

**ОДРЖИВИ РАЗВОЈ
БРАНИЧЕВСКОГ
ОКРУГА
И
ЕНЕРГЕТСКОГ
КОМПЛЕКСА
КОСТОЛАЦ**



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ОДРЖИВИ РАЗВОЈ БРАНИЧЕВСКОГ ОКРУГА И ЕНЕРГЕТСКОГ КОМПЛЕКСА КОСТОЛАЦ

Костолац, 23. мај 2019. године

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Костолац
Предавања по позиву са међународним учешћем**

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САДРЖАЈ

ПЕДЕСЕТ ГОДИНА НАУЧНОГ РАДА ПРОФЕСОРА ПАВЛА И. ПРЕМОВИЋА	7
Momčilo Manić SAČUVAJMO ŽIVOTNU SREDINU: ZA ČISTIJI I LEPŠI GRAD POŽAREVAC	10
Zlatko V. Sovreski, Simeon Simeonov, Elizabeta Hristovska, Marija Čekerovska, Mevludin Shabani, Naim Ostergllava КОНЕКЦИЈА КОГЕНЕРИРАНИХ СИСТЕМА СА МАЛИХ СНАГА У ТЕРМО ЕНЕРГЕТСКЕ СИСТЕМА СА АСПЕКТА ЖИВОТНЕ СРЕДИНА.....	21
Miloš B. Rajković, Mirjana Stojanović, Slađana Milojković, Lazar Kaluđerović POREĐENJE SADRŽAJA URANA U VODI ZA PIĆE IZ GRADSKOG VODOVODA POŽAREVAC I ARTESKOG BUNARA IZ SELA DUBRAVICA U BRANIČEVSKOM OKRUGU I KONSEKVENTNI UTICAJ NA ZDRAVLJE KONZUMENATA	25
Мирољуб Манојловић ГЕНЕРАЛИ ПОЖАРЕВЦА	43
Bratislav Ž. Todorović, Amer M. Juma, Pavle I. Premović RASTVARANJE KEROGENA IZ ANTRACITA SA LOKALITETA VRŠKA ČUKA U TERMALNOJ VODI: PRELIMINARNI REZULTATI.....	47
Zlatko V. Sovreski, Nikolče Talevski, Zoran Joševski, Elizabeta Hristovska, Misko Dzidrov, Feta Sinani GLOBAL LOGISTIC PERSPECTIVES ABOUT QUALITY OF THE CONCEPT FOR MANAGEMENT OF THE COMMUNAL WASTE IN THE ENVIRONMENT.....	50
Tomislav Petrov, Nenad Savić, Novica Jevtić ТЕХНИЧКО ОДРЖАВАЊЕ И NJEGOV UTICAJ NA POVŠENJE NIVOА POUZDANOSTI TERMОELEKTRANA	56
Filip Jovanovski, Blagica Cekova STRUCTURAL EXAMINATIONS AND APPLICATION OF THE PERLITE OF THE REPUBLIC OF MACEDONIA	63
Milan Šulić МОКРЕ ЧЕЛИЈЕ.....	66
Blagica Cekova, Filip Jovanovski APPLICATION OF NATURAL MATERIAL "PEMZA" FOR SYNTHESIS OF POROUS MATERIALS	68
Aleksandar Marinković, Maja Đolić, Milica Rančić, Milica Karanac, Zlate Veličković LETEĆI PEPEO MODIFIKOVAN SA OKSIDOM ŽELEZA (A-FEОOH) KAO ADSORBENT ZA UKLANJANJE ARSENATNOG JONA	72
Milan Šulić GORIVNE ČELIJE	77
Zlatko V. Sovreski, Nikolče Talevski, Zoran Joševski, Elizabeta Hristovska, Vangelica Jovanovska, Misko Dzidrov LOGISTIC ASPECTS OF THE ACTIVITIES OF THE ROLLING STOCK OF THE PUBLIC COMMUNAL COMPANY PRILEP 2017 (Republic of N. Macedonia)	83
Мирослав Станојловић НОВИ НОСАЧИ - НОВИ ЖИВОТИ ФРЕСКАМА.....	89
Сретен Јелић, Тајјана Јовановић, Олга Гаврић СОЦИОДЕМОГРАФСКА ОБЕЛЕЖЈА ДОМАЋИНСТВА СРБИЈЕ С ОСВРТОМ НА БРАНИЧЕВСКУ ОБЛАСТ И ОДРЖИВИ РАЗВОЈ	99
Pavle I. Premović, Ivan M. Stojanović KLIMATSKE PROMENE U SRBIJI I NJIHOV UTICAJ NA KVALITET ŽIVOTNE SREDINE	105

GLOBAL LOGISTIC PERSPECTIVES ABOUT QUALITY OF THE CONCEPT FOR MANAGEMENT OF THE COMMUNAL WASTE IN THE ENVIRONMENT

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Abstrakt

The quality had appeared even in the primitive community. Until today each step of the human is followed with wish for higher quality. The road toward quality never ends. Therefore, the quality everywhere represents unavailability. That unavailability is reality also during management with the communal waste in Republic of Macedonia. The application of the logistical approaches in the management with the communal waste in Republic of Macedonia is based on different environmental, economical and maintainable procedures that go in favor for realization of the unique aim "quality".

In this paper shall be represented several logistic approaches about increasing the quality in the management with the communal waste. On basis of real data and one contemporary approach shall be presented the qualitative changes in this field. The conclusions that shall be real indicator about the quality will be based only on official data and facts that fit into the logistics as a science shall be maintainable indicator about higher level of service for each inhabitant of Republic of Macedonia. With that this paper shall be a unique from one logistical aspect about total quality as prospects for a global challenge and opportunity of the Republic of Macedonia for the coveted position in this field.

Key words: *Logistic approaches, Communal waste, Total quality, Concept, Environment*

1. Introduction

Concept represents certain draft that is not final version. Basic project, concept, opinion. While conception represents certain main plan, way of thinking over about certain phenomenon. The representation of the present conception of the management with the communal waste in Republic of Macedonia shall be presented with aim of improvement of the future activities. The activities applied during the introduction of the quality in the concept for management with the communal waste must lead toward statements about improvement of the concept and the conception of the process that has dynamics that always could be improved. Out of that the concepts could be divided in: *concepts from the past, concepts from the present days, and concepts for the future.* But it must be defined concepts (Technological, technical, traffic transportation, economical and environmental) that most often follow the management with the communal waste. The different concepts have to be reviewed (spatial, temporal and functional) and to apply scientific methods that would represent starting point about new proposal about improvement of the quality. Operative, differentiating and dispositive tasks, functions and levels must be in function of the maximal quality. And finally the application of the logistical approaches (concentration, specialization, decentralization, cooperation and integration) will be of crucial importance about the

selection of the optimal, efficient and effective logistic approaches in the implementation of the quality.

2. Data on which is based this paper

Data on which is based this paper are data that refer to Republic of Macedonia. The data are taken from the state institute for statistics of Republic of Macedonia, the Government of Republic of Macedonia (its ministries in composition), and also real data collected from the field. Most different scientific methods are applied for analysis, synthesis, comparison and also judgment about contribution toward quality of one logistical aspect.

The scientific methods are applied together with the logistical approaches that are applied in this paper. **Present concept about management with the communal waste in Republic of Macedonia.**

Present conception about management with the communal waste in Republic of Macedonia is based on two bases and that is:

- Concept of statutory and legal regulation (controlled at three levels and that is: national, regional and municipal), and
- Concept of functional maintainability (with dimensions by the unique specifics that follow certain regions and municipalities in the state)

From **aspect of the concept about statutory and legal regulation** in Republic of Macedonia the management with the communal waste is regulated with the Law for the Living Environment, and also seven modifications and amendments of the quoted law, National plan about the management with the communal waste in Republic of Macedonia, The Law for management with wastewith all additional modifications, and also books of regulations about proceeding with different types of communal waste (brought by the Ministry for living environment and spatial planning) that are treating this phenomenon in all its segments, and finally Strategy about the management with the communal waste in Republic of Macedonia (2008 – 2020) brought by the Government of Republic of Macedonia. Al this is regulated on the national level about which the competences are at the Ministry for living environment and spatial planning. While these quoted regulations at regional level are the competences that are transferred to the eighth planned regions and the city of Skopje, and on the municipal level where the competences are transferred to each municipality individually, in other words the municipalities themselves apply the quoted regulations and bring decisions about themselves.

From **aspect of the concept about functional maintainability** the management with the communal waste in Republic of Macedonia comprises all social, economic, cultural, technical, technological, political, legal, natural and environmental elements of uniqueness for each municipality (product of real collected data). Other uniqueness of the functional maintainability is given in the National Strategy about maintainable development of Republic of Macedonia for the period of (2009 – 2030) year out of which come also the strategies about local environmental development for the municipalities. Republic of Macedonia counts 2 052 722 inhabitants, 84 municipalities, 8 planned regions, and every of its inhabitants produces daily average of 0,9 kg. of communal waste.

When the present concept for management with the communal waste in Republic of Macedonia is reviewed it is wanted that concept to get on quality with one efficient and effective logistic approach and implementation of maintainable logistic strategy. From this it could be stated that management with the communal waste of Republic of Macedonia is legally regulated and all future improvements and modifications should be part of that system.

3. Deffining of the aspects of management with the communal waste

Defining of the aspects of management with the communal waste should be explained with the concept aspect, which carries Latin origin (lataspectum) and means appearance, view (upon which something is seen or appears).For the needs of this paper the following aspects should be defined:

- Technological aspects – that point out on the degree of development and application of new technologies in the process from the beginning till the end, (product of data that are reality about the application of the technological processes in the enterprises in Republic of Macedonia).

- Technical aspects – summary of methods that are applied in any kind of work and mastering with certain methods, (product of data about different methods that are applied in Republic of Macedonia).

- Traffic – transportation aspects – when it is a word about management with the communal waste these aspects mostly are based upon the transport of the communal waste from the producers to the waste dump, (product of the real road network on which the transport of the communal waste in Republic of Macedonia is performed).

- The economical aspects – these aspects mostly are based upon realization of certain positive results from the entire management with the communal waste (product resulted from the work of the enterprises that manage with the communal waste in Republic of Macedonia), and

- Environmental aspects – (these aspects shall be frame around which will be made all decisions, or as it may be stated all technical – technological, traffic – transportation, economical – logistical solutions will be in function so as to obtain qualitative healthful and maintainable living environment for each inhabitant)

This mix of aspects the most will be expressed when it is a word about surroundings that here are only enumerated, and that is: Geographical – demographical surrounding, Business – economic surrounding, Socio – cultural surrounding, Technical – technological surrounding, Political – legal surrounding, and Natural – environmental surrounding. These surroundings are basis for determining of aspects that follow the management with the communal waste, are access in creation of one logistical mix of aspects that are product of thequoted surroundings and foundation on which each qualitative improvement will be performed.

4. Concept of management with the communal waste

The concept of management with certain phenomenon represents multidisciplinary field of research and application. Therefore each management should be thoughtfully confined for the sake of identification and action over the process. On the basis of the previous activities over the management processes, and the logistics as one multidisciplinary field, the concepts of management most often are considered from three aspects and that is:

- Spatial concept of management
- Temporal concept of management, and
- Functional concept of management

The data about Republic of Macedonia with application of the concepts in this paper shall be reviewed about the phenomenon of management with the communal waste and shall be explained with emphasize and adjustment about this phenomenon. Therefore the start of this point should begin with one graphic of the components of the logistical requirements that clearly in its point of interest have the quoted concepts of management. So as to have one greater weight of the entire process of management, the logistics as a scientific discipline goes a bit

furthermore with that it introduces also additional two subcomponents of quality and quantity to these quoted concepts of management, which subcomponents represent aspects of all quoted concepts. That is represented In the following figure 1.

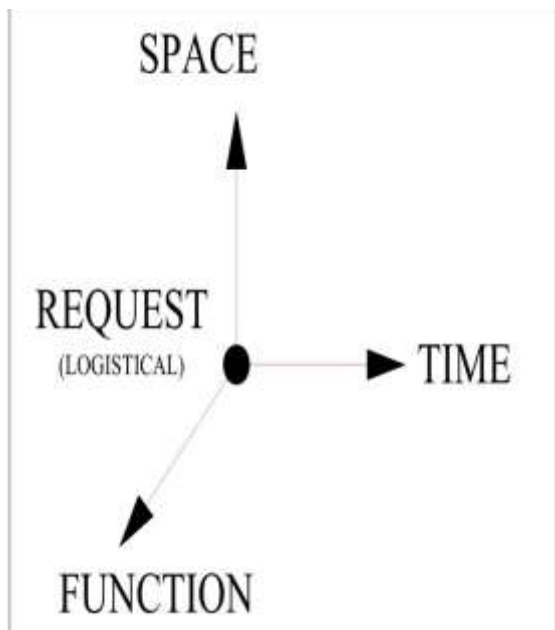


Figure 1.1. Basic components of the logistical requirements (Prepared by the Author's)

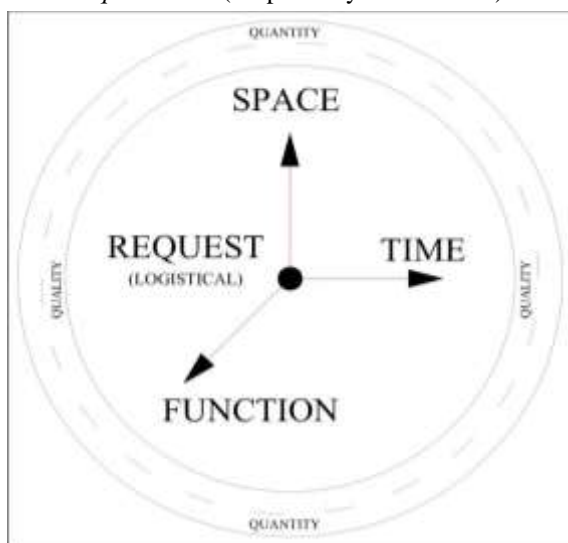


Figure 1.2. Basic components of the logistical requirements, together with the basic components of the logistical requirements with subcomponents (quality and quantity) (Prepared by the Author's)

From this it could be stated that the management with the communal waste in Republic of Macedonia in its philosophy should have the spatial, temporal and the functional concept of management with accent on the qualitative performing in the process of management with the communal waste. Also about qualitative recognition of the works from the aspect of the multidisciplinary experiences applied in the paper were used.

Spatial concept of management with the communal waste: The spatial dimension is strictly defined and determined. It is always tied with certain

relation (area). From this it comes out also the spatial concept. The spatial concept of management with the communal waste is a concept that is divided in three parts as to every other spatial logistical concept, and that is: Spatial concept at level of state (macro concept), Spatial concept at level of region (meta concept), and Spatial concept at level of community (micro concept). This is represented in the following figure number 2, where it clearly could be seen that this logistical way of consideration at level of state is global.

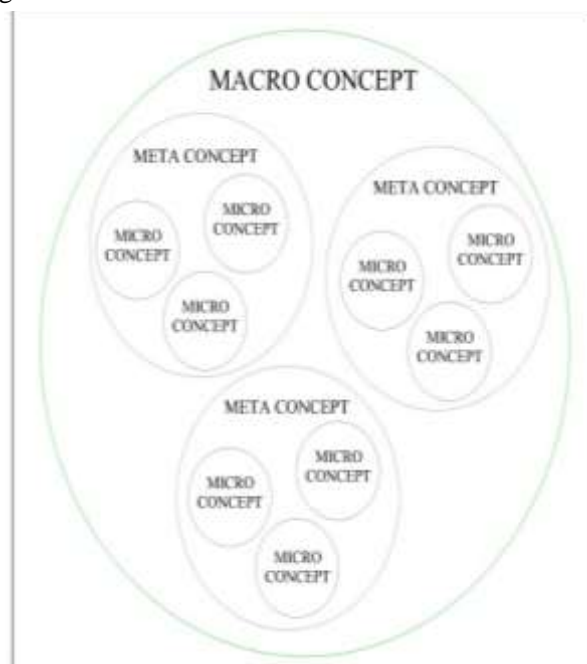


Figure 2.1. Spatial concept of consideration at level of state (Prepared by the Author's (conceived on the basis of usage of numerous literature))

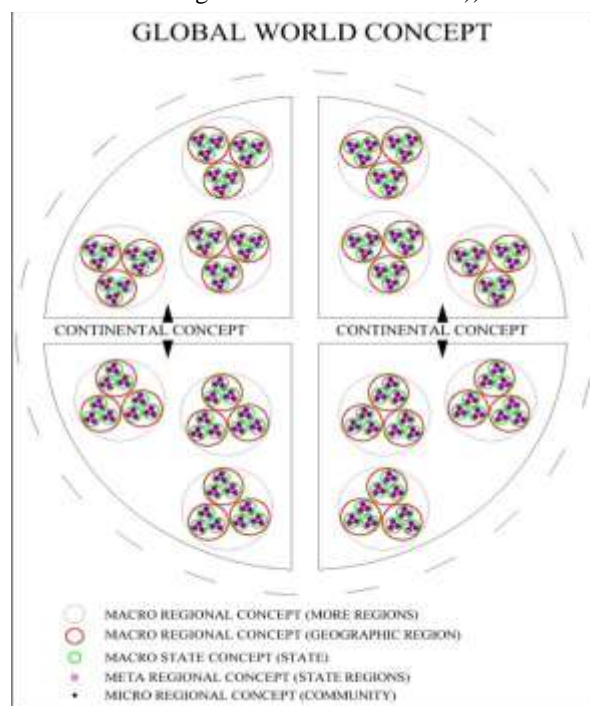


Figure 2.2. Spatial concept of consideration at level of state and also at global world level.

Prepared by the Author's (conceived on the basis of usage of numerous literature)

Out of this also could result further explanations of this spatial concept that are based upon: Global world concept, Continental concept, The concept of macro regional concept, The concept of macro state region, The concept of meta region and The concept of micro region. This clearly points out which is the role in the spatial concept of recognition of the works when it is a word about the management with the communal waste and its essential importance also about Republic of Macedonia as part of this system.

Temporal concept of management with the communal waste: Consideration of the concepts from temporal perspective could divide the concept into: Finished situation (situation that had happened in the past), Existing situation (situation that exist in the present moment) and Planned situation (situation that is planned).

For consideration of this concept of interest are the existing situation and the situation that is planned (the situation that had happened in the past serves only for analysis). That refers also for the phenomenon of the management with the communal waste. The existing situation comprises all actualities that follow certain management or process. The planned situation comprises not only all the existing actualities but also plans the new situations and processes. This concept is represented in the following figure number 3, where represented are the three activities of the situations (finished activities, existing activities and planned activities) that make the process of management, and that refers to the management with the communal waste. On the figure is represented a possibility for introduction of quality.

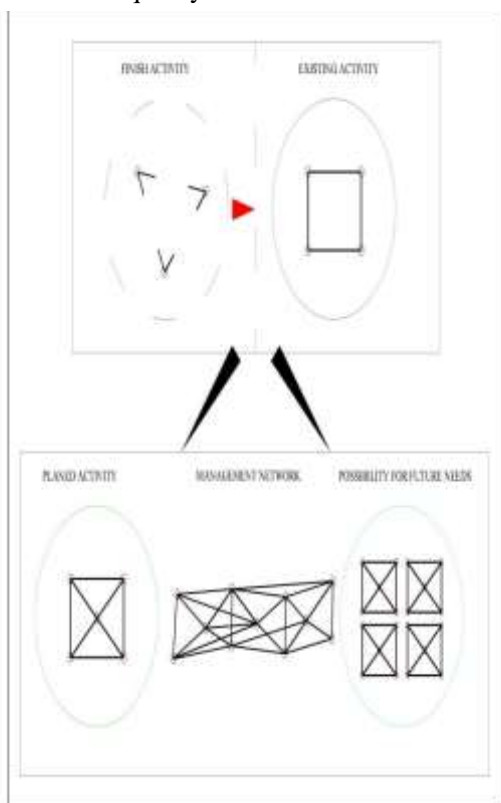


Figure 3. Temporal concept with a view of all activities (finished, existing, planned and possible improvements) (Prepared by the Author's)

From this concrete example it could clearly be stated that of interest for consideration are the existing situations and that what is wanted to be improved.

That part is represented in certain steps and adjusted for the needs of the management with the communal waste. These steps are the following (product of the application of different strategies for management with the communal waste in Republic of Macedonia): Firstly it should be analyzed the philosophy of consideration for obtaining the desired aims. Secondly the complete process should be understood where certain situation shall have application. Thirdly it should clearly and precisely determine the desired idea which should get a written form. Fourthly it should exactly determine the time when certain process will be performed. Fifthly the priorities and responsibilities should clearly be established. Sixthly we should be prepared about certain potential issues that would appear during the process of preparation. Seventhly we should be prepared for each issue to respond with maintainable attitudes. And eighthly we should clearly determine the possibilities for implementation of the new processes of management.

This altogether could be presented in figure number 3, from which it could clearly be stated that for a qualitative network for management we should have analysis about activities that are already finished, existing activities, planned activities and also possibilities for improvement. This basically represents a foundation of the temporal concept for management with the communal waste.

This represented above clearly defines the role of the time in each process, and from that also in the process of management with the communal waste. From this it could clearly be stated that each process deserves interest but the temporal concept is the most essential whether certain work will be finished or not. Therefore this concept is unique and it bears with the present times but with experiences of the past and requirements for the future.

Functional concept of management with the communal waste: The consideration of management of one functional concept basically means functionality. That functionality is reflected in each field and in its essentiality it seeks real and efficient action in each part of the process. When it is a word about the functional concept about management with the communal waste that means all factors that influence from already existing influences are part of interest and analyzing, and also defining the area where the concept shall be applied, the time when the concept will be realized, the structure that is part of interest in other words what normally is the quantity as a standard in other words what quantity should be met with the concept and normally the high standards that should be met by the concept in other words the quality. This is represented in the following figure number 4. These dimensions and factors are the following: Area – strictly defined and determined location or relation. Time – strictly defined temporal momentums or strictly defined temporal intervals for obtaining of the effectiveness in future. The structure – strictly defined with the need whether service or

requirement to meet certain needs. But the functional concept must meet the Quantity – strictly defined and determined with the quantity. Quality – strictly defined and determined with standard. Geopolitics – strictly defining of the political rules that are governing at the area where the process of management is taking place. Economy – strictly defined with the rules that govern for obtaining of positive results at work. Industry – strictly defined with the system where the management is taking place. Traffic and transportation – strictly defined with the system of movement and communication at determined area, at determined time and with exactly defined quantity. Technical technological influences – are strictly defined with the possessed technique and technology. Environment – strictly defined with the healthful living environment. This influence is the face of each process of management. That is represented in the following figure number 4.

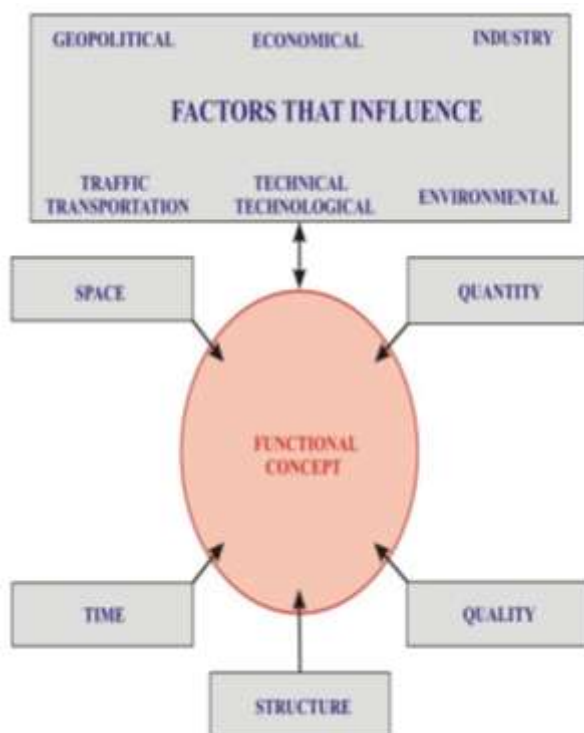


Figure 4. *Functional concept with grasp of entire surrounding* (Prepared by the Author's)

After this it could be clearly stated that the functional concept of management represents mix of the quoted dimensions and influences. When it is a word about management with the communal waste that means that it is clear and obvious that this concept in its scope represents one wide and enormous spectrum of activities that require special seriousness and approach of consideration.

5. Tasks, functions, and levels of management with the communal waste

The emphasizing of the operatives, differentiating and dispositive tasks, functions and levels of management with the communal waste represents possibility of exact locating of the places for application of the logistical approaches for improvement of the quality.

- * Operative tasks, functions and levels are (selection, collection, transport and depositing)

- * Differentiating tasks, functions and levels are (networks, systems and strategies), and

- * Dispositive tasks, functions and levels are (management, taking care, and systematic leading)

Quoted tasks functions and levels represented in this way, give one clear notion where is the place of each of the quoted action in the process of management with the communal waste.

6. Elements for introduction of new approach of management with the communal waste – logistical approach

The development of the logistical system always is in interactive adjustment towards the market requirements and the requirements of certain logistical systems. Always there is an aspiration of elimination of all that is unnecessary, all that with uniform aim reducing of the logistical expenses and increasing of the quality of the logistical service and acceleration of the process.

In present days the logistics develops some new approaches with which is wanted to obtain quality in the management. Around the phenomenon of the communal waste and its qualitative management certain logistical approaches will be used. These logistical approaches are the following and are part of the following publication, and also the publication of the world literature (where clearly and in an unambiguous way the role of the logistics and its approaches in every process of management is represented, and the same will be adjusted also for the management with the communal waste).

- Logistical approach – Concentration which makes concentrating and rationalization of the logistical activities in the logistical systems (product of the comparative application of the logistics of the real data).

- Logistical approach – Specialization which makes specializing of the complete logistical service for distribution and transport of certain types of goods. This approach is based upon the principle of collection of more requests from certain users of certain region and application of contemporary technologies and with that is provided higher quality in the transport and the distribution, and with that also the logistical expenses are less, (product of the comparative application of the logistics of real data).

- Logistical approach – Decentralization that comes out of the traditional approach of the concentration. Most often is structured also to several other subsystems out of which most often applied in practice are: the technical, logistical and organizational which afterwards go to additional decentralization, (product of the comparative application of the logistics of real data).

- Logistical approach – Cooperation that comes out of the principles of cooperation of the participants in the logistical systems that realize same or similar activities, (product of the comparative application of the logistics of real data).

- Logistical approach – Integration which comes out of that this principle performs concentration in the systems and the processes. This kind of approach represents imperative for the application of the contemporary logistic strategies. The integration as approach most often is applied about quality in the flow of information in the entire process of management, (product of the comparative application of the logistics of real data).

These logistical approaches in this paper will be explained with one logistical approach and will be judgment that would come out of the analysis and the synthesis of the entire process of management with the communal waste in Republic of Macedonia comparatively applied through the logistics as science. These applicable methods for needs and improvement of the performances should give a concrete contribution about maximal quality everywhere and at any time when it is a word about management with the communal waste in Republic of Macedonia individually or as a part of the global world order.

CONCLUSION

This paper is based upon real data about Republic of Macedonia. State, where exist 84 municipalities and is divided at eight (8) planned regions according to the new law for territorial organization of the local self-management in Republic of Macedonia of 11 August 2004 year. This deserve to be interest of researching because of 2 052 722 inhabitants everyday create by 0,9 kilograms of communal waste every day. Each improvement of the quality means quality at each field of the quoted number of people. These people are spatially present on the territory of the state that is part of the entire global order. Timely is reality in the present. Functionally exist in space and time and out of that it must require a quality about everything which

means their every day event. The application of the logistical approaches in whatever task of the every day event represents a real and qualitative contribution. Contribution that in the root of the past offers present maintainability and gives maintainable possibility about qualitative future. The application of the logistics with the five quoted approaches makes this paper unique from one traffic transportation view on things which in itself makes application of different aspects that contribute about realization of the desired wish “total quality about management with the communal waste”, and all that with one and uniform aim a higher level of service for everybody.

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