THE REAL ENVIRONMENTAL CRISIS – EFFECTS IN TOURISM DEVELOPMENT, CONFLICTS AND SUSTAINABILITY

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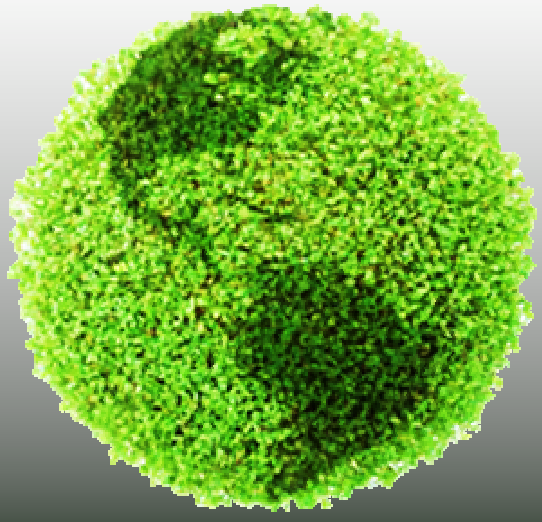

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Contents:

CRITICAL SUCCESS FACTORS OF ISO14001 EMS: WHAT RESEARCHERS MUST DO

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Abstract:

An environmental management system (EMS) provides the framework for continual environmental improvement through effective management of an organization's environmental impacts. The most well-known and accepted EMS is the ISO 14001 standard on environmental management established by the International Organization for Standardization (ISO). The key components that impact on EMS implementation are a synergistic blend of 'hard' and 'soft' elements. The elements of soft EMS are essentially dimensions of human resource management (HRM), while the 'hard' elements are more technical-oriented. To ensure successful environmental management, the 'hard' elements of an EMS must be accompanied by equal attention to the 'soft' elements. Despite of the growing interest in the voluntary environmental management standards, little empirical information exists on the critical success factors of environmental management (i.e. EMS implementation). Indeed more broad empirical studies and large sample surveys methodologies will be required for exploring the relationship of specific environmental management practices to environmental performance. Such empirically validated measurement instruments are essential to undertaking the development and testing of predictive theories of environmental management. In particular more effort should be placed in formulating theoretical models that can represent the complex EMS practices-environmental performance relationships. At the present time, the nature of the relationship between the soft elements, hard elements and environmental performance remains unclear. This paper aims to provide a motivation for investigating the link between the soft and hard elements to environmental performance.

Keywords: ISO 14001 EMS, soft elements, hard elements, environmental perfor**mance**.

1. Introduction

The ISO 14001 standard provides the guidelines for constructing an environmental management system (EMS) which has been designed to help organizations in the creation of structured mechanisms for continuous improvement in environmental performance (Kitazawa, and Sarkis 2000). Statistics published by the International Organization for Standardization (ISO) shows that up to the end of December 2008, at least 188 815 ISO 14001: 2004 certificates had been issued in 155 countries and economies. The 2008 total represents an increase of 34 243 (+ 22%) over 2007, when the total was 154 572 in 148 countries and economies (source: http://www.iso.org). Yet, despite of the growing widespread adoption of the voluntary environmental standard, little empirical information exists on the critical success factors of environmental management (i.e. ISO14001 EMS implementation). There is a need for a reliable and valid instrument grounded in a theoretical framework, which assesses specific environmental management practices to environmental performance at the organizational level. Essentially the key components that impact on ISO 14001 EMS implementation are a synergistic blend of 'hard' and 'soft' elements. The 'soft' elements are dimensions of human resource management (HRM), while the 'hard' elements are more technical-oriented. At the present time, the nature of the relationship between the soft elements, hard elements and environmental performance remains unclear. Hence this paper aims to provide a motivation for investigating the link between these three elements.

References

[1] Aboulnaga, I.A. 1998. Integrating quality and environmental management as competitive business strategy for 21st century. *Environmental Management and Health* 9/2: 65-71.

[2] Ann, G.E., Zailani, S., and Wahid, N.A. 2006. A study on the impact of environmental management system (EMS) certification towards firms' performance in Malaysia. *Management of Environmental Quality: An International Journal* 17/1: 73-93.

[3] Babakri, K.A., Bennett, R.A., and Franchetti, M. 2003. Critical factors for implementing ISO 14001 standard in United States industrial companies. *Journal of Cleaner Production* 11/7: 749-775.

[4] Bansal, P. 2005. Evolving sustainability: A longitudinal study of corporate sustainable development. *Strategic Management Journal* 26/3: 197-218.

[5] Bansal, P., and Hunter, T. 2003. Strategic explanation for the early adoption of ISO 14001. *Journal of Business Ethics* 46/3: 289-99.

[6] Barney, J. 1991. Firm resources and sustained competitive advantage. *Journal of Management* 17/1: 99-120.

[7] Barney, J.B. 1986. Organizational culture: can it be a source of sustained competitive advantage? *Academy of Management Review* 11/3: 656-665.

[8] Berry, M., and Rondinelli, D. 1998. Proactive corporate environmental management: a new industrial revolution. *Academy of Management Executive* 12/2: 38-50.

[9] Carmeli, A., and Tishler, A. 2004. Resources, capabilities and the performance of industrial firms: a multivariate analysis. *Managerial and Decision Economics* 25/6-7: 299-315.

[10] Chin, K.S., Chiu, S., and Tummala, V.M.R. 1999. An evaluation of success factors using the AHP to implement ISO14001-based EMS. *International Journal of Quality & Reliability Management* 16/4: 341-361.

