>To secure the possible targets for terrorist attacks.</p>
<b>National cybersecurity system of Ukraine</b>		
<p>To ensure the cybersecurity, including cryptographic, technical, and other forms of protection for national information resources; to provide cybersecurity for critical information infrastructure as well as to establish cooperation on cybersecurity matters with national and local authorities, military forces, law enforcement agencies, research and educational institutions, public associations, enterprises, institutions and organizations of</p>	<p>The system is based on the functional principle without any subsystems and clearly defined operating principles for the territorial level.</p> <p><i>Major actors:</i> State Service of Special Communication and Information Protection of Ukraine, National Police of Ukraine, Security Service of Ukraine, Ministry of Defence of Ukraine and the General Staff of the Armed Forces of Ukraine, intelligence agencies, National Bank of Ukraine</p>	<p>To ensure the coordination between cybersecurity agencies and joint protection against cyber threats.</p> <p>To facilitate the establishment and operation of the National Telecommunication Network as well as the implementation of the organizational and technical model for cybersecurity.</p> <p>To prevent, identify and respond to cyber incidents and cyber-attacks as well as to eliminate their impacts.</p> <p>To inform on the cyber threats and protection mechanisms.</p> <p>To ensure the protection of rights and freedoms of people as well as the interests of society and the state from criminal attacks in cyberspace.</p> <p>To take measures designed to prevent, detect, suppress and investigate cybercrimes.</p> <p>To spread the security-related knowledge in cyberspace.</p> <p>To counter cyber terrorism and cyber intelligence.</p> <p>To facilitate the readiness of the critical infrastructure for possible cyber-attacks and cyber incidents, etc.</p>

<p>all form of ownership, operating in the area of electronic communications and information security and/or owners (administrators) of critical information infrastructure</p>		
<b>Defense capability ensuring system of Ukraine</b>		
<p>To ensure the readiness and capability of all actors of the security and defense sector of Ukraine, national and local authorities, the unified state system of civil protection of Ukraine as well as national economy for the transition from a state of peace to a state of war; defense against armed aggression, and termination of an armed conflict as well as the readiness of the population and national territory for defense</p>	<p>The system is based on the functional principle. The organizational features of the Territorial Defense have been identified.</p> <p><i>Major actors:</i></p> <p>1) in the field of defense capacity and coordination of respective activity within Ukraine: National Security and Defense Council of Ukraine, the Cabinet of Ministers of Ukraine, the Ministry of Defence of Ukraine, and the General Staff of the Armed Forces of Ukraine;</p> <p>2) in the field of defense capacity, at the territorial level: local administrations, local self-government authorities, including executive committees, and military commissariats</p>	<p>To prepare for defense, including:</p> <ul style="list-style-type: none"> <li>- To project and assess the military threat and the war danger;</li> <li>- To develop and implement the military, military-economic, military-technical, and national military-industrial policy;</li> <li>- To improve the structure, specify the tasks, and functions of the Armed Forces of Ukraine and other uniformed services; to ensure the required strength of the personnel, development, training, and appropriate level of combat capability, as well as combat and mobilization readiness for national defense; draft the employment planning;</li> <li>- To develop the military-industrial complex, establish favorable conditions for mobilization of various national industries designed for the production of a sufficient number of weapons, materiel and military equipment;</li> <li>- To plan and prepare the resistance movement;</li> <li>- To ensure the readiness of national and local authorities and the unified state system of civil protection for operation in a wartime;</li> <li>- To establish the state material reserves and reserve funds;</li> <li>- To protect the national borders of Ukraine;</li> <li>- To ensure the cyber defense</li> </ul>

		<p>measures for the protection of national sovereignty and defense capability, to prevent an armed conflict, and to counter armed aggression;</p> <ul style="list-style-type: none"> <li>- To develop the territorial defense;</li> <li>- To defend against armed aggression etc.</li> </ul> <p>Objectives of territorial defense:</p> <ul style="list-style-type: none"> <li>- To protect and secure the state border;</li> <li>- To facilitate the continuous operation of public authorities, military command and control bodies, as well as strategic (operational) deployment of forces;</li> <li>- To protect the important facilities and communications;</li> <li>- To eliminate the sabotage-reconnaissance forces, other armed formations of the aggressor, and illegal armed groups acting against the state;</li> <li>- To maintain the legal regime of martial law.</li> </ul>
<b>Emergency medical services system</b>		
To ensure the organization and performance of life-saving measures for people in urgent state and reduce its impact on health, including in case of emergencies and response to them.	<p>The system is based on the functional principle. The special features of the organization and the supply of its operations on a territorial level have been identified.</p> <p><i>Major actors:</i> health care institutions and their structural units (emergency and disaster medicine centers, emergency (ambulance) stations, emergency (ambulance) crews, emergency (rescue) departments responsible for the organization and provision of emergency medical assistance.</p>	<p>To provide accessible, free, timely, and quality emergency health care, including in case of emergencies and response to them.</p> <p>To provide medical and sanitary support during mass events and activities involving state-protected individuals.</p> <p>To maintain cooperation with emergency rescue units of the ministries as well as central and local executive authorities during emergencies and response to them.</p>

