## National Security of Georgia and some Aspects of its Informational-Analytical Stet (By the concrete example of Energy Security)

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The usage of the informational area for political, scientific and other aims is produced on the base of mastering and using analytic, prognostic and other informational technologies.

This special type of technologies is informational technologies. V.Chavchanidze distinguishes two tendencies, in particular, the technical means of the informational technologies and the intellectual means of the informational technologies[28].

Generally information technology is the unity of methodic, programmatic, technical and organizational sources, which are united in functional structure for solving the distinct tasks of working out the information, and which consists of methodic and computational working out and transferring of information, the technologies of integration of technical sources, of technical equipment and their realization in the united complex.

Today the technologies of informational analysis and prognosis possess the most important place in raising the effectiveness of political business and in its informational securing[29].

The technologies of informational analysis and prognosis are the sources of making decision of complex practical tasks (political, social-economic, energy and etc.) and are directed to secure politician's activity. They make it possible to prognosticate the perspectives of spread data, of classifying informational fragment in one system, of binding the happened as the whole picture and of activities of the different powers, structures, interest groups.

The general analysis of conceptual aspects of given problem will not receive the perfect face, if is not made demonstration of concrete informational-analytic technology. The suggested model of usage of informational analytic and prognostic technologies in the sphere of securing of Georgian national security will prove as an example.

According to Georgian law "about the council of national security", "The organizational-technical and informational-analytic activity of the national Security Council must be proved by its machinery", which must support the government:

In working and carrying out the policy of national security (strategic tasks);

In solving the current (tactic) problems related to the national security;

In controlling of carrying out and executing the decisions made about the problems of national security[30].

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[28] WavWaniZe v., mecnierul-informaciuli analizisa da prognozirebis problemaTa Sesaxeb // mecniereba da teqnologiebi. # 1-3. 2001. gv. 13.

[29] Яковлев И.Г., Информационно-аналитические технологии и политическое консультирование.//ПОЛИС/ № 2-3. 1999. С. 122-133, 179-191.

National security faces problems in both spheres of public life: in foreign as well as in domestic (political, economical, energy, social and others). Timely exposure of characterizing this problem must secure forming and realization of oriented forerunner decisions reasoned to influence against them. For working out the forerunner decisions it is necessary to determine:

The aim of influence; the form of influence;

The place of influence (a real or structural);

The time of influence (period); the object of influence[31].

Solving these tasks needs gathering, binding, working and analyzing of a great deal of information. Also it is necessary to secure the perfection of intellectual operations executed in this process, specifically:

Notional interpretation of information;

Determination of level of likeness of information;

Evaluating the quality of perfection, trust working and non-resistance;

Evaluating the characters of information that comes from the aims of following the information;

Generalization of information, formation of conclusions and etc.

Here is necessary that the system that must secure five interrelated principles of qualitative and effective process of decision making:

The real scale of time;

Comfortable and exhaustive informing;

Responsibility;

Optimal combination of possibilities of people and computer technique;

The high quality of adoption, evolutional embedment of automatized sources, or adaptation of every approbated and common method already used by consumer in the process of taking decision.

Also program packages of intellectual analysis of data must be used, which will:

Give the possibility of modeling, forecasting and building expert systems, also, of integration with the data bases ruling systems;

Present the last results (prognosis) so that they were perceived effectually (fast), clearly and simply;

Value the exactness of original information, because the last results depend on its quality;

It would be simple to use, and consumer's interface will be comfortable and familiar.

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[30] The law of Georgia on the National Security Council. Tbilisi, May 24, 1996.

[31] Cohen R., Mihalka M., COOPERATIVE SECURITY: NEW HORIZONS FOR INTERNATIONAL ORDER. Marshall Center Paper #3. 2001.

The demands of these problems give the necessity of creation of special automatized system of informational analysis and prognosis in the state, which on the base of analysis of information and generalization got from the different sources must:

Make the permanent analysis of informational reflection of current situation in the priority spheres of state interests;

Expose the tendencies of development of situations in these spheres;

Also changes and inclinations influencing on their politics, gather the knowledge about the reasons of such changes and results;

Give the necessary information on every step of the process of taking a decision, with the guarantee of completeness and trustworthiness, in an adequate and simply interpretation form and at the needed moment of time.

