

Environment oriented behavior. A case study on customers of a water company

¹D. Crina Petrescu

¹Faculty of Business, Babeş-Bolyai University, Cluj-Napoca, Romania. Corresponding author: D. C. Petrescu, crinapetrescu10@yahoo.com

Abstract. Education has an important role in the environment protection. The Public Relation strategy of SC Compania de Apă Someş SA has a component related to the water protection. The necessary information to establish the right strategy was obtained by a first survey in 2003 and a second one in 2004 (a third one will be organized in 2009). The most important results related to clean water, wastewater, water protection, consumer's environment (water) protection behavior are presented in this paper. The general conclusion is that the environmental issues are important for the consumers and, in time and with the right stimulation, they can improve their environment oriented behavior.

Key Words: environment protection, water protection, consumer behavior.

Resumen. La educación es importante para la protección del medio ambiente. Le estrategia de Relaciones Publicas de SC Compania de Apă Someş SA tiene una parte relacionada con la protección de las aguas. La información necesaria para establecer la estrategia correcta ha sido obtenida mediante una primera encuesta en 2003 y una segunda en 2004 (la tercera estará organizada al fin del proyecto, en 2009). Los resultados más importantes relacionados con el agua potable, las aguas residuales, la protección del medio ambiente (y de las aguas) están presentados en este trabajo. La conclusión general es que los asuntos de medio son importantes para los consumidores y, con el tiempo y la ayuda de los incentivos adecuados la gente mejoraran su comportamiento ecológico.

Palabras clave: protección del medio ambiente, protección de las aguas, comportamiento ecológico del consumidor.

Rezumat. Gradul ridicat de poluare la care s-a ajuns în prezent se datorează în mare măsură și inerției în gândire, greutății cu care oamenii, în calitate de agenți economici sau persoane fizice, își schimbă concepțiile. Datorită acestei situații se pune mare accent pe educația începută la vârste cât mai mici. Evident că nu lipsesc nici cea care se adresează adulților. Înainte de a începe orice acțiune educativă trebuie să cunoaștem publicul căruia ne adresăm, pentru că numai atunci vom putea concepe acțiuni care să conducă la efectul dorit. O asemenea inițiativă a avut loc prin Măsura ISPA 2000/RO/16/P/PE/008, Reabilitarea și Modernizarea Rețelei de Apă și Canalizare din Zona Cluj. În anul 2003, SC Compania de Apă Someş SA (CAS, pe vremea aceea RAJAC Cluj) împreună cu consultantul proiectului, DHV Water BV Sucursala România, în cadrul componentei de Relații Publice a măsurii ISPA, au organizat un sondaj, prin care s-au cules, între altele, și informațiile necesare întocmirii unei strategii de conștientizare a publicului cu privire la importanța și necesitatea protejării surselor de apă din zona Cluj. În 2004 a fost organizat un al doilea sondaj (iar la sfârșitul proiectului, în 2009, va fi al treilea). Cele mai importante informații obținute prin sondajele amintite, legate de apele curate, cele reziduale, de tratarea lor, de comportamentul ecologic al consumatorului etc fac obiectul lucrării de față. Concluzia generală este oamenii sunt interesați de aspecte legate de mediul natural și astfel, în timp și prin stimulente adecvate, ei își pot îmbunătăți comportamentul față de mediul natural.

Cuvinte cheie: protecția mediului, protecția apelor, comportamentul consumatorului.

Introduction. Environment protection, in general, water protection, in particular, are both necessary and expensive in money, time and human resources (Hazilla & Kopp 1990; Petrescu 2004, 2006). An activity with negative impact on the environment, that is carried on over a longer period of time and that has cumulative effects that appear after the moment when the activity was produced is much more difficult to be accepted and understood as a destructive one than an activity that has an instant visible effect. This is why in relation with the education about environment protection an important step is to raise the awareness about the pollution: its nature, sources, protection measures (Petrescu & Lemnaru 2006; Petrescu et al 2007).

Material and Method. The high level of pollution that we face in the present is partially the result of the inertia in thinking, of the difficulty that people, as private persons or economic agents, have when they should change their ideas or visions. In order to face this situation, the education started in younger age is very important. This is why the books, TV shows, environment education activities etc for children and teenagers are numerous; of course, there are plenty for adults, too. Before starting any educational activity we must know well our target because this is the only way to find the most appropriate actions to generate the response we wish for.

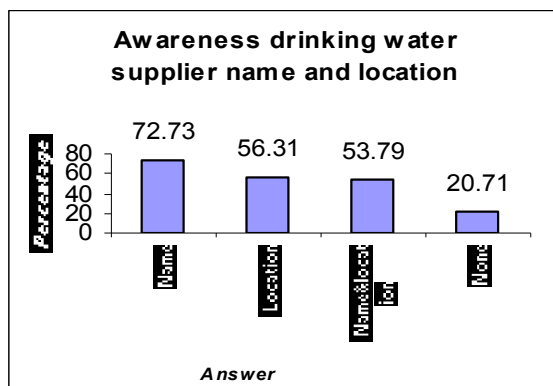
Such an initiative was carried on within ISPA Measure 2000/RO/16/P/PE/008, Rehabilitation and Modernization of the Water Supply and Sewerage System for the area of Cluj. In 2003, SC Compania de Apă Someș SA (CAS, former RAJAC Cluj) together with the consultant of the ISPA project, DHV Water BV (Romania Branch), within the Public Relations component of the ISPA measure, carried on a first survey. This generated, among others, information necessary for the public awareness strategy about the importance and necessity of the water sources in the area of Cluj.

The survey was carried on in Cluj-Napoca between September-October 2003, the sample was 388 individuals, from which 251 were persons living in blocks, 102 persons living in houses and 35 block administrators. Also, 21 Cluj media representatives were questioned. Three target groups have been established: people living in blocks or houses, block administrators and media representatives. For each group was designed a special questionnaire. The data gathered was introduced in a database, was analyzed and the information obtained was used to evaluate the current situation in order to establish the right Public Relations strategy for CAS, the realistic objectives and the actions needed to accomplish all this.

Some of the information obtained was as expected, but other was surprising and also useful for establishing a correct Public Relations strategy. At the same time, this information was a powerful and useful tool for convincing the most skeptical ones that a survey was necessary to achieve the objectives that have been set. The most important information obtained with this survey and related to the clean water, wastewater, water treatment, environment oriented behavior etc is presented in this paper. Each question has an identification number corresponding to the survey it belongs to (Q1 for the first one, Q2 for the second one) and to the number of the question in the original questionnaire.

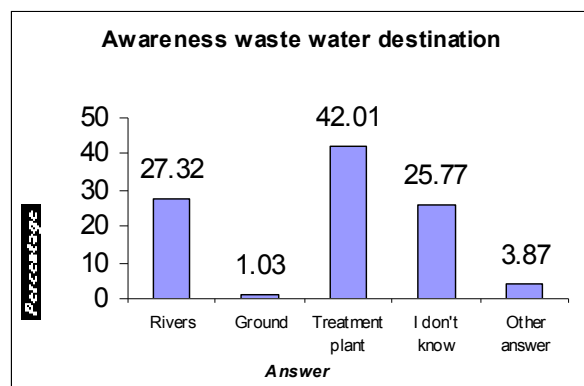
Results and Discussion.

Q1.5 Do you know who supplies you with drinking water and where this supplier is located?