Source: Reznikova et al. (2021) (amended by the author).

## Annex 3

### Self-Assessment Survey for Executive Authorities on Resilience

\_\_\_\_\_  
\_\_\_\_\_  
(name of institution)

#### I. Security situation analysis

1. Which are the core indicators for the state of security of the industry (areas of responsibility)?

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

2. Do those indicators exceed or approach the critical level?

<input type="checkbox"/> YES	<input type="checkbox"/> NO
------------------------------	-----------------------------

*(If NO, go to Q 4 of the survey)*

3. If the indicators exceeded the critical values, what caused this situation?

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

4. Is the current situation in the industry (area of responsibility) getting any worse?

<input type="checkbox"/> YES	<input type="checkbox"/> NO
------------------------------	-----------------------------

5. Which factors may be detrimental to the current situation?

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

6. Which is the largest threat to the industry (area of responsibility)?

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

*(In case of more than one threat, apply Q7-11 to each threat)*

7. Which target groups/objects are the most vulnerable to current threat impact?

---

---

---

---

8. What could be the most extensive negative impact of the threat on the target group provided in Q7? *(Provide an answer for every target group)*

---

---

---

---

9. Which factors hurt the ability of the most vulnerable target groups/objects to resist the threat?

---

---

---

---

10. Which target groups/objects are capable of dealing with the threat on their own at acceptable losses in functionality?

---

---

---

---

11. Are the indicators and limits of permissible losses in the industry (area of responsibility) defined in terms of target groups/objects?

<input type="checkbox"/> YES	<input type="checkbox"/> NO
------------------------------	-----------------------------

**II. Capability analysis**

*(The answers to these questions should be provided by separate public entities and enterprises, which are subordinated to the ministry (agency). The answers to Q1-11 should be provided for each identified threat separately).*

Indicate the type of threat

---

---

---

---

1. Assess the sufficiency of core resources to counter the identified threat and mark your answer for every type of resource in the appropriate cell of the table.

	<i>meets predetermined standards</i>	<i>insufficient</i>	<i>critically insufficient</i>
human			
material			
financial			

2. Are there any unregulated legal matters within the industry (area of responsibility) that complicate the response to an identified threat?

YES  NO

If YES, indicate them.

---



---



---

3. Are there any unresolved administrative matters within the industry (area of responsibility) that complicate the response to an identified threat?

YES  NO

If YES, indicate them.

---



---



---

4. Have there been exercises, training sessions on different stages of response to the identified threat or development of the relevant crises?

YES  NO

5. Do all entities that respond to an identified threat clearly understand the course of joint actions and their area of responsibility?

YES  NO

6. Identify the most challenging issues of interdepartmental cooperation in countering the identified threat.

---



---



---



---

7. Is the population well informed of the possible signals of threat or crisis?

YES  NO



8. Is the population well informed of the procedure for dealing with a threat or crisis?

<input type="checkbox"/> YES	<input type="checkbox"/> NO
------------------------------	-----------------------------

9. Is there an established two-way channel of communication between the ministry (agency) and the population on crisis response matters?

<input type="checkbox"/> YES	<input type="checkbox"/> NO
------------------------------	-----------------------------

10. Is there an established two-way channel of communication on matters of cooperation and crisis response between the ministry (agency) and

Other authorized public authorities	<input type="checkbox"/> YES	<input type="checkbox"/> NO
Subordinate institutions, enterprises, and organizations	<input type="checkbox"/> YES	<input type="checkbox"/> NO

*(Mark your answer in the appropriate cell of the table)*

11. Are the necessary (standard) reserves of core resources accumulated?

human	<input type="checkbox"/> YES	<input type="checkbox"/> NO
material	<input type="checkbox"/> YES	<input type="checkbox"/> NO
financial	<input type="checkbox"/> YES	<input type="checkbox"/> NO

*(Mark your answer in the appropriate cell of the table)*

12. Indicate the time required to engage the additional (reserve) resources.

---



---



---



---

13. Are there any reserve premises that could be used for the temporary relocation of public institutions and strategic enterprises in case of unavailability of main premises?