For realization of such tasks of information working- out, must be existed or must be created the following organizational and technical sources:

Of acquiring timely and perfect information;

Of choosing, calculating and classifying entered information;

Of analyzing and generalizing the calculated information;

Of evaluating the quality of information;

Of forming the conclusions and recommendations;

Of evaluating from the aim of permanent intelligence of information.[32]

As to what refers to demarcation of functions between the human and system - here the general tendency must be used; the tasks, in the frames of competence, at every level must be put by a human; the final decisions, in the frames of competence, at every level must be taken by a human; intellectual working out of data, producing of decisions and plans, prognosticating of events, in the frames of competence at every level must be carried out by a human in dialogue with the system.

The main function of the decision making system must be carrying out the intellectual analysis of data, for which it must have the base of precedents and knowledge.[33] The decision making system through the dialogue with the expert-analytics must give the evaluation of the events, it must carry out prognostication and working out of the variants of decisions. The system must have the developed means of visualization of analysis results and connection with consumer (interface).

The system also must simplify the analysis of questions and problems related to the national security, producing the variants of decisions and prognosticating the carrying out of their results. This demand is wholly related to intellectual working out of the operative data, as a result of which, in dialogue with the system, can be received both reference and regulating and the extraordinary information.

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[32] Toffler, A. The third Wave. New York: William and Morrow, 1980.

[33] Прангишвили И.В., Системный подход и общесистемные закономерности. – М.: Синтег, 2000.

From the theoretical analysis of the technology of informational analysis and informational prognosis, we can turn to the discussion of the concrete example of its realization into practice.

The original technologies of analysis and prognosis can be used in projecting and forming the automatic system "Didgori", the system of strategic analysis and global modeling of Georgian National Security Council, and its fragments are carried out in the part of the system of informational securing of state government (in program module), concretely, at the time of formulation the demands of solving tasks of system "Didgori", of classifying the information, which must be gathered and worked out and of formulating the system of coding, creating of unificated documents used in the system and during the automatization of informational reference-calculating and informational-analytical processes.

The functional system of "Didgori" consists of the systems of:

Forming informational base (receiving, working out and guarding the information);

Of informational securing;

Of dataset and exchange of information, of taking decisions;

Of controlling the taken decisions and others.

And the functional system is characterized by the several levels of automatization, for example, one of the level - apparatus of the National Security Council, with its local set - secures working out of global strategic information (analytic research, evaluating the situation, prognosticating of worked out decision) for securing operative receiving of decisions and others by the supreme government of the country (the highest level of the system).

The foundation of the databases of the National Security Council - the united net of informational securing - is characterized by triple-measured vector:

The classes of information suppliers;

Of tasks (problems) that must be solved;

Of experts and others.

The types, concept and regulation of supplying analytic information are determined. The information that must be supplied is qualified in questions and is divided, according to the meaning, in types:

Extraordinary;

Regulate;

Reference...

The entered information is put in order in the base of data according to the tasks (problems), which must be solved, from which any fore-determined individual with competence could take information at any time. Also in the automatic regime, created programs will be able to consume the information according to the tasks, which must be solved in "Didgori".

"Didgori" enables the State Departments to acquaint with the information on those interesting questions, the list of which will also be regulated strictly.

The ruling object of "Didgori" owns any kind of information (economics, politics...) about the ruling object at any moment of time. Thus, the system secures: efficiency, accuracy of information, possibility of working up the highly dimensional information.

In the system "Didgori" the work proceeds in two directions:

Creation of the informational automatized system (operative receiving of primary information, its transferring, keeping, reproduction).

Creation of complex of intellectual systems, in other words, by other methods (polymetrical, sociometrical, econometrical and etc.) the creation of the systems, when in certain conditions, with the help of using and modeling of information stored up in the basis, the system must give us some variants of decision, must enable us to make anticipatory determination of strategic tendencies and must help analysts and the decision makers.

For development of the handling system must be used such program packages of data intellectual analysis, which:

Will enable us to create the systems of modeling, forecasting and expert system;

Will show us the clarity and easy reproduction of the ultimate results (prognosis);

Will evaluate the accuracy of initial information, because the final results are very dependent on its quality;

Will be easy for utilization, users' interface will be comfortable and familiar;

Will give us the final results effectively (quickly);

Will be an open system and will let us integrate with the different databases controlling systems.

For the reason that informatization of securing process of the national security bears a long-term nature, the system "Didgori" is under development and depending on the situation, it gives opportunity to realize efficiently the conformable changes (in classification of decision task and others). Therefore, the putting this system in action, its next modernization needs to carry out of the continuous work, relatively must be determined the priorities of modernization of system "Didgori" - the system of strategic analysis and global modeling - and on its basis, for supporting the securing of national security, the priorities of necessary works and measures for forming the system of special destination, which is built on modern informational technologies.

National Security problems are caused in different spheres of the social life. Opportune revelation of the characteristic features of these processes can provide formation and realization of the far-sighted decisions that are oriented for influence against them. For this time, let's view concrete example of that what kind of analytical information's accumulation has to be done in the system "Didgori" for the formation and realization of the far-sighted decisions in Georgia's Energy Security sphere.

| # | Analytical information | Kind of information | Activity of entrance into the system |
|---|---|---|---|
| 1 | Strategic plan of the country's ensuring with energy carriers, methods of its realization, course, analysis, evaluation. | *Inquiry* | *Once in 6 months* |
| 2 | Formed situation in country's energy (thermoelectric power stations, hydroelectric power stations, use of the energy of wind and sun, baseline high tension's power grids, the system of providing big cities with energy). Mutual picture, urgent measures and necessary resources for passing them. | *Regulation* | *Once in 3 months* |
| 3 | Provision of country's defense and vitally important objects by electric power. Analysis, evaluation. | *Regulation* | *Once in 3 months* |
| 4 | Natural energy supply existing in the country. The politics of its use | *Inquiry* | *Once in 12 months* |
| 5 | Connection with other countries' power system. Their meaning, conditions and perspectives of receiving (giving back) electric energy. | *Inquiry* | *Once in 6 months* |
| 6 | Financial situation existing in the power system, control of electric power expenditure and working up of the mechanism of expended power's price, their realization and necessary measures for it's certain fulfilling. Mutual condition, analysis, evaluation. | *Regulation* | *Once in 3 months* |
| 7 | The analysis of situations and events that are dangerous for the country's security in the power system, evaluation. Manufacture of possible decisions. | *Extraordinary* | *Immediately* |
| 8 | The supply of coal in Georgia. Condition of active or former exploitation coal-fields, analysis, evaluation | *Regulation* | *Once in 6 months* |
| 9 | The strategy of use of coal supply existing in the country. Possibility of its use for the improvement of the country's heat-and-power engineering's condition. Plans, ways of its realization. | *Inquiry* | *Once in 6 months* |
| 10 | Possibility of use of coal like fuel by strategically important objects. Condition, ways of its realization, evaluation. Manufacture of possible decisions. | *Regulation* | *Once in 6 months* |
| 11 | Prospecting of natural gas fields in Georgia, evaluation of their reserve in standpoint of the improvement heat-and-power engineering condition. | *Inquiry* | *Once in 6 months* |
| 12 | The strategy of natural gas use in Georgia, condition of mastering the fields. Analysis, evaluation | *Inquiry* | *Once in 6 months* |
| 13 | Possibilities of receiving natural gas from other countries. Condition, evaluation. | *Inquiry* | *Once in 6 months* |
| 14 | The condition of natural gas net in the country and readiness to supply population with natural gas. Securing of its reconstruction, examination and checking up of the population safety. Condition, analysis. | *Inquiry* | *Once in 6 months* |
| 15 | The condition of supplying vitally important objects with natural gas. | *Regulation* | *In 3 months once* |

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|---|---|---|---|
| 16 | Financial situation of "Saqgaz"". Analysis, evaluation. Manufacture of possible decisions. | *Regulation* | *Once in 3 months* |
| 17 | Prospecting of fuel fields in Georgia, evaluation of their reserve from the standpoint of improving condition of the country's heat-and-power engineering. | *Inquiry* | *Once in 6 months* |
| 18 | The plan of creating the reserve of fuel in the country, ways of its realization. Condition, analysis, evaluation. | *Regulation* | *Once in 6 months* |
| 19 | Supplying country's vitally important objects with fuel. Analysis, evaluation. | *Regulation* | *Once in 3 months* |
| 20 | Creation of strategically important reserve of heat-and-power engineering | *Regulation* | *Once in 3 months* |
| 21 | The plan of heat-and-power engineering State concern's action in especial situation (military operations, calamities and etc.) | *Extraordinary* | *Immediately* |

As a result, it can be said that the presented model of mastering of the informational area, and of its usage in the political sphere as an example of informational-analytic securing of the National Security of Georgia. This is a clear, evident example of theoretical research of the technologies of informational analysis and informational prognosis and of its usage in practice, which on the whole is the unity of sources of information receiving and handing over, of its working out, keeping and reflecting, special automatic system based on original technologies of prognosis and informational analysis, in which practical functioning supports informational-analytic securing of the process of firm integration of Georgia in the European family.

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