The name and the location are simple, but important parts of the image of any company. The fact that only half of the population know both and that 20% do not know any indicate that efforts have to

Q1.10 Where does the waste water go after entering the sewerage system?



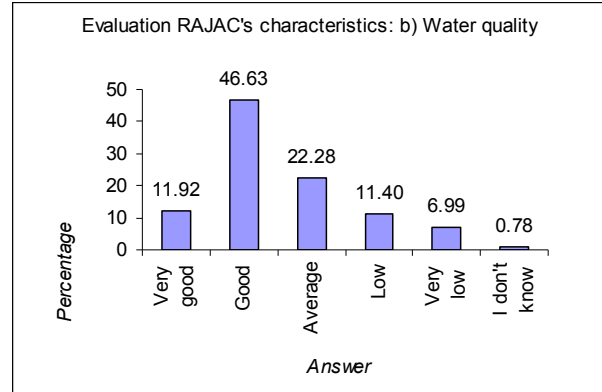
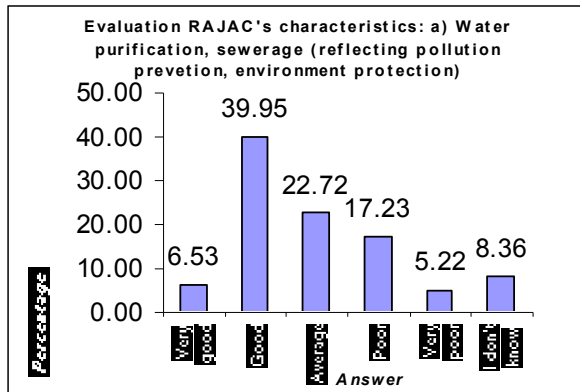
Only 42% of the people know the waste water is treated (but not all of them believe this really happens). Almost 1/3 thinks it goes into the ground or the rivers. The water treatment is a very important part of

be made in order to increase the awareness on the name and location of CAS.

CAS activities. This means many people are not aware that CAS is doing a part of its job. Also, the current perception for wastewater destination has to change in order to create the image of an Environment oriented company for CAS.

Q1.11 Reward the following aspects related to CAS's activity:
a) Water purification, sewerage (reflecting environment protection, pollution prevention)

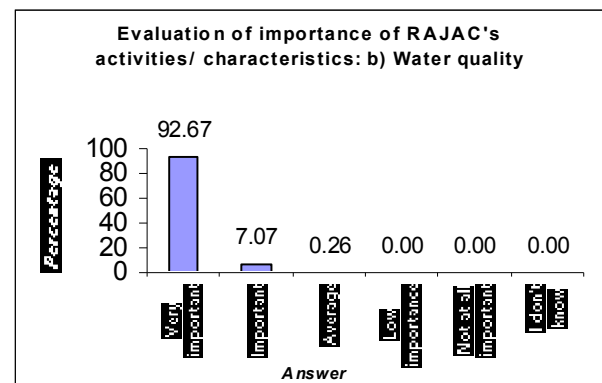
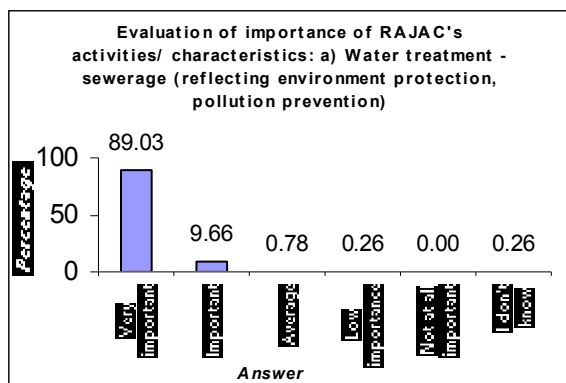
Q1.11 Reward the following aspects related to CAS's activity:
b) Water quality



From the technical point of view the quality of the water treatment and of the water and the functioning of the network are already good. What CAS can do is to improve the customers' perception of them, by better communication, by making them understand the real level of the services offered by CAS. Other characteristics, like the transparency, quick response, customer oriented attitude and execution of works CAS got an important percentage of "Very good" and "Good"; still, improvement can be made because approximately 1/4 of the customers give evaluation of "Bad" and "Very bad".

Q1.13 How important do you think that are the following aspects related to CAS's activities:
a) Water treatment - sewerage (reflecting environment protection, pollution prevention)?

Q1.13 How important do you think that are the following aspects related to CAS's activities:
b) Quality of drinking water?

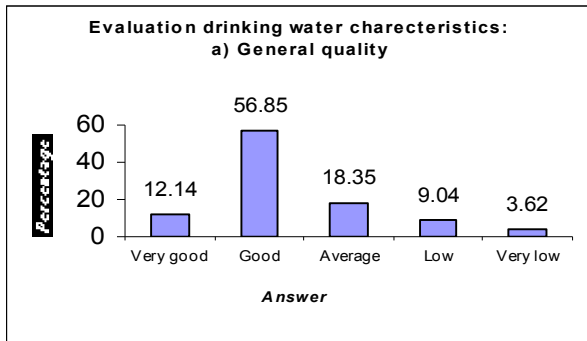


Almost all the people evaluate the characteristics of CAS as important or very important, so they will be sensitive to any modification regarding these characteristics (water treatment and sewerage, water quality, quality of the water-sewerage network, company transparency, quick response, customer care, execution of repair works; here we represented only the first two). The responses showed they are not aware of the

investments level; this situation doesn't allow them to value correctly the improvements.

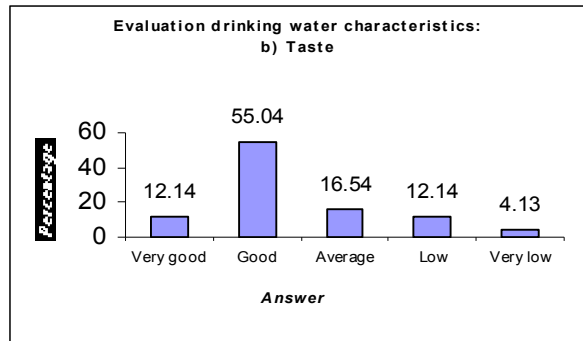
Q1.15 Evaluate the characteristics of the drinking water in Cluj:

a) General quality

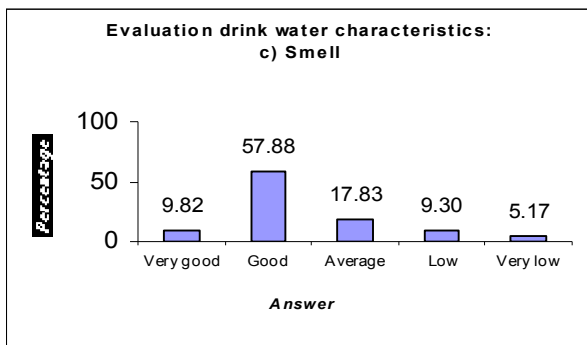


Q1.15 Evaluate the following characteristics of the drinking water in Cluj:

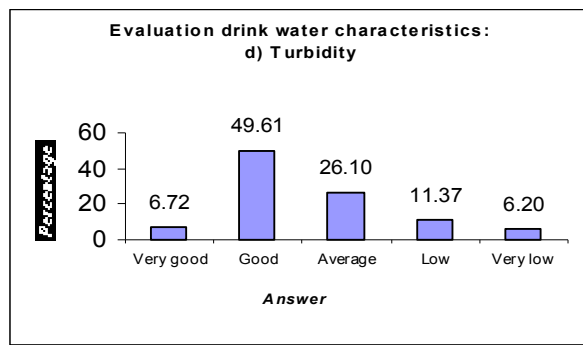
b) Taste



Q1.15 Evaluate the following characteristics of the drinking water in Cluj: c) Smell

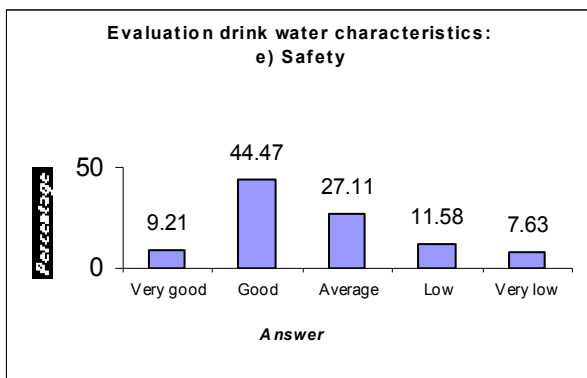


Q1.15 Evaluate the following characteristics of the drinking water in Cluj: d) Turbidity



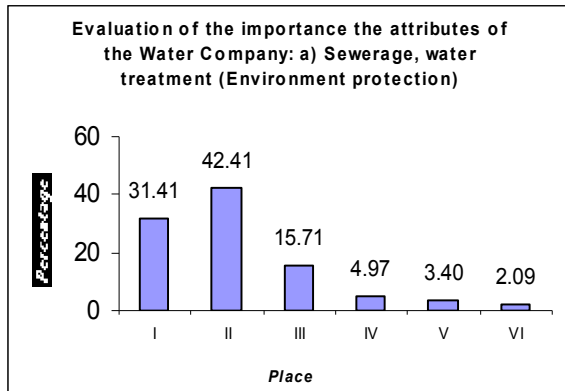
Q1.15 Evaluate the following characteristics of the drinking water in Cluj:

e) Safety

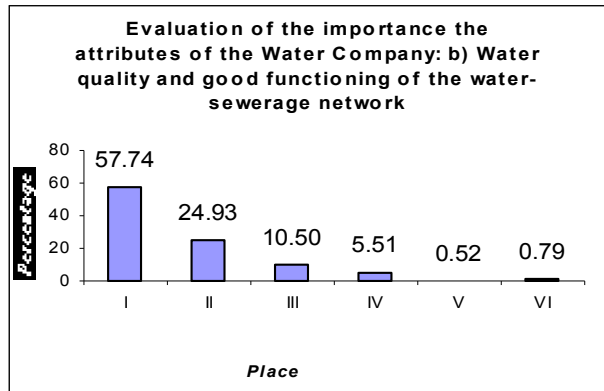


The general evaluations of the water in Cluj and of its characteristics are favorable. Half of the population sees them as "Good". Improvements can be made solving the specific problems of the 10-15% who gave evaluation of "Low" or "Very low". Also, proper communication can decrease the percentage of "Medium" in favor of "Good". The results indicate a preoccupation for the safety of the drink water; this information is important for an advertising campaign or other marketing actions. It can also help in changing customers' behavior towards an environment oriented one: if they want clean waters, they have to protect the water sources.

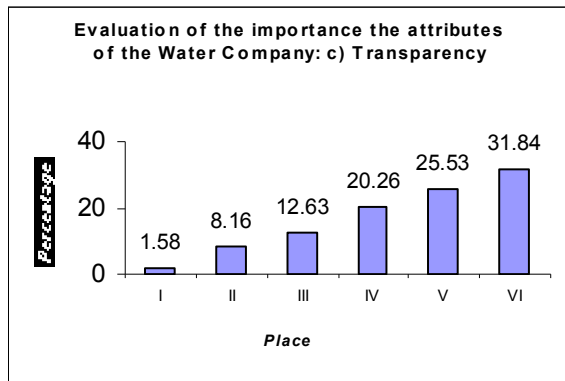
Q1.17 Rank by importance the following attributes that the Water Company should have: a) Sewerage, water treatment (Environment protection)



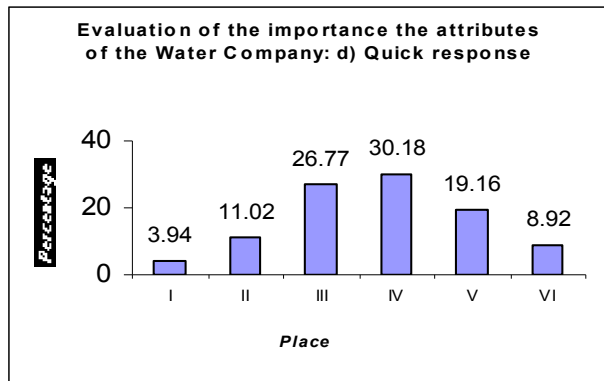
Q1.17 Rank by importance the following attributes that the Water Company should have: b) Water quality and good functioning of the water-sewerage network



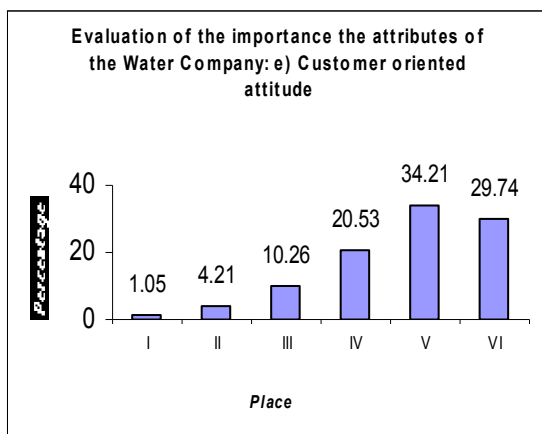
Q1.17 Rank by importance the following attributes that the Water Company should have: c) Transparency = Public access to information



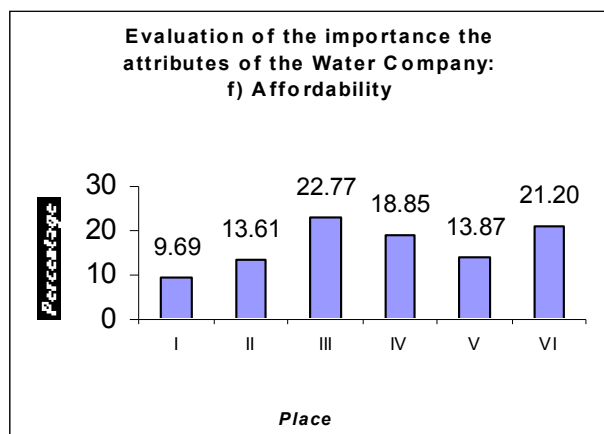
Q1.17 Rank by importance the following attributes that the Water Company should have: d) Quick response (to damages, to information request, to complaints etc)



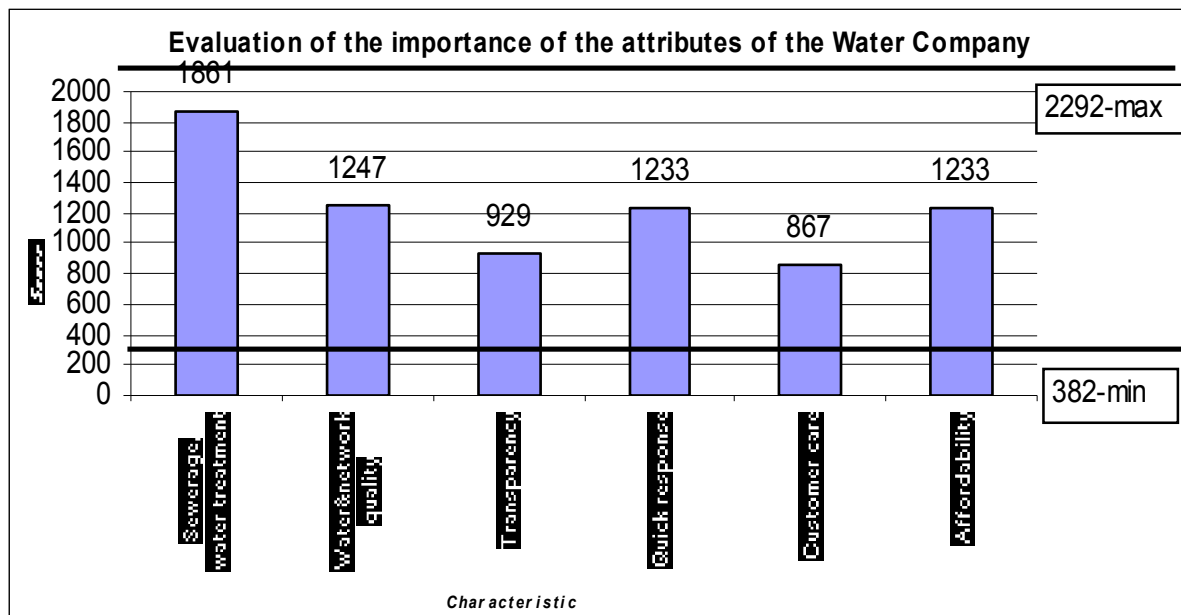
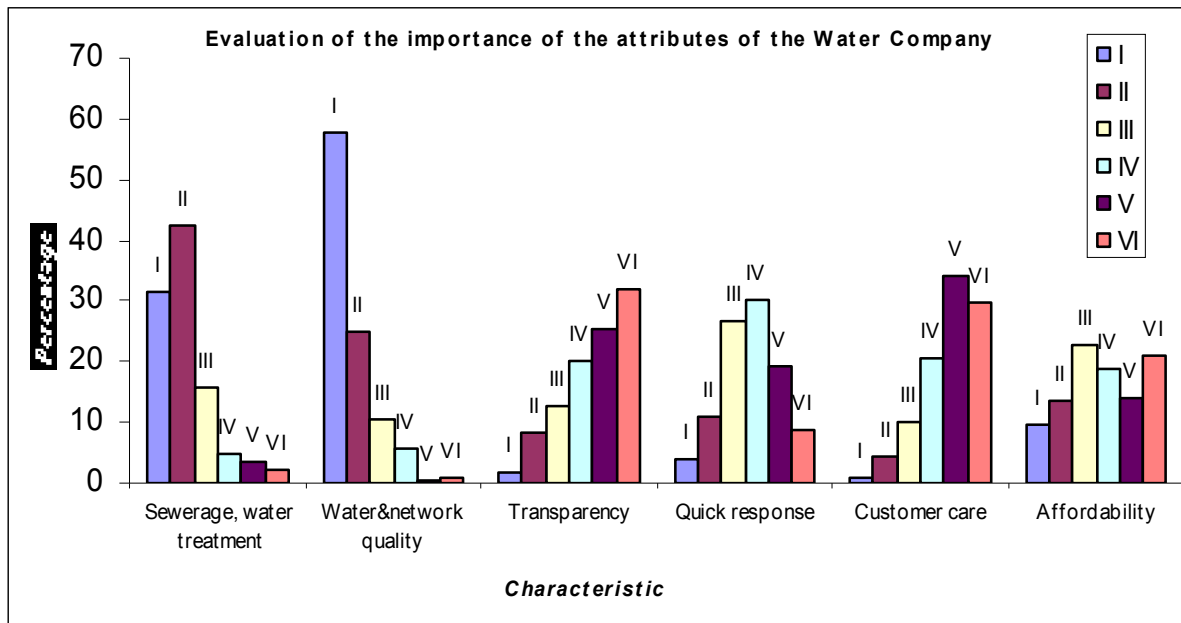
Q1.17 Rank by importance the following attributes that the Water Company should have: e) Customer oriented attitude



Q1.17 Rank by importance the following attributes that the Water Company should have: f) Affordability



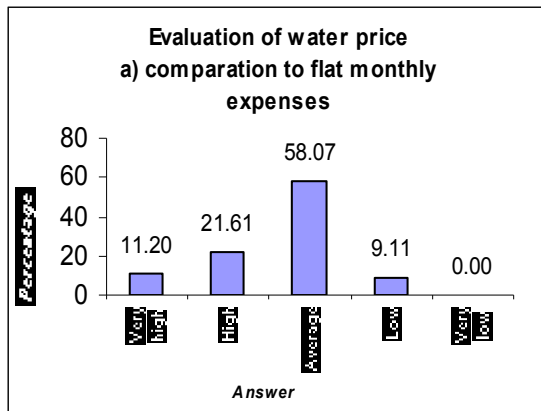
Q1.17 Rank by importance the following attributes that the Water Company should have: a) Sewerage, water treatment (Environment protection), b) Water quality and good functioning of the water-sewerage network, c) Company Transparency, d) Quick response, e) Customer oriented attitude, f) Affordability



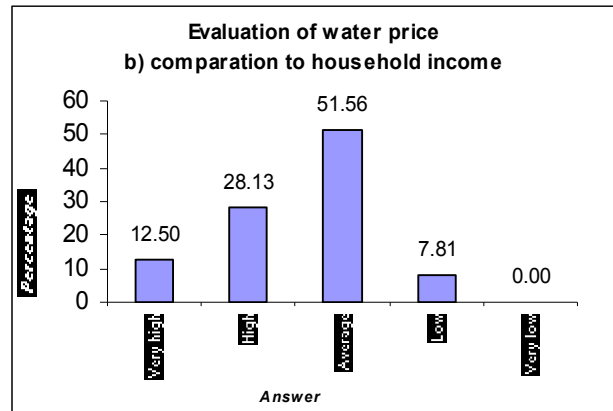
Among the attributes of a water Company, the highest importance is given to the sewerage, water treatment, then follow the water quality, the quick reaction to the customer problems and the affordability. This means that if CAS wants to have happy customers, CAS has to fulfill their demands and expectations in this direction, with priority.

For each characteristic the "score" is calculated like this: we took the total the number of persons that have given the first place to a certain characteristic and multiplied it by 6, those who have given it the second place and multiplied it by 5, those who have given it the third place and multiplied it by 4, those who have given it the fourth place and multiplied it by 3, those who have given it the fifth place and multiplied it by 2 and those who have given it the sixth place and multiplied it by 1; we made the sum of all these results and obtained the score for one characteristic.

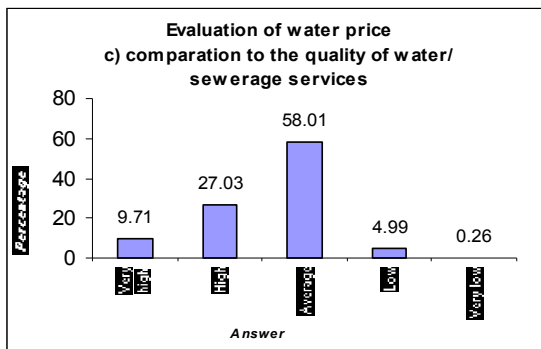
Q1.36 How do you see the water price comparing it to: a) flat monthly expenses



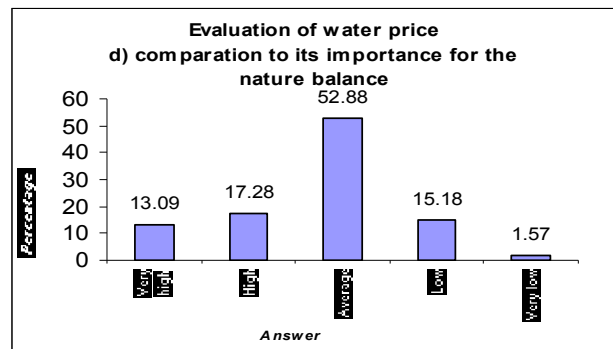
Q1.36 How do you see the water price comparing it to: b) your household's income



Q1.36 How do you see the water price comparing it to: c) the quality of water/ sewerage services

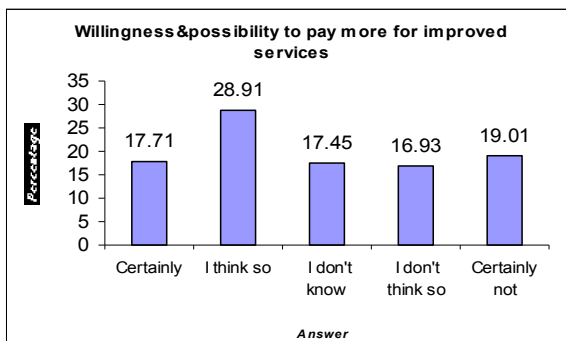


Q1.36 How do you see the water price comparing it to: d) its importance for the nature balance?

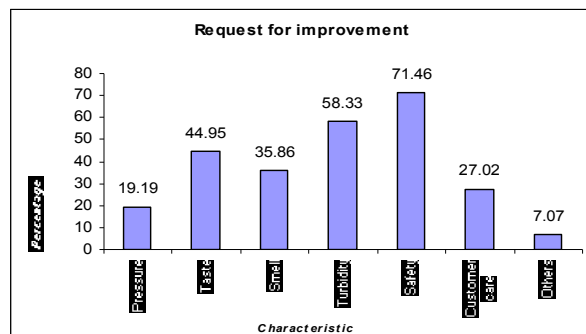


More than half of the people appreciate the cold water price as "Average", about 20-30% as "High" and "Very high" (when they compare it to the flat monthly expenses, the household income and the quality of the water-sewerage services). When related to the environment, the price is perceived as lower than in other cases. This shows that taking the nature as a reference point for the evaluation of the price can be helpful for making the people accept the future increase in the tariffs. It also shows they are sensitive to environment issues and they give a high value to the environment.

Q1.37 Are you willing and do you have the possibility to pay more for improved services?



Q1.38 What would you like to be improved?



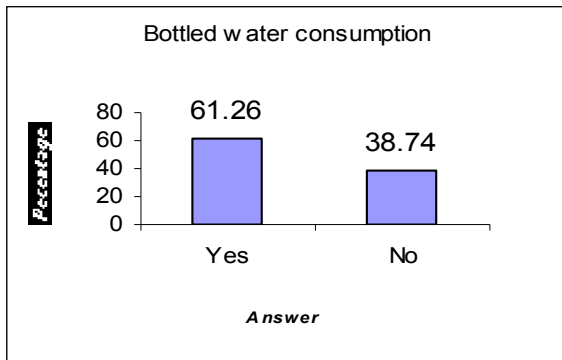
With the right communication strategy, offering the right arguments and the

There is a real problem with the water safety perception: when people have the

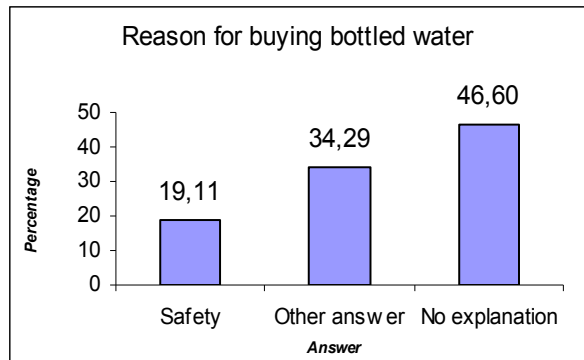
proper explanations the 34.38% (17.45+16.93) of the people who do not know or are not sure if they want and can pay more could understand and accept a higher price for improved services.

opportunity to ask for improvement, 71.46% of them demand higher safety. This means they have the feeling the drinking water it is not safe enough. They are not aware CAS delivers good water and that if there are problems these are caused by other factors than the water purification process. If this situation improves, the image of CAS will also improve.

Q1.40 Do you use to drink bottled water?

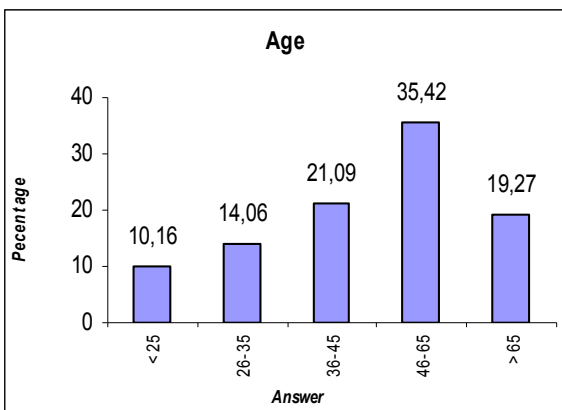


Q1.40 Reason for buying bottled water

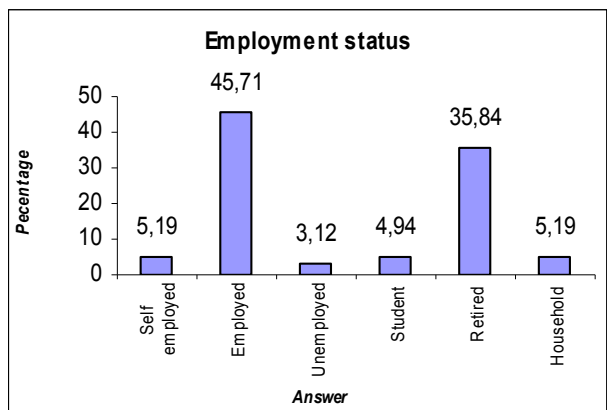


61.26% of the people drink bottled water and 31.2% of them do it for safety reasons. These 31.2% represent 19.11% from the general sample. A part of them prefer bottled water because they have the wrong idea that CAS does not purify the water properly. This attitude is generated by two situations: either the people have good water, but have an incorrect idea about it, or the water they get at the taps is indeed of poor quality. In both cases they must be informed that the water that CAS delivers is in accordance with the national standards. If the water quality at the tap is altered, it happens because of factors that are not the responsibility of CAS, like, for instance, the improper state of the pipes in the apartment.

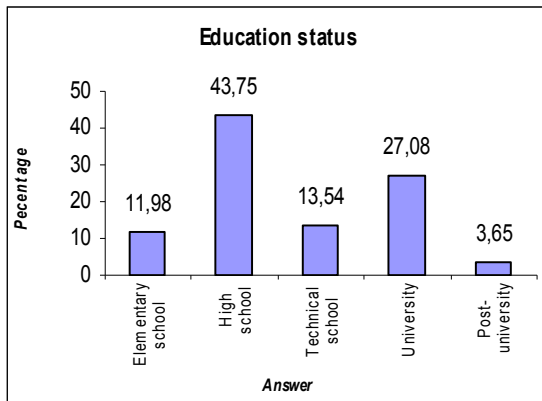
Q1.01 Age



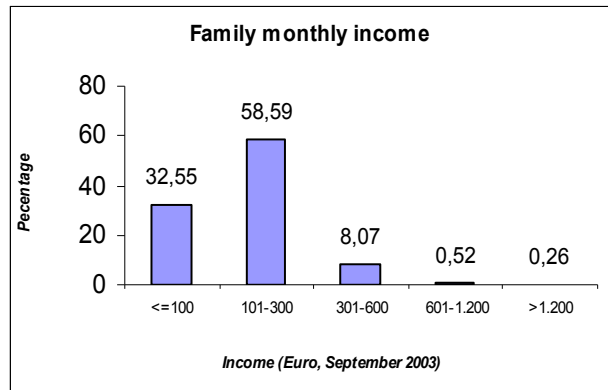
Q1.03 Employment status



Q1.04 Education status

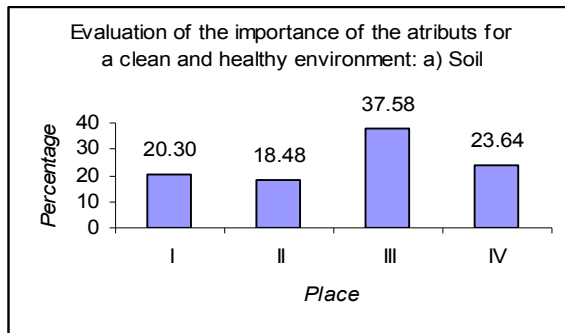


Q1.010 Family monthly income

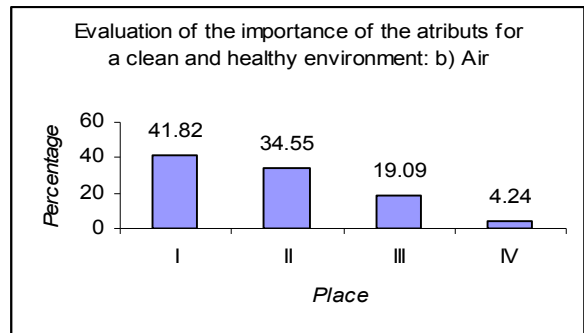


Eight months later (April 2004), another survey was carried on in Cluj-Napoca, following the same methodology as the first one. Half of the questions were related to the environment (and water) oriented behavior or perceptions. The most significant of the results are presented in the next paragraphs.

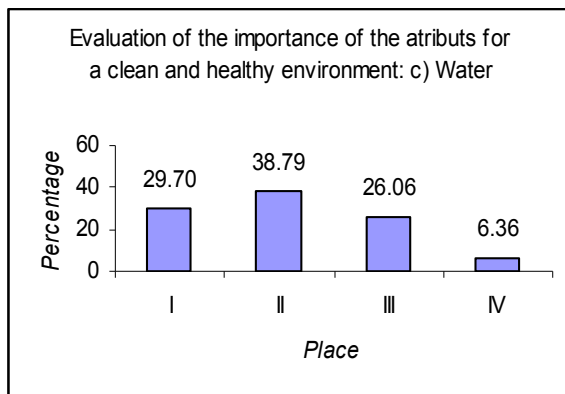
Q2.1 Rank by importance the following elements of a clean and healthy environment: a) Soil



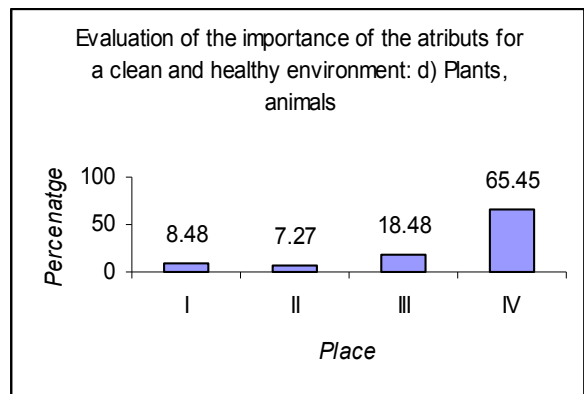
Q2.1 Rank by importance the following elements of a clean and healthy environment: b) Air



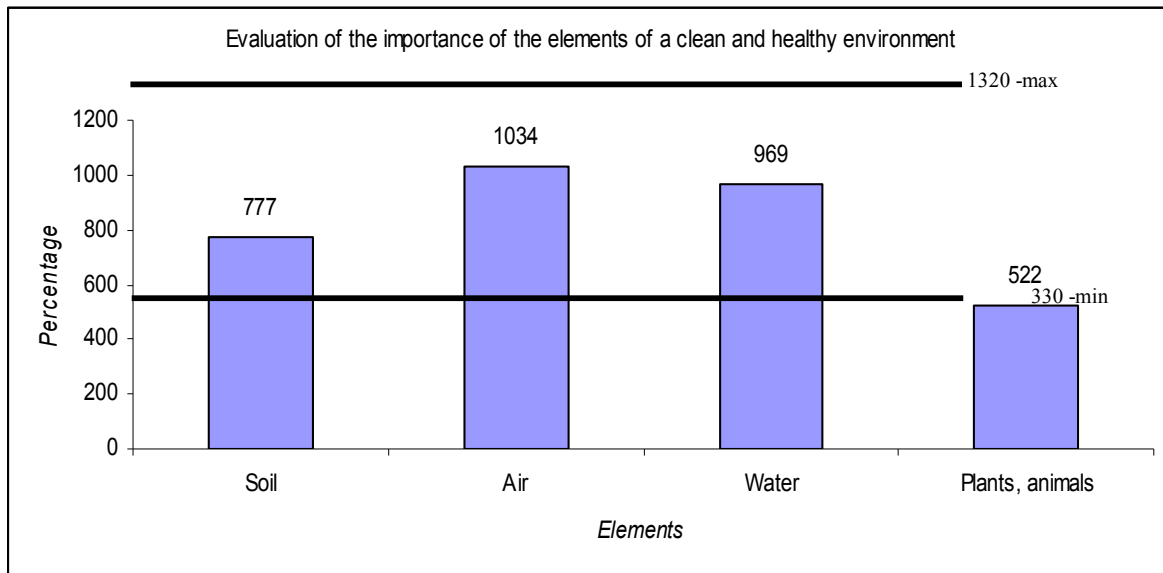
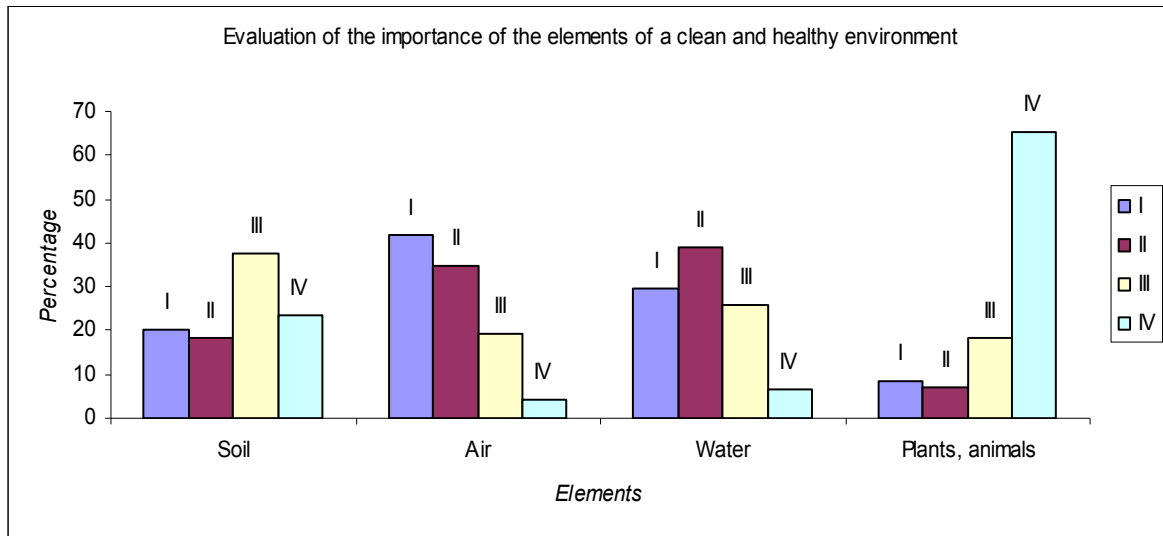
Q2.1 Rank by importance the following elements of a clean and healthy environment: c) Water



Q2.1 Rank by importance the following elements of a clean and healthy environment: d) Plants, animals



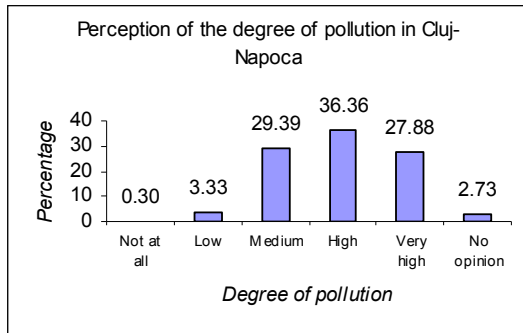
Q2.1 Rank by importance the following elements of a clean and healthy environment: a) Soil, b) Air, c) Water, d) Plants, animals



People questioned believe that the most important component of a clean and healthy environment is the air. On the second place comes the water, on the third the soil and on the fourth the plants and animals. As they have given a high importance to the water, the education and awareness raising campaigns focused on water protection can be successful.

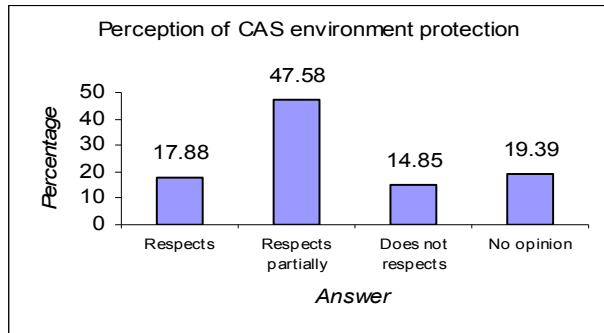
For each characteristic the "score" is calculated like this: we took the total the number of persons that have given the first place to a certain characteristic and multiplied it by 4, those who have given it the second place and multiplied it by 3, those who have given it the third place and multiplied it by 2 and those who have given it the fourth place and multiplied it by 1; we made the sum of all these results and obtained the score for one characteristic.

Q2.2 How polluted do you think Cluj-Napoca is? a) Not at all, b) Low, c) Medium, d) High, e) Very high, f) No opinion



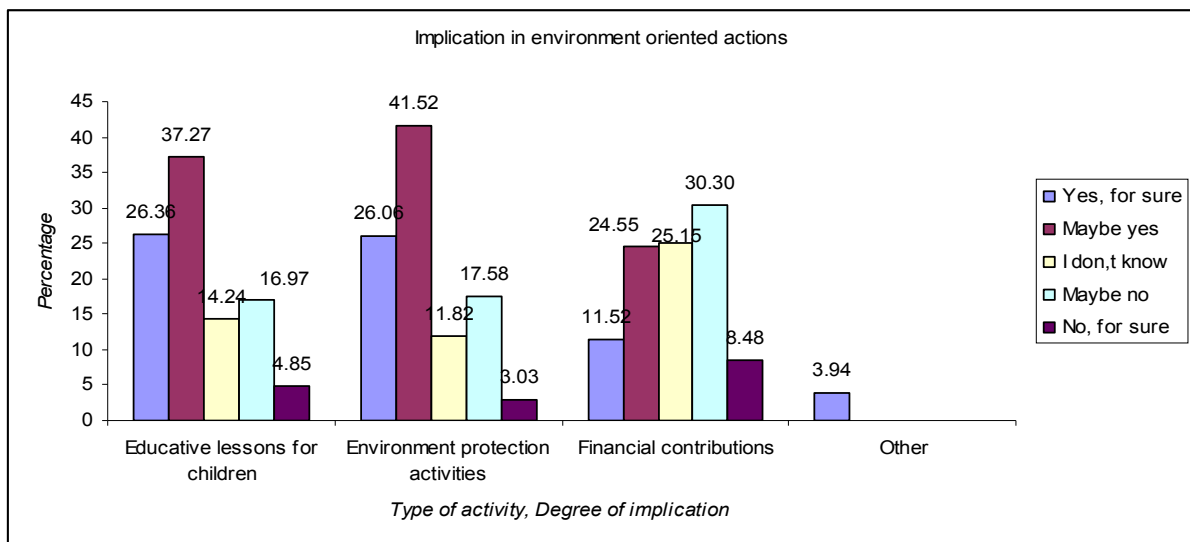
Approximately 2/3 of the respondents (64,24%) believe that Cluj-Napoca is a polluted city, 1/3 (29,39%) believe its pollution is medium and only a small percentage (3,63%) see it as a clean city. People who believe their city is polluted and at the same time see the pollution issue as important are more likely to improve their behavior towards environment protection and pollution prevention.

Q2.3 Do you think CAS protects the environment? a) Respects, b) Respects partially, c) Does not respect, d) No opinion



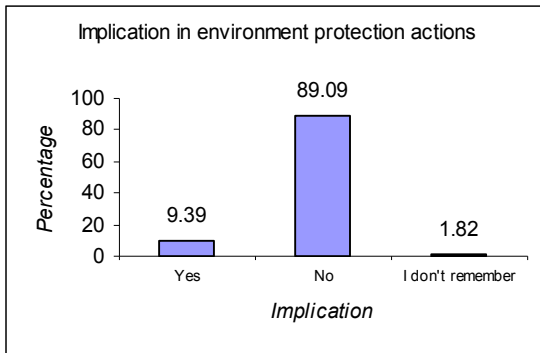
More than half of the subjects think CAS respects the environment. From this point of view, CAS has a good image. This situation has an educative side, as CAS is a big company whose services are used by all inhabitants of the city; it can serve as an example of appropriate behavior for its customers.

Q2.4 What are you willing and what are you able to do in order to protect the environment and the drink water sources? a) to be involved in educative activities for children, b) to participate directly in environment protection actions, c) to contribute financially in actions for reduction and prevention of the pollution, d) other.



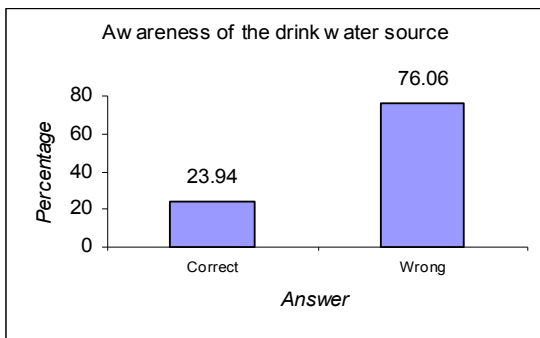
More than half of the subjects declare they are willing and able to be involved in environment and water protection actions and 1/3 accept the idea of contributing financially. Less than 10% declare they do not want or can to be involved in such actions. Once again, people show interest and availability for environment protection and pollution prevention actions.

Q2.7 Have you ever participated in environment protection actions organized by various institutions?
a) Yes, b) No, c) I don't remember



Only a very small part (9.39%) of the subjects declares they were involved in environment protection actions organized by different institutions. This can happen because they were not asked to participate, because they didn't want to participate or both. Further investigation has to be made in this direction in order to have a complete image of the situation.

Q2.13 What is the source of your drink water?



Less than 1/3 of the subjects know where their drink water comes from. This must be corrected by an appropriate education and communication strategy because a high awareness on the drink water sources will help creating a good environment behavior.

Conclusions. Each question of the survey has its own interpretation and associated conclusion and they were presented beside their graphic representation in this paper. Some of the most important are:

- Only 42% of the people know the waste water is treated (but not all of them believe this really happens). Almost 1/3 thinks it goes into the ground or the rivers. The water treatment is a very important part of CAS activities. This means many people are not aware that CAS is doing a part of its job. Also, the current perception for wastewater destination has to change in order to create the image of an Environment oriented company for CAS.
- The general evaluations of the water in Cluj and of its characteristics are favorable. The results indicate a preoccupation for the safety of the drink water; this information can help in changing customers' behavior towards an environment oriented one: if they want clean waters, they have to protect the water sources.
- When related to the environment, the price is perceived as lower than in other cases (when they compare it to the flat monthly expenses, the household income and the quality of the water-sewerage services). This shows that taking the nature as a reference point for the evaluation of the price can be helpful for making the people accept the future increase in the tariffs. It also shows they are sensitive to environment issues and they give a high value to the environment.
- There is a real problem with the water safety perception: when people have the opportunity to ask for improvement, 71.46% of them demand higher safety. This means they have the feeling the drinking water it is not safe enough. They are not aware CAS delivers good water and that if there are problems these are caused by

other factors than the water purification process. If this situation improves, the image of CAS will also improve.

- A part of the people who drink bottled water prefers it to the tap water because they have the wrong idea that CAS does not purify the water properly. This attitude is generated by two situations: either the people have good water, but have an incorrect idea about it, or the water they get at the taps is indeed of poor quality. In both cases people must be informed that the water that CAS delivers is in accordance with the national standards. If the water quality at the tap is altered, it happens because of factors that are not the responsibility of CAS, like, for instance, the improper state of the pipes in the apartment.
- People questioned believe that the most important component of a clean and healthy environment is the air. On the second place comes the water, on the third the soil and on the fourth the plants and animals. As they have given a high importance to the water, the education and awareness raising campaigns focused on water protection can be successful.
- Approximately 2/3 of the respondents believe that Cluj-Napoca is a polluted city, 1/3 believes its pollution is medium and only a small percentage sees it as a clean city. People who believe their city is polluted and, at the same time, see the pollution issue as important are more likely to improve their behavior towards environment protection and pollution prevention.
- More than half of the subjects declare they are willing and able to be involved in environment and water protection actions and 1/3 accept the idea of contributing financially. Less than 10% declare they do not want or can't be involved in such actions. Once again, people show interest and availability for environment protection and pollution prevention actions.
- Less than 1/3 of the subjects know where their drink water comes from. This must be corrected by an appropriate education and communication strategy because a high awareness on the drink water sources will help creating a good environment behavior.

The two surveys have reached their general goal: they have produced rich and adequate information necessary to design the Public Relation strategy that SC Compania de Apă Someș SA needed in order to become a customer oriented company that delivers services at European standards, protects the public health and the environment and is economically efficient.

Within the same ISPA measure a last survey is scheduled for the end of the project (2009). The results of the three surveys will be compared to find out, among others, if there is a progress in the environment oriented behavior of the customers and what should be done in order to keep on improving it.

Acknowledgements. We would like to thank Mr Cees Keetelaar (Consultant's team leader, DHV Water BV, Netherlands), Mr Anjo Travaille (PR Expert, DHV Water BV, Netherlands), Mrs Mihaela Pop (Project Supervisor, SC Compania de Apă Someș SA, Romania), Mr Lucian Croitoru (Head of PR Department, SC Compania de Apă Someș SA, Romania) for the useful and wise advice and, also, to all the persons involved in carrying out the surveys for their hard work.

References

- Hazilla M., Kopp R. J., 1990 Social cost of environmental quality regulations: a general equilibrium analysis. *Journal of Political Economy* 98(4):853-873.
- Petrescu D. C., 2004 [The plan of pollution prevention in the Tarnița-Gilău Basin]. *EcoTerra* 1-2. [in Romanian]
- Petrescu D. C., 2006 Clean water and polluted water: from confusion to awareness. A survey carried on in Cluj-Napoca. *Environment & Progress* 8:299-307.

- Petrescu D. C., Lemnaru L. A., 2006 Bringing the EU environment standards in Romania: ISPA Measure, rehabilitation and modernization of the water supply and sewerage systems in the area of Cluj. *Environment & Progress* 6:380-385.
- Petrescu D. C., Pop M., Vlad G., 2007 [Waste water management and environment protection at SC Compania de Apă Someș SA (Cluj-Napoca)]. *Environment & Progress* 10:335-341. [in Romanian]
- ***, 2003 Quarterly Report, Customer Relations ISPA Promotion. Results of the First Public Survey September - October 2003, Cluj-Napoca, November 2003. [in Romanian]
- ***, 2005 Quarterly Report, January - March 2005, ANNEX - A Public Relations ISPA Promotion, Cluj-Napoca, April 2005. [in Romanian]

Received: 1 September 2008. Accepted: 20 September 2008. Published: 30 September 2008.

Author:

Dacina Crina Petrescu, Faculty of Business, Babeș-Bolyai University, Horea Street, no 7, 400174, Cluj-Napoca, Romania, EU, e-mail: crinapetrescu10@yahoo.com

How to cite this article:

Petrescu D. C., 2008 Environment oriented behavior. A case study on customers of a water company. *AACL Bioflux* 1:85-98.

Printed version: ISSN 1844-8143

Online version: ISSN 1844-9166 available at: <http://www.bioflux.com.ro/docs/vol1/2008.1.85-98.pdf>

© 2008 Bioflux