<input type="checkbox"/> YES	<input type="checkbox"/> NO
------------------------------	-----------------------------

14. Is there any alternative energy supply source for the electrical equipment of public institutions or enterprises in case of main supply sources failure?

<input type="checkbox"/> YES	<input type="checkbox"/> NO
------------------------------	-----------------------------

15. Is there a minimum necessary reserve (in case of crises) of the following:

personal protection equipment	<input type="checkbox"/> YES	<input type="checkbox"/> NO
potable water	<input type="checkbox"/> YES	<input type="checkbox"/> NO
food products	<input type="checkbox"/> YES	<input type="checkbox"/> NO

*(Mark your answer in the appropriate cell of the table)*

16. Is there any alternative transport and logistics capacities for the personnel of the public institutions or enterprises in case of the main capacities fail?

<input type="checkbox"/> YES	<input type="checkbox"/> NO
------------------------------	-----------------------------

17. Indicate the time required to engage the additional (reserve) capacities of the public institution (enterprise).


18. Is there a chance (in case of crisis) to provide the population with alternative sources of:

potable water	<input type="checkbox"/> YES	<input type="checkbox"/> NO
food products	<input type="checkbox"/> YES	<input type="checkbox"/> NO
electricity	<input type="checkbox"/> YES	<input type="checkbox"/> NO

*(Mark your answer in the appropriate cell of the table)*

19. Is there any premises allocated for accommodating:

IDPs	<input type="checkbox"/> YES	<input type="checkbox"/> NO
medical facilities	<input type="checkbox"/> YES	<input type="checkbox"/> NO
people affected by the crisis	<input type="checkbox"/> YES	<input type="checkbox"/> NO

*(Mark your answer in the appropriate cell of the table)*

20. Are the available communication systems capable of providing the reliable and secure transmission of important data?

<input type="checkbox"/> YES	<input type="checkbox"/> NO
------------------------------	-----------------------------

21. Do the current cybersecurity systems provide a reliable level of protection?

<input type="checkbox"/> YES	<input type="checkbox"/> NO
------------------------------	-----------------------------

22. Is the personnel of the public institution or enterprise provided with equipment for remote operations, including:

mobile technical equipment to work with information	<input type="checkbox"/> YES	<input type="checkbox"/> NO
civilian communication equipment	<input type="checkbox"/> YES	<input type="checkbox"/> NO
protected communication equipment	<input type="checkbox"/> YES	<input type="checkbox"/> NO
other technical equipment (specify which ones):	<input type="checkbox"/> YES	<input type="checkbox"/> NO

*(Mark your answer in the appropriate cell of the table)*

23. Are there any conditions established for the work of public institution personnel with classified information in remote or other informal mode?

<input type="checkbox"/> YES	<input type="checkbox"/> NO
------------------------------	-----------------------------

24. Is there an emergency evacuation procedure for:

population	<input type="checkbox"/> YES	<input type="checkbox"/> NO
strategic enterprises	<input type="checkbox"/> YES	<input type="checkbox"/> NO
public institutions	<input type="checkbox"/> YES	<input type="checkbox"/> NO

*(Mark your answer in the appropriate cell of the table)*

25. Are there any protocols for a coordinated response to crises?

<input type="checkbox"/> YES	<input type="checkbox"/> NO
------------------------------	-----------------------------

26. Are there any scenarios describing the possible development of the crisis?

optimistic	<input type="checkbox"/> YES	<input type="checkbox"/> NO
pessimistic	<input type="checkbox"/> YES	<input type="checkbox"/> NO
optimum	<input type="checkbox"/> YES	<input type="checkbox"/> NO

*(Mark your answer in the appropriate cell of the table)*

27. Are there any alternative strategies covering the response to the crises?

<input type="checkbox"/> YES	<input type="checkbox"/> NO
------------------------------	-----------------------------

Source: developed by the author

Scientific publication

Olga REZNIKOVA

**NATIONAL RESILIENCE  
IN CHANGING SECURITY ENVIRONMENT**

Monograph

*Design by Pavlo Reznikov*

The monograph was prepared for publication  
at the National Institute for Strategic Studies  
Pyrohova str., 7-a, Kyiv, 01030  
Tel./fax: (044) 234-50-07  
e-mail: [info-niss@niss.gov.ua](mailto:info-niss@niss.gov.ua) <http://www.niss.gov.ua>