[11] Christmann, P. 2000. Effects of best practices of environmental management on cost advantage: the role of complementary assets. *Academy of Management Journal* 43/4: 663-80.

[12] Corbett, C.J., Luca, A.M., and Pan, J.N. February 2003. "*Global perspectives on global standards a 15-economy survey of ISO 9000 and ISO 14000*", online, date accessed 13th May 2005. Available from: http://www.iso.ch/iso/en/iso9000-14000/iso14000/iso14000index.html.

[13] Daily, B.F., Bishop, J.W., and Steiner, R. 2007. The Mediating Role of EMS Teamwork as it pertains to HR Factors and Perceived Environmental Performance. *Journal of Applied Business Research*, vol. 23, no. 1: 95-109.

[14] Daily, B.F., Bishop, J.W., and Steiner, R. 2003. The impact of human resource management practices on employee perceptions of environmental performance. *Proceedings of National Decision Sciences Institute Conference Meeting*, Washington D.C.

[15] Daily, B.F., and Huang, S.C. 2001. Achieving sustainability through attention to human resource factors in environmental management. *International Journal of Operations & Production Management* 21/12: 1539-552.

[16] Darnall, N., 2003. Why firms certify to ISO 14001: an institutional and resource-based view. *Academy of Management Proceedings* pp. A1-A6.

[17] Fahy, J. 2000. The resource-based view of the firm: some stumbling-blocks on the road to understanding sustainable competitive advantage. *Journal of European Industrial Training* 24/2-4: 94-104.

[18] Fernandez, E., Junquera, B., and Ordiz, M. 2003. Organizational culture and human resources in the environmental issue: a review of the literature. *International Journal of Human Resource Management* 14/4: 634-56.

[19] Flynn, B.B., Schroeder, R.G., and Sakakibara, S. 1995. The impact of quality management practices on performance and competitive advantage. *Decision Sciences* 26/5: 659-91.

[20] Galbreath, J., and Galvin, P. 2004. Which resources matter? A fine-grained test of the resource based view of the firm. *Academy of Management Proceedings:* L1-L6.

[21] Geralis, M., and Terziovski, M. 2003. A quantitative analysis of the relationship between empowerment practices and service quality outcomes. *Total Quality Management & Business Excellence* 14/1: 45-62.

[22] Govindarajulu, N., and Daily, B.F. 2004. Motivating employees for environmental improvement. *Industrial Management & Data Systems* 104/4: 364-72.

[23] Guest, D.E. 1987. Human resource management and industrial relations. *Journal of Management Studies* 24/5: 503-522.

[24] Hart, S.L. 1995. A natural-resource based view of the firm. *Academy of Management Review* 20/4: 986-1014.

[25] Ho, D.C.K., Duffy, V.G., and Shih, H.M. 2001. Total quality management: an empirical test for mediation effect. *International Journal of Production Research* 39/3: 529-548.

[26] Hui, I.K., Alan, H.S., and Pun, K.F. 2001. 'A study of the environmental management system implementation practices', *Journal of Cleaner Production*, 9/3: 269-276.

[27] Kane, B., Crawford, J., and Grant, D. 1999. Barriers to effective HRM. *International Journal of Manpower* 28/8: 494-515.

[28] Kaur, H. 2010. *Impact of HR factors on environmental performance: Impact of HR factors on employee attitudes and environmental performance of ISO14001 EMS companies*. LAP LAMBERT Academic Publishing.

[29] Kitazawa, S., and Sarkis, J. 2000. The relationship between ISO 14000 and continuous source reduction. *International Journal of Operations & Production Management* 20/2: 225-48.

[30] Klassen, R.D. 2000. Exploring the linkage between investment in manufacturing and environmental technologies. *International Journal of Operations & Production Management* 20/2: 127-47.

[31] Klassen, R.D., and McLaughlin, C.P. 1996. The impact of environmental management on firm performance. *Management Science* 42/8: 1199-1214.

[32] Klassen, R.D., and McLaughlin, C.P. 1993. TQM and Environmental Excellence in Manufacturing. *Industrial Management & Data Systems* 93/6: 14-22.

[33] Klassen, R.D., and Whybark, D.C. 1999. The impact of environmental technologies on manufacturing performance. *Academy of Management Journal* 42/6: 599-615.

[34] Lam, S.S.K. 1996. Total quality management and its impact on middle managers and front-line workers. *Journal of Management Development* 15/7: 37-46.

[35] Lam, S.S.K. 1995. Quality management and job satisfaction: an empirical study. *International Journal of Quality & Reliability Management* 12/4: 72-8.

[36] Latest ISO survey reveals sharp rise in use of standards for food safety and information security. Press release on the ISO Survey 2009, Ref.: 1274, 7 December 2009, viewed on 1 November 2010, http://www.iso.org/iso/pressrelease.htm?refid=Ref1274.

[37] Lau, H.C., and Idris, M.A. 2001. The soft foundation of the critical success factors on TQM implementation in Malaysia. *TQM Magazine* 13/1: 51-60.

[38] Lewis, W.G., Pun, K.F., and Lalla, T.R.M. 2006. Exploring soft versus hard factors for TQM implementation in small and medium-sized enterprises. *International Journal of Productivity and Performance Management* 55/7: 539-554.

[39] Madu, C.N. Winter 2004. Achieving competitive advantage through quality and environmental management. *Environmental Quality Management* 14/2: 59-76.

[40] Mallak, L.A., and Kurstedt, H.A. 1996. Understanding and using empowerment to change organizational culture. *Industrial Management* 38/6: 8-10.

[41] Montabon, F., Melnyk, S.A., Sroufe, R., and Calantone, R.J. 2000. ISO 14000: Assessing its perceived impact on corporate performance. *The Journal of Supply Chain Management* 36/2: 4-16.

[42] Naor, M., Goldstein, S.M., Linderman, K.W., and Schroeder, R.G. 2008. The role of culture as driver of quality management and performance: infrastructure versus core quality practices. *Decision Sciences* 39/4: 671-702.

[43] Padma, P., Ganesh, L.S., and Rajendran, C. 2008. A study on the ISO14000 certification and organizational performance of Indian manufacturing firms. *Benchmarking: An International Journal* 15/1: 73-100.

[44] Pan, J.N. 2003. A comparative study on motivation for and experience with ISO 9000 and ISO 14000 certification among Far Eastern countries. *Industrial Management & Data Systems* 103/8: 564 - 78.

[45] Pil, F.K., and Rothenberg, S. 2003. Environmental performance as a driver of superior quality. *Production and Operations Management* 12/3: 404-15.

[46] Poksinska, B., Dahlgaard, J.J., and Eklund, J.A.E. 2003. Implementing ISO 14000 in Sweden: motives, benefits and comparisons with ISO 9000. *International Journal of Quality & Reliability Management* 20/5: 585-606.

[47] Porter, M.E., and van der Linde, C. 1995. Green and competitive: ending the stalemate. *Harvard Business Review* 73/5: 120-134.

[48] Powell, T.C. 1995. Total quality management as competitive advantage: a review and empirical study. *Strategic Management Journal* 16/1: 15-37.

[49] Quazi, H.A. 1999. Implementation of an Environmental Management System: the Experience of Companies Operating in Singapore. *Industrial Management & Data Systems* 99/7: 302-11.

[50] Radonjic, G., and Tominc, P. 2007. The role of environmental management system on introduction of new technologies in the metal and chemical/paper/plastics industries. *Journal of Cleaner Production* 15: 1482-1493.

[51] Radonjic, G., and Tominc, P. 2006. The impact and significance of ISO14001 certification on the adoption of new technologies. The case of Slovenia. *Management of Environmental Quality: An International Journal* 17/6: 707-727.

[52] Rahman, S. 2004. The future of TQM is past. Can TQM be resurrected? *Total Quality Management* 15/4: 411- 422.

[53] Rahman, S. 2001. A comparative study of TQM practice and organizational performance of SMEs with and without ISO 9000 certification. *International Journal of Quality & Reliability Management* 18/1: 35-49.

[54] Rahman, S., and Bullock, P. February 2005. Soft TQM, hard TQM, and organizational performance relationships: an empirical investigation. *Omega* 33/1: 73-83.

[55] Rondinelli, D., and Vastag, G.. 2000. Panacea, common sense, or Just a label? The value of ISO 14001 environmental management systems. *European Management Journal* 18/5: 499-510.

[56] Russo, M.V., and Fouts, P.A. 1997. A resource-based perspective on corporate environmental performance and profitability. *Academy of Management Journal* 40/3: 534-59.

[57] Saa-Perez, P.D., and Garcia-Falcon, J.M. 2002. A resource-based view of human resource management and organizational capabilities development. *International Journal of Human Resource Management* 13/1: 123-40.

[58] Sambasivan, M., and Fei, N.G. 2008. Evaluation of critical success factors of implementation of ISO14001 using analytic hierarchy process (AHP): a case study from Malaysia. *Journal of Cleaner Production* 16/13: 1424-1433

[59] Samson, D., and Terziovski, M. 1999. The relationship between total quality management practices and operational performance. *Journal of Operations Management* 17/4: 393-409.

[60] Sharma, S., and Vredenburg, H. 1998. Proactive corporate environmental strategy and the development of competitively valuable organizational capabilities. *Strategic Management Journal* 19/8: 729-753.

[61] Strachan, P. 1997. Should environmental management standards be a mechanistic control system or a framework for learning?. *The Learning Organization* 4/1: 10-17.

[62] Tan, L.P. 2005. Implementing ISO 14001: is it beneficial for firms in newly industrialized Malaysia?. *Journal of Cleaner Production* 13/4: 397-404.

[63] Taylor, W.A., and Wright, G.H. 2003. The impact of senior managers' commitment on the success of TQM programmes – an empirical study. *International Journal of Manpower* 24/5: 535-50.

[64] Thiagarajan, T., and Zairi, M. 1997. A review of total quality management in practice: understanding the fundamentals through examples of best practice applications – part III. *The TQM Magazine* 9/6: 414-17.

[65] Thorne, K., and Smith, M. 2000. Competitive advantage in world class organizations. *Management Accounting: Magazine for Charted Management Accountants* 78/3: 22-26.

[66] Vachon, S. 2007. Green supply chain practices and the selection of environmental technologies. *International Journal of Production Research* 45/18-19: 4357-4379.

[67] Wee, Yeo Soo, and Quazi, H.A. 2005. Development and validation of critical factors of environmental management. *Industrial Management & Data Systems* 105/1: 96-114.

[68] Wilkinson, A. 1992. The other side of quality: 'soft' issues and human resource dimension. *Total Quality Management* 3/3: 323-29.

69] Zutshi, A., and Sohal, A.S. 2004. Adoption and maintenance of environmental management systems: critical success factors. *Management of Environmental Quality: An International Journal* 15/4: 399-419.

LEGAL REQUIREMENTS FOR THE ENVIRONMENT ACCORDING TO EUROPEAN CONVENTIONS
Especially in South – Eastern Balkan countries

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Abstract:
This paper work pretends to testify the risks the environment has been facing with for decades in the global aspects and at the same time the reaction of the human society that by strong legal means to impact in the protection of this system. Now when the global social-economical development has shown an unforeseen growth before, we have silently ascertained that in parallel alongside with this progress the environment where we live has been degraded and destructed not thinking at all that the future generations have the right to live normally as well. The seventieth of XX Century indicate the intensification and mobilization of responsible governments for environment protection programs. Gradually this issue has moved to international instances and institutions which have issued series of declarations, directives, and conventions and they recommend and enforce governments of countries to approximate their national legislations with the principles and standards provided by these significant documents. In addition, due to the increase of high social risk and the dynamic of environment destruction, two other conventions have been issued which enforce countries to regulate their liability for environment protection with the Civil Law and Criminal Law, this way qualifying and considering the destructive activities of subjects towards the environment.

Keywords: Legislation, environment, civil and criminal liability, convention, directive.

1. Introduction

The technical and technological development of the late years of the last century has created many dangerous centers for the environment. This condition has been caused by the human kind itself by misadministration not only of nature and its resources, but also the work environment and it has brought great damages to their lives, their physical integrity, health, wealth and other values. At the same time by such actions the basis of human survival is being seriously and extremely jeopardized. Due to the high rate this risk indicates, the international community has undertaken a series of measures, procedures and resources in order to eliminate, prevent, or minimize these threatening centers for the environment and for the human life itself.

It is undisputable that the risk for the destruction of environment equilibriums has become a global problem which threatens the entire global living environment. Starting from these concerns, the international community has started to reflect a more serious engagement in the prevention and protection plan in this field. Our country is also in the phase of social, economical, political and legislative reforms. In this aspect it is paying special attention to the issue of harmonization, respectively approximation of the local legislation with the regulations, acts and important international documents which aim for environment balance. In this sense, the aspect of environment protection and elimination of damages caused by possible centers of existing or potential risks is assessed as of special significance, which shows the urgent need to harmonize much deeper and with more diligence the legislative basis in conformity with both conventions: The Convention for Civil liability for the damages caused from dangerous activities for the environment from 1993, and the Convention on the protection of living environment through the criminal Law in year 1998. Moreover, due to the importance the environment protection has now, there are several documents and recommendations which enforce countries to act on the legislative, economical, and social, and

lately the humanitarian aspects. The aim of these elements is the composition of the legislative basis and economical measures which always must be developed upon sustainable bases towards environment protection.

References

[1] Ardal, B. 1990. *Green Politics: A Norwegian Experience.* Scandinavian Political Studies.

[2] Adam, J. 1995. *Risk.* London, ULC Press.

[3] Carter, N. 2001.*The politics of the environment*. Cambridge University Pres

[4] Turner, R., Kerry, P., David, I., Bateman, I. 1994. Environmental *Economics: An Elementary Introduction,* Hamel Hempstead, Harvester Wheatshef.

[5] Report of the United Nations conference on the human environment Stockholm 1972.

[6] Kyoto Protocol to the United Nations Framework Convention on Climate Change.

[7] Krasniqi, A. Edrejtanë turizëm dhe hotelieri, Pejë 2004.

[8] Provision Criminal Code of Kosovo.

[9] Declaration of the United Nations Conference on the Human Environment, Stockholm from 5 to 16 June 1972, http://www.unep.org/Documents.Multilingual/Default.asp?documentid=97&articleid=1503.

[10] Convention on the Protection of Environment through Criminal Law CETS No. 172 Place: Strasbourg, Date 4/11/1998. http://conventions.coe.int/treaty/Commun/QueVoulezVous.asp?NT=172&CL=ENG

[11] Convention on Civil Liability for Damage Resulting from Activities Dangerous to the Environment Lugano, 21.VI.1993. http://conventions.coe.int/treaty/en/treaties/html/150.htm

RATIONAL AND EFFECTIVE USE OF GEORGIAN REGION ARSENIC INDUSTRIAL WASTE FOR OBTAINING OF COMPOUNDS AND MATERIALS WITH SPECIFIC PROPERTIES*

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Abstract

Arsenic is almost quantitatively educed from realgar(As_4S_4)-auripiginent(As_4S_6) ores of Georgia, by an alkaline solution (NaOH, KOH). The process significantly accelerates if water solutions of the corresponding sulphides (Na_2S, K_2S) instead of alkali are used. The possibility of producing arsenic (III) sulfide from the industrial residuals of pyrometallurgical processing of nonferrous and precious metals ores is considered. For this purpose, the samples of industrial residuals of processing the nonferrous and precious ores were treated with amyl, izoamyl and hexyls alcohols. It is shown that the filtrate obtained from the mentioned samples can be used as an initial material for production of arsenic (III) sulfide. An expansion of practical application area, both for the mineral and production waste are determined.

Based on arsenic and stibium compounds obtained by transformation of arsenic industrial waste [arsenic(III) and stibium oxide, arsenic(III) and stibium chlorides and alkoxides we synthesized and studied new cationic-anionic complexes and chelates. The interaction of tetrasubstituted arsonium iodides, obtained based on Arsenic industrial waste products transformation, with zinc iodide and potassium cyanide was studied: from the wastes of arsenic industries and via their transformations, from industrial waste of pyrometallurgy production of arsenic we s obtained: White arsenic with high cleanness for use in pharmacopoeia;

We obtained new economic compounds and materials based on them. We fulfilled the technical order of business, definition of possibilities of creation of joint enterprises with limited liability. We synthesized and studied carbofunctional polymers with various structures, purposed for creation the matix component of antibiocorrosion coatings have been. By using the data of IR and NMR spectral analyses the composition and the structure of synthesized compounds have been established.

Based on matrix component and bioactive complex compounds we created various materials multifunctional application for individual and environmental protection. Based on the preliminary researches it was shown that the elaborated composites may be recommended as: a) protective covers of multifunctional destination (film materials and impregnating compositions) stable to biocorrosion; b) materials with antimycotic properties for prophylaxis and treatment of mycosis and dermatomycosis: adhesive compositions in the form polymer systems for nail fungi diseases treatment; c) biologically active polymer materials for crops protection, and also for human protection during contacts with microorganisms.

Key words: realgar-auriipigment ores, eduction, arsenic (III) sulfide, matrix, bioactivity

1. Introduction

Utilization and purposeful use of industrial waste and secondary raw materials present significant technical-economical backlog for any country.

Waste pollution of the following three principal types is characteristic to Georgia region:

- Waste of chemical industry (including the factories not functioning currently, lithopone, barite, etc.):

- Leavings of procession of natural raw materials such as trachites, calcites, lithopone, barite, arsenic, industrial wastes, coniferous, nut-shell, etc.
- Secondary raw materials in the shape of non-recyclable items or packing from various polymers e.g., polypropylene, polyethylene, polychlorvinyl, polyethyleneterephtalat, etc.), which is linked with rapid development of tourism and growth of import in Georgia;

Purposeful recycling of the wastes is performed in two main directions:

1. Regeneration of precious compounds from the industrial wastes/leavings (Gigauri *et.a*l. 2007);
2. Use of the industrial waste for creation of various compounds and materials with specific properties [Tskhakaia 1978, 3-18, and Brostow *et.al*. 2010, 159, 24-26].

Realgar (As_4S_4)-uripigment (As_4S_6) ores of Racha (Georgia) are unique in the world [Luke 2000]. The content of a dominant in these ores is particularly high and reaches an average of 12% [Wolfson, Oshmian, and Enikolopov 1990]. Besides, it is very important that these ores do not contain the impurity elements, and the best chance is given to produce not only highly pure metal arsenic and As_2O_3, but also other conversable products (Figure 2). For extracting arsenic and some of its compounds from the realgar-auripigment ores of Racha, first of all, the concentrate is burned in a special furnace that does not exclude pollution of environment both by sulphur dioxide and by arsenic compounds - 2-3% of aerosol comes on white arsenic (Wolfson, C.A., Oshmian, V.G., Enikolopov, N.C. 1990).

Arsenic is also a natural associate clement almost of all nonferrous and precious metals. After pyrometallurgical processing of the ores of these elements, which is one of the inevitable conditions for their recovery in an individual state, it comes out of the technological scheme in the form of white arsenic and is present in industrial residuals. The content of arsenic in them often varies within 8-60%. At the same time, they contain commercially important quantities of precious metal. To avoid environment pollution, the residuals are buried in a special burial ground (sepultchre) that is associated with great material and financial expenses.

Arsenic is almost quantitatively educed from realgar (As_4S_4) – auripiginent (As_4S_6) ores of Georgia, by an alkaline solution (NaOH, KOH). The process significantly accelerates if water solutions of the corresponding sulfides (Na_2S, K_2S) instead of alkali are used. The possibility of producing arsenic (III) sulfide from the industrial residuals of pyrometallurgical processing of nonferrous and precious metals ores is considered. For this purpose, the samples of industrial residuals of processing the nonferrous and precious ores were treated with amyl, izoamyl and hexyl alcohols. It is shown that the filtrate obtained from the mentioned samples can be used as an initial material for production of arsenic (III) sulfide. An expansion of practical application area, both for the mineral and production waste are determined.

In mining-chemical factories odd the arsenic processing, chemically pure arsenic(III) sulfide designated for khalkogenic glasses, specified by semi conductive properties and employed in radio and television techniques were produced by a vacuum-thermal processing (Jokai, Hegoszki, and Fodor 1998), immediately from realgar-auripigment. Apart from the target product, realgar is also released as a secondary product, containing about 85-93 percents of the target product. Despite aforementioned the extraction technology of the arsenic and his satellite elements from the industrial waste of production of the realgar-uripigment and the application of the products, obtained from the former, are not studied perfectly by the present time.

There are important reserves in Georgia to extract arsenic from industrial wastes (arsenic-pyrite, realgar-uripigment processing and pyrometalurgical industry) in various forms in order to produce relatively cheap but important compounds [9-13] and materials with specific properties such as pharmacevtal preparates, anthelmintes and antimicrobe conservers, etc.[2,14-18]. Real

perspective appears for producing the arsenic-containing advanced − semi-conductors, anti-biocorrosional covers and biomedical nano composites [15- 18].

Last time there was attached the serious attention the possibility of the use some of arsenic compounds produced from the transformation industrial waste in homophate − in one of the interesting direction of the therapy.

(a) **(b)**

Figure 1. The exhibits of Arsenic-pyrite (a) and Realgar-Uripigment (b) of Georgia

On the basis of analysis of literature data one concludes that apart from presence of many successful works on creation and investigation of functional compounds and composites based on arsenic industrial waste, there remain many problems, which demand solution. For example:

1. Creation of new cheap raw materials basis, which will be acceptable in technical, economical and ecologic view.

2. Use of industrial waste and secondary mineral resources for obtaining compounds, having either new or well-known structures, with specific, important properties and functional materials; to solve certain important technical problems with their help.

3. Research of the possibility to use of arsenic and stibium compounds based on the industrial waste of arsenic-pyrite, realgar-uripigment processing and pyrometalurgical industry in advanced non traditional technologies (nano composites, semy-conductors, optical-fibres communications, television techniques, non-silver photography etc.).

Realgar(As_4S_4)-auripigment(As_4S_6) ores of Racha are unique in the world (Gigauri *et.al*. 2007); The content of a dominant in these ores is particularly high and reaches an average of 12% (Tskhakaia 1978, 3-18, and Brostow *et.al*. 2010). Besides, it is very important that these ores do not contain the impurity elements, and the best chance is given to produce not only highly pure metal arsenic, but also other conversable products. For extracting arsenic and its compounds from the realgar-auripigment ores of Racha, first of all, the concentrate is burned in a special furnace that does not exclude pollution of environment both by sulfur dioxide and by arsenic compounds - 2-3% of aerosol comes on white arsenic [Luke 2000].

Arsenic is also a natural associate clement almost of all nonferrous and precious metals. After pyrometallurgical processing of the ores of these elements, which is one of the inevitable conditions for their recovery in an individual state, it comes out of the technological scheme in the form of white arsenic and is present in industrial residuals. The content of arsenic in them often varies within 8-60%. At the same time, they contain commercially important quantities of precious metal. To avoid environment pollution, the residuals are buried in a special burial ground (sepultchre) that is associated with great material and financial expenses. There is possibility of producing arsenic (III) sulfide from the residuals of pyromctaliurgical processing of the ores of precious and nonferrous metals. Hence, at least two problems would simultaneously be solved: it would not be necessary to bury the arsenic-containing residuals and all expenses would be avoided, see Figure 1.

In Georgian region - Racha mining-chemical factory chemically pure arsenic (III) sulfide designated for khalkogenic glasses, specified by semi conductive properties and employed in Radio and Television (see ref [5]) technologies, were produced by a vacuum - thermal processing (Wolfson, Oshmian, and Enikolopov 1990), immediately from realgar-auripigment. Apart from the target product, realgar is also released as a secondary product, containing about 85-93 percents of the target product. (The rest is As_4S_6 and elemental sulfur). Despite all these, neither deposit realgar nor their application areas, as a production residue are not definite for the present time.

The aim of our research is to determine the possibility of arsenic removal from the realgar-auripigment ores and from the phyrometalurgical residuals, by omitting the stages of the concentrate preliminary burn. The desired product arsemic (III) sulfide could be used in TV equipment, electrical and xerographic industries (Jokai, Hegoszki, and Fodor 1998), etc.

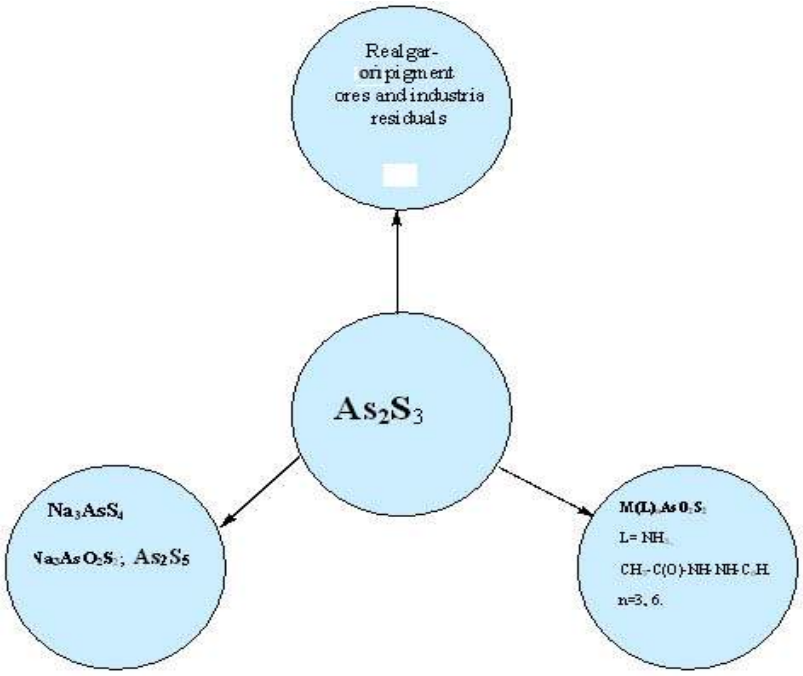

Figure 2. Realgar-uripigment (b) source of Georgia

As it is known zinc represents the most important element in many respects for all lives organisms. It is unchangeable for synthesis of ferment carbonhydrate existing in erythrocytes, which is important for respiration processes. Zn^{2+} ions produce complex compounds near the ligands containing nitrogen and oxygen donor atoms that are interested in many respects because they are included in composition of active center of vital important ferment.

Zinc is included in all organs and materials of animal. It takes participation in production of active form of insulin and uses for assignment of hormonal activation of synthesized insulin. On the basis of this fact our purpose is to synthesis biologically active complexes which contain such biologically active elements as are arsenic, zinc, nitrogen and many other organic radicals. Follow from above mentioned we hope that coexisting of this elements increase physiological activity of synthesized complexes.

Application of arsonium salts for synthesis of coordination compounds keeps priority in chemistry of arsenic-organic compounds (Gigauri, Chachava, Gverdtsiteli, Laperashvili, 2007). They easily form cationic-anionic complexes (Tskhakaia 1978, 3-18, and Brostow *et. al*. 2010), soluble

salts of tetraalkyl(aryl)arsonium are successfully used for precipitation of ions (their common salts are highly soluble in water) [Wolfson, Oshmian, and Enikolopov 1990]. It is known that d^{10}-elements easily form pseudohalogenic acidy-complexes with different composition and structure. On the basis of these facts, try to ascertain the coordination sequence of ligands and biologic activity of such compounds (Gigauri *et.al*. 2007).

Last decade the period of an intensive technical progress followed by creation of a new materials and appearance of aggressive microorganisms population. A lot of synthetic polymers and materials based on them are susceptible to attack of various microorganisms in the environment leading to product failure[2]. The actions of microorganisms on polymers are influenced by two different processes: a) the deterioration and degradation of polymers which serve as a native substance for growth of the microorganisms (direct action); b) the influence of metabolic products of the microorganisms. Losses of destruction of natural and synthetic materials with micromycets reach enormous amounts and constitute milliards of dollars annually in worldwide scale (indirect action).

One of the ways for protection of synthetic materials from the action of microrganisms is the creation of novel polymer covers with high bioactivity by modification of various polyfunctional film-obtaining adhesive polymer matrixes with biologically active compounds [Jokai, Hegoszki, and Fodor 1998].

Use of natural and synthetic biologically active compounds as modificating additives, unable to firm fixation in polymer matrix. Such polymers are characterized not only by contact [fungistatic] action, as the first ones, but can dosilly extract biologically active compounds to environmet. The latter is an important factor of guaranteed human protection during it long stay in a closed space.

In many regions of the world is widely circulated some diseases of agricultural plants, caused by various phytopathogenic microorganisms. For example, roots cancer, caused by *A. tunefacicu*s. Tumors, halles and nodes are formed as a result of intensive division of affected cells of meristem plant tissues. Roots' and fruit-trees cancers are provoked by - *A. tunefacicus*; a cancer of root crops, beets is provoked by *X. campestris pv. Beticols,* etc. These diseases distractively damage plants and significantly decrease harvesting efficiency. They also deteriorate quality of grape, water-melons, melons and gourds and other agricultural plants [20].

Therefore synthesis of new compounds as plants protectors with high biological activities and effective for phytopathogenic microorganisms, as well as conservers and compounds for anti-biocorrosive covers of various natural, synthetic and artificial materials, cultural heritage is extremely significant and requires further development.

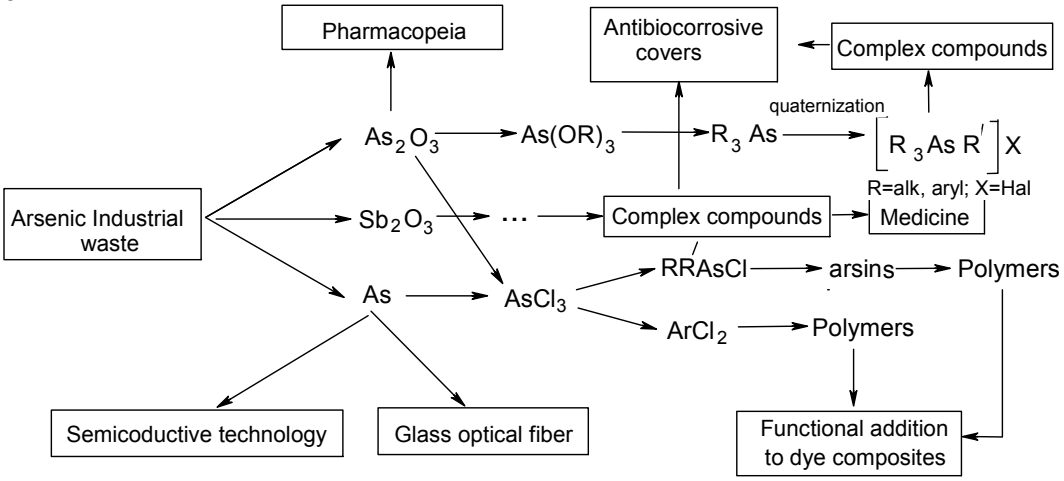

Figure 3. Scheme of the obtaining and using from arsenic industrial waste some of important arsenic and stibium containing compounds

References

[1] Gigauri, R, Chachava, G., Gverdtsiteli, M., Laperashvili, I. 2007. Extract of the arsenic from industrial waste. *Proceedings of the Academy of Sciences of Georgia*. *Sieria of Chemistry,* 33(4), 395.

[2] Tskhakaia, N.Sh. 1978. Prospects on Production of Arsenic and Its Compounds. Proceedings of the All-Union Conference "The Prospects of Production of Arsenic and Its Compounds including the Ultra-Pure Ones". Tbilisi, pp. 3-18.

[3] Brostow, W., Gakhutishvili, M., Gigauri R., Halay, E., Lebland, Y., Japaridze, S., Lekishvili. N. 2010. A new possibility of separation of natural oxide forms of arsenic and antimony. *Chem. Eng. J., (USA).* 159, pp. 24-26.

[4] Luke, P. 2000. Filler and Extender Minerals in Nova Scotia. Nova Scotia Department of Natural Resources. *Mineral Resources Branch. Economic Geology Series,* ME 1990-2. VAMAS Publications.

[5] Wolfson, C.A., Oshmian, V.G., Enikolopov, N.C. 1990. *Principles of creation of composite polymeric materials*. M. Khimia, (Rus).

[6] Mineral Resources of Georgian SSR. (Ed. Godabrelidze S.A.). Tbilisi, Tecknika da Shroma, 1933, pp.715-725.

[7] Technological Regulations No.I2: White Arsenic Production (Racha Mining-Chemical Plant), 1982, p.13.

[8] Jokai, J., Hegoszki, P., Fodor. 1998. Stability and Optimization of Exstractrion of four Arsenic Species. *Microchemical Journal*. 59, 1.

[9] Thilo, K., Hertzog, A., Winkler, Z. 1970. Anorg, Allgem. Cbem., Bd. 373, S. III.

[10] Gakhutishvili, M., Gigauri, R., Vachnadze, E., and Chikovani, O. 2000. Arsenic Eduction from Realgar- Auripigment Ores of Racha (Georgia), Georgian Eng. News, 2, 174.

[11] Gakhutishvili, M. 2000. Arsenic Utilizing Production Waste: A Foundation for Development of Science and Society, *Intelecti*, 17, 23.

[12] Gakhutishvili, M., and Gigauri, R. 2001. Coordinating Compounds of d-metals (III) dithioarsenates with Acetylphenylhydrazine, *Georgian Eng. News*, 3, 138.

[13] Gigauri, R, Gakhutishvili, M., Giorgadze, K., and Machaidze, Z. 2004. A Method of Sodium Dithioarsenate(V) Production from Hydrometaiiurgical Industrial Wastes of Non-ferrous and Noble Metals. *Proc. Georgian Acad*. Sci., 30, 205.

[14] Gakhutishvili, M., and Gigauri, R. 2007. Synthesis and Thermal Investigation of Complexes of d-metals(III) of dithioarsenates, *Georgian Chem. J*., 7, 21.

[15] Lekishvili, N., Rusia, M., Pichkhaia, B., Gakhutishvili, M., Arabuli, L., and Barbakadze, H. 2008. Creation of bioactive arsenic and antimony compounds from arsenic processing industrial waste

and materials with predefined properties, International Conference on Materials and their Recycling, September 17-19, Tbilisi.

[16] Barbakadze, Kh., Brostow, W., Gakhutishvili, M., Gigauri, R., Gventsadze, D., Lekishvili, N., and Lobzhanidze, T. 2009. Inorganic-organic hybrid materials from low-cost industrial waste and secondary resources, to be presented at POLYCHAR 17 World Forum on Advanced Materials, April 20-24, Rouen.

[17] Lekishvili, N., Arabuli, L., Beruashvili, T., Lobzhanidze, T., Barbakadze, Kh., Kezherashvili, M.. Antibiocorrosive Covers Based on some Arsenic Compound Derivatives. 1st International Caucasian Symposium on Polymers & Advanced Materials. 11-14 September, Tbilisi, Georgia, pp. 74-75.

[18] Kasradze, Kh., Bezarashvili, G., Lekishvili, N., Rusia, M., and Pichkhaia, B. 2008. Synthesis, Use and Study of Kinetics of Triisoamyl-Arsenate Obtained by Etherification Orthoarsenic Acid with Isoamyl Alcohol. Georgian International Journal in Science &Technology. *Nova Sci. Publ.,* Inc, New York, 1, 1, 63-69*,*

[19] Barbakadze, K., Beruashvili, T., Brostow, W., Kebuladze, N., Lekishvili, N., Lobzhanidze, T., and Pichkhaia, B. 2009. *Protection of health, natural environment and archeological and museum exhibits.* World Forum on Advanced Materials − POLYCHAR 17, France, Rouen, 20-24 April.

[20] 41st IUPAC World Chemistry Congress. 2007. Chemistry Protection Health, Natural Environment and Cultural Heritage. Programme and abstracts. Turin (Italy), August 5-11.

[21] Friebulin, H. 1991. *Bask One- and two-dimensional NMR Spectroscopy*. VCH, Germany, 218.

[22] Kreshkov, A.P., Bork, V.A., Bondarevskaya, E.A., Myshlyaeva, L.V., Syavtsillo, S.V., and. Shemyatenkova, V.T. 1962. *Manual for Analysis of Organosilica Compounds*, M. Goschimizdat, (Rus.).

[23] Sharlo, G. 1965. *Methods of Analytical Chemistry.* Moscow.

[24] Iwahara, T. , Kusakabe, M., Chiba, M., and Yonezawa, K. 1993. *J. Polym. Sci.*, A **31**, 2617.

[25] Freidlina, F.Kh. 1945. *Synthetic Methods in the Field of Metalorganic Arsenic Compounds*. Moscow-Leningrad: Academy of Sciences of the USSR, p.164.

[26] Brauer, G.A. 1985*. Reference Book of Inorganic Synthesis*. Moscow: Mir, 2, 609-628.

[27] Gigauri, R., Kamai, P., Ugulava, M. 1971. *Russian Journal of General Chemistry*, 2, 41, 336-337.

[28] Kuzmin, K. 1954. 1. Journal Organic Chemistry. vