

Consideration of the Effectiveness of Common Indicators in Codification of Iran's Meteorology Organization Strategic Programs

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Abstract: This paper is a try to become familiar with strategic program, strategic management and studying various theoretic aspects and its performance. On the other hand, by studying Iran's meteorology organization as a pioneering one, we investigated third and fourth advancement program of this organization, then the efficacy of common indexes in compiling strategic program of organization will be compared. After studying two periods, strategic program with their approaches together, we can realize the existing considerable differences between two periods. Investigation demonstrate that the internal and external indices of strategic evaluation and their weights which organization makes to use to compile and review its own strategic program, have not had necessary efficacy to carry out the purpose. Several meetings was held with Organization strategists who compile organization's strategy program to achieve proper indices and suitable weights, by using questionnaires about the credit and importance of each factors. At last, after studying obtained result, all parameters and their weights were acquired and presented in from of tables to put to use strategists and to compile future strategies.

Key words: Internal • External • Factors • Weights • Private sections • Authority

INTRODUCTION

Programming and strategic management are two subjects which have been proposed for successful management of pioneering organizations as two basic factors during recent decades around the world [1].

Strategic program which is necessary for each organization, must choose a proper model for compiling strategies. In a practical strategic model a definite flow of information will be introduced in a continues way of environmental and internal analysis [2].

Future recognition will be possible by these models. They also make programming for organization stability easy.

A set of organizational activities in two fields of internal and external factors have been performed. The recognition and analysis of each of internal and external parameters leads to papering a list of strong and weakness points, fortunes and threat.

Correct recognition of effective factors of these environments, will help strategic programming team to find those strategies which makes some useful changes in the organization's future.

According to quick environmental changes and complicated organizational decisions, the necessity of using a comprehensive program to encounter these problems is more tangible than the past. This program is called strategic programming of Strategic management [3].

Strategic management foundations are based on realization a degree that managers have achieved about competitive companies, markets, prices, raw material suppliers, distributors, government, creditors, stock holders and costumers existed around the world and these elements are determiners of trade success in modern world [4]. So one of the most important instruments that organizations can make use of it for their success in future is strategic management.

Exploiting Strategic Management in Meteorology

Organization: Strategy is a method of creating constant value for stockholders and government and strategic plan of an organization is a specific and comprehensive framework concludes mission, purposes and goals for a long run [5]. This plan has perfection and is formed during a two - way process among all formed organizational levels and deli neat a specific framework for operational plans. This plan has a long period view and covers all

internal and external meteorology activities if organization. The organizations need to put in a line all persons and their organizational section to carry out their goals.

Comparing the 3rd and 4th Programs of Country's Meteorology Organization Advancement:

*Third 5-year Program Strategies:
Exploiting Developed Technologies:*

Strategic policy of meteorology organization in relation with utilizing advanced technologies centralized on the following goals.

- Equipping and utilizing advanced measurement systems and sharing knowledge and transmitting news about quick climatic and weather cautions and warning.
- Cooperation to achieve new energy purposes from meteorology program of future century like climate, solar energy problems to substitute them with energies obtained by fossil fuel.

Privatization: Strategic policy of meteorology organization was programmed in the line with privatization problem with the following purposes:

- Decreasing government tenure.
- Decreasing government expenses.
- Creating employment fortune to decrease unemployment rate in society.
- Increasing exploitation and proficiency of human resources.

Exporting mechanical, educational and research services of meteorology and climatology to developing countries especial neighboring ones.

Strategic policy of organization according to its practices is based and situated on two following axes:

- Accepting the responsibility for performing investigation and research projects and plans in developing countries and neighboring countries.
- Exporting and presenting mechanical, engineering and educational services of meteorology to local meteorology organization.

Expanding Meteorology Activities in Counties Divested Areas: Strategic policy of meteorology organization is established to create the following substructures:

- To complete permanent networks of meteorology.
- To improve data collecting system.
- To equip connection system of meteorology.
- To improve computer site and data processing.
- To provide specialized human resource.
- Active participation in development programs.

Using Climatic and Weather Information and Research for Country Preparation: Considering the matter that in preparatory programs, climatic and weather studies have remarkable importance. This organization by having remarkable ability in special and scientific field decides to have active participation in following axes in preparatory programs along third advancement program of country:

- Implementing plans and projects of meteorology and climatology with preparatory attitudes.
- Providing statics and basic information of studies for various basic research attitudes at national and county levels.

Decentralization: In third advancement program for more decentralization, following axes will be considered:

- Giving more authority to general offices of countries, meteorology.
- Developing applied meteorology research centers for all counties in country.
- Allocating acquired revenue from selling statistics, information and services of counties meteorology to main offices of meteorology counties countries.

Developing National, Area and International Activities in Relation with Eco Environment and Stable Development: Because of specific and determined commitments and responsibilities for counties meteorology organization relating to Rio conference and agenda 21 of this forum and international conventions in such programs like preserving Ozone Layer, climate change and stable development and considering the reality that social-economic development in society depends on stable biological environment in vast degree, on of strategic policies of development third program in this organization will be paying attention to this subject.

Income Making: One strategic policies of this organization in third development program is income making which will be fulfilled through parenting statics, information and meteorology services with the following purposes:

- Increasing government revenue.
- Operate in one line with economical regulation plan of country to increase national gross production.

Sovereignty Implementation and Mechanical Supervision on Parallel Activities of Meteorology at Country Level:

Avoiding parallel activities in ministries and governmental organizations has been mentioned in government agenda. Unfortunately during first and second five - year programs, developing meteorology parallel practices including different meteorology station establishment, collecting their data which are too expensive and also other meteorological activities in other organizations were programmed and implemented. This matter leads to uncoordinations in meteorological and climatological studies all over the country and make some problem in obtaining to a centralized and united and reliable information bases. So various officials in this major and field were created which it result were presenting various contradicted reports and information sources.

Strategic policy of organization in line with solving mentioned problems was situated on the following axes:

- Concentration of technical supervision on all activities relating to meteorology and climatology sciences in country's meteorology organization.
- Granting responsibility of national network of meteorology supervision in country is the duty of meteorology organization.
- Eliminating user's need in different level of society to statistic, information and meteorology service.

In fourth program because of systematic and regular relationship with World Meteorology Organization (WMO), this program was designed in a strategic form.

- In this line, management structure based on management was corrected according to knowledge.
- Making expect and creating a loftiness center.
- Turning the organization to a learning one.
- BSC software was designed to evaluate and supervision on implementing strategies.
- The organization was changed into a dynamic one from a static situation.

Forth Five Year Program Strategies Capacity Making

Expected Results Are as Follows:

- Increasing scientific and mechanical ability of organization specialists.

- Increasing user's knowledge and awareness in relation with data optimal usage and organization products.
- Increasing organization role in decision making processes of country officials.
- Increasing scientific and mechanical ability of meteorology among private sections and country's universities.

Scientific Research and Technical Development

Expected Results Are as Follows:

- Boosting organization ability to produce anticipation and more correct, on time and reliable precautions.
- Increasing supervision ability of organization to produce more precise data.
- Boosting processing ability.
- Increasing communication ability.

Services:

Expected Results Are as Follows:

- Quality and quantity expansion of intelligence gathering methods.
- Increasing the ability of quick alter system.
- Increasing direct connection with users expanding information bank.

Participation:

Expected Results Are as Follows:

- Using data and weather, climatic, water and environmental products in decision making for officials by cooperation of other organizations such as: water recourses and air pollution control management.
- Collecting county's supervision networks with cooperation of electricity ministry, agriculture organization and shipping organization and military.

Effective Sovereignty and Powerful Management:

Expected Results Are as Follows:

- Increasing efficiency of administrative sections.
- Structure correction proportional to duties and commitments of organization.

Investigating Differences and Contradiction of Compiled Strategic in 4th and Third Programs:

Changes in Strategy of Using Advanced Technologies in Third Programs to a Scientific Research and Mechanical Development Strategy in Fourth Program: The only way that meteorology science can play an important role in all dimensions life especially in advancement program is using advanced technologies such as automatic measurement devices, satellite receivers, radar networks of metrology, communication systems with high capacity and speed and the most important one utilizing advanced software in different types especially in field of short time and long run anticipation modeling of meteorology and climatology and so on.

These projects and plan were implanted during third program based on exploiting policy of advanced technology. So during transmission time from traditional system to new system we have encountered a lot of problems which deep and extensive studies on universal sample indicated that beside buying and exploiting advanced technology of knowledge and science transmission and technical advancement in these systems, they are only possible thorough using applied research and making link with universities and scientific centers and utilizing domestic professors and scientists. Finally exploitation system of advanced technology in third program changed into scientific research and technical development. These projects and plan were implemented during third program based on exploiting policy of advanced technology. So during transmission time from traditional system to new system we have encouraged a lot of problems which deep and extensive studies on universal sample indicated that besides buying and exploiting advanced technology if knowledge and science transmission and technical advancement in these system, they are only possible thorough using applied research and making link with universities and scientific centers and utilizing domestic professors and scientists. Finally exploitation system of advance technology in third program changed into scientific research and technical development.

Privatization Strategy Change in Third Program to Service Strategy in Fourth Program: Privatization was third program policy, so in governmental structure in third world, Privatization is a constant subject. Usually civil system don't agree on granting affaires to private centers, from other side exploitation from meteorology services and information in different aspects has direct relation with society development. Practically we faced lots of obstacles and problems to privatize meteorology. Utilizing data and meteorology information in designing

dams, climate divisions, defence application and etc... situated as a port of government's activities and sovereignty and representing services to people and it was mentioned to concentrate on services in fourth program.

Issue Strategy Change of Technical, Research and Educational Services in Third Program to Participation Strategy in Fourth Program: By taking in to consideration the abilities of human resource, engineering, technical, scientific force of meteorology which have best records in governmental organizations, it was supposed in third program, to export technical, educational and research services to other countries especially regional countries like newly. Independent ones or neighboring one and needed one in Africa and Asia.

On this line many acceptable services were presented to Afghanistan, Tajikistan, Iraq, sedan and many other African and Asian counties.

After passing a long time it was clarified that these actions in a separate and single form won't be effective and it is necessary to cooperate with other related and near organization until more adequate result achieved.

Changing the Strategy of Development Activities in Dispossessed Areas in Third Program to Capacity-making Strategy in Fourth Program: One of Islamic government slogan is helping dispossessed areas. In third program many activities and projects were performed and took into consideration. Therefore In implemented investigations, some of these investments were left defective or they didn't have necessary efficiency.

For example, the station which was established in a disposed area and it was supposed to act and search on agricultural meteorology topics, never was able to solve infrastructure needs like electricity, water, phone and gas etc..., or needed human resources specialists never intend to work in these areas. Because of this reason, it seems to change the policy of attention to disposed areas in third program into capacity-making policy in fourth program by educating native people and knowledge conversion in using from regional advancement mechanism policy.

Strategy Change of Information Utilization and Climatic Research to Make Country Ready in Third Program to Participation Strategy in Fourth Program: Preparation of Islamic republic vast land and finding weak and strong points and potential abilities and populated, natural,

weather and so on assets are the most significant needed subjects of development and in this line one of the most important and determined basis in our country which is located in a dry and semi-dry region, is using information result of climatic and weather research in country preparation.

In Iranian society, from cultural view, any work which set free doesn't have any special custodian but as a person or organizations start to work, they will say it is our duty why you interfere.

Because of these matters, this policy namely utilizing climatic information in country is provision and third program faced obstacles which changed as participation with other organizations in fourth program.

Therefore this policy namely using climatic information in preparation of land and third program faces obstacle which changed into fourth program as participation with other system and organizations.

Decentralization Strategy Change in Third Program to Suitable Sovereignty and Efficient Management Strategy in Fourth Program: In modern world, definitely centralized systems become unsuccessful. A clear and significant sample of these types of government and program in recent decades is communist countries and at the peak of them is Soviet Union which all people are aware of its defunct story and its division into several countries and stability of republic of Russia. Decentralization is a part of third program in national and county's structures. In this line, in all counties of countries meteorology main office was established and during that period half of countries own on applied meteorology research center. Tehran weather forecasting center created regional weather forecasting centers in 6 regions of country and bestow vast budget and expense authority to counties. So practically a major problem was made. That was different clash of country's official with meteorology subject and into development.

As a result, in some counties, a lot of budgets and credits allocated to development and meteorology guidelines and in some counties little attention was paid to meteorology works rather than previous centralized period. On the other words overall development of meteorology encountered problem. Forcefully by delineating and implementing programs and paying attention to further back counties, Decentralization of third program changed into adequate efficient management in fourth program which management implementation and balanced credit card system and using it at a high and adequate degree were the result of it.

Strategy Change of Developing Regional and International Activities in Third Program to Participation Strategy in Fourth Program: Because weather subject doesn't have any political limitation, so working on weather and climatic topics is a regional and international one and the laboratory of weather investigation is as the same size of earth planet. In this line, it was tried to achieve an important and prominent role based on international and regional activities development at the level of WMO. In a way that Iran was selected as world first vice chairman and 22 persons of meteorology managers and experts were chosen as the chosen as the chairman, reports and ... etc.

Regional structure of water and meteorology and Khazar environmental guarding coordination committee was activated by participation of international organization of WMO and UNEP, UNDP and World Bank of European Union in other words, regional contract of RMMP in Persian Gulf between coastal countries had various meetings.

Another forum was hold between Jerky, Georgia, Iran, Iraq, Syria and Lebanon in order to base a regional work and Oman and India ocean beach countries like Oman, Pakistan, India and Iran launch activities in structure form. In this line we realized that we have a competitor in each area based on counties benefits like Russia, Saudi Arabia, India and... etc. and finally we changed the regional and international activities of development policy which was followed in third program to participation policy with neighbors and competitors at regional and world level in fourth program.

Income-making Strategy Change in Third Program to Service Strategy in Fourth Program: Income making is the result and introductions of privatization programs. Meteorology had a special potential receive a huge amounts by presenting information data from all sections especially in field of flight information of foreign and domestic airplane companies and from consultants and contractor especially in field of huge plans of dam making, watering system, industry and agriculture plans, railroad construction plans and building and city expansion plans. In this line, a law was approached in Parlement in third program and based on this law and rules which approached by government, we were able to receive money against our services from users. Later we realized that system and specially private section use little from meteorology information and data in country's projects in order to pay little money. Because meteorology activities were considered as a part of national implementation,

Table 1: 3rd and 4th strategy planning strategies and differences

	Third program strategy	Fourth program strategy	The reason of the strategy change
1	Exploiting advanced technology	Scientific research and technical development	Using science besides technology
2	Privatization	Asking for services	Authority of organization
3	Issue mechanical, research and educational services	Participation with private sections	Participation in regional and international level
4	Developed activities in disposed areas	Capacity making	Increasing development services in all areas especially in disposed regions
5	Utilizing climate information	participation with private sections	Cooperation with other governmental or nongovernmental organizations
6	Decentralization	Suitable and efficient management	Implementation of efficient management
7	Expanding regional and international activities	participation with private sections	Cooperation with regional countries
8	Income making	Suitable social services	Governmental and organizational supervision
9	Forcing authority and supervision on parallel activities	Suitable authority and efficient management	Implementing efficient management

so our attention from income making problems in third program was altered to data process release and services presentation to all sections and people in fourth program changing.

Supervision and Government Enforcement Strategy on Parallel Activities in Third Program to Appropriate Efficient Management in Fourth Program:

Some of the country's system like electricity ministry, water department and new energy part, agriculture ministry and jihad which later changed into agriculture jihad ministry and military air force and some parts of corps and environmental protection agency, shipping organization each of them put into action to buy equipments and employing and using human resource specialist of meteorology and dependent branches. In third program it was supposed to handle all parallel activities and works performed under supervision of one center through rules and regulation, So practically these actions had some problems and deficiency that after deep investigation and holding several sessions we conclude that implementing one efficient management can create suitable authority for meteorology in a better way and in this line it is looking for potential powers implementation.

And in fourth program it is trying to made powerful, present adequate services based on up-to-date technologies like web site, touch screen, holding conference and forums, making relation with universities and scientific centers, sms utilization and putting into operation intranet and extranet to achieve more suitable condition.

The 3rd and 4th strategy planning strategies and differences is illustrated in the Table 1.

Finally the Cause of Resulting Discrepancies: In this part after finding existing disparities in these two programs and investigating the reasons of changing third program strategies to fourth program, we tried to study and recognize effectual elements in compiling strategic programs of organization for investigating the reasons and regions of changes.

In this line in a group meeting with the presence of strategists the effectual factors were represented and some of these parameters are explained as follow:

General Environment Factors

Economic Factors:

- Exchange credit to buy devices from foreign countries.
- Proportion of credits growth with stations and needs growth.

Political Factors:

- Recognizing meteorology and climatology service environment of organization to cabinet and governmental and private sections.
- Increasing the proportion of working mothers in organization and presenting management positions to them.

Social Factors:

- Human resource specialist especially in field of needed meteorology at county's level.
- Drawing people, trust and information and reports users of meteorology to general technical and special services.

Lawful Factors:

- Following from decentralization policy developing meteorology activities policy to all county's countries
- Customs problems and limitations to get the devices and equipments through customs and spare parts of meteorology system

Technological Factors:

- Proportion of communication system of meteorology system with GTS makes some problems for organization to share international commitments and information because there is not any needed communicational bed in country.
- Expanding quality and quantity methods of information casting.

Increasing awareness and knowledge of users in relation with the way of using optimal data and products of organization.

Processing Environment Factors:

Users: Implementing meteorology service system for final users with the purpose of creating suitable product in conformity with users needs:

- Careful attention to issue predictions and weather precautions and increasing information and statistics accuracy.
- Scientific and specialty analysis.

Competitors and Competitive Elements:

- Increasing scientific and technological power of organization experts.
- Expanding above network of climate measurement stations.
- Complete accessing to satellite pictures and yield of meteorology models.

Human Resource of Needed Resources of Suppliers on Organization:

- Carting partial job attractions to keep and preserve expert forces.
- Increasing scientific and technical power of meteorology among private sections and country universities.

International Factors:

- Implementing airport meteorology supervision system which still has not obtained to international standards level (ICAO).
- Monopolizing the producers of meteorology equipments around the world and non-existence of domestic resources.
- Increasing power of organization in producing more accurate data.

Interior Environment Factors:

Organization Structure and its Performance Against Challenges and Fortunes:

- Development and access to constitutional structure and proper management.

Organizational Strategies to Keep Present Customers and to Attract Potential Customers:

- Necessary programming to issue meteorology technical and specialty services to regional countries at national and international level.
- Preparing newer models in field of numeral prediction.

The Situation of Financial and Organizational Cash Level to Do Daily Processes of Organization:

- Economizing more meteorology and climatology services
- Expanding needed meteorology activities in field of navigation, biology, city pollution, famine studies. Etc...

Questionnaires: After recognizing effective elements in development of organization, questionnaires were delineated to determine priorities of element, their weights and many other effective parameters, these questionnaires were filled by those strategists who have compiled meteorology program. The acquired results were as follow:

Newly Proposed Factors

Education: Education position in developed program of human resources as an asset.

R&D (Research and Development).

The role of R&D in meteorology development.

Table 2: Maximum and minimum degree of final credits for known elements

Importance degree of Max	Max score	Final Max score for each factor
5	5	25
Importance degree if Min	Min score	Final Min score for each factor
1	1	1

Applied Researches: The effects of weather change in various activities.

Determining Priority of Parameters End Their Weights: The maximum and minimum degree of final credits for known elements are presented in Table 2.

The data relating to priority determination of elements and their weights are presented briefly based on seven strategies, expert views of organization in a Table 2.

After discussion about public opinion poll results in a group session, it was purposed to accept elements with final credit in a range of 15 to 23.

DISCUSSION AND CONCLUSION

In this project after studying third and fourth strategic program of county's meteorology organization and realizing the main differences between their strategies, we did research about the reason of these differences by holding sessions and oral opinion polling and we represented. As organization uses inner and external indices for strategic evaluation to compile and review strategic program, we also tried to recognize these elements to find the cause of strategy change reasons. Then we delineate questionnaires to determined elements and their weights priority and other effective factors which were not supposed before and present to strategists. After calculating credits, questionnaires, result were acquired as follow:

New Effectual Elements Were Proposed:

Elements and Their Weights Priority Were Determined: Then credit calculation and questionnaires' result were presented to strategists briefly in a Table. Finally after discussing about results, the accepted credit range for elements was determined by strategists.

It is proposed that strategist pay more attention to new elements and those which were considered acceptable in interval rather than strategic programs in order to achieve long run purpose in an organization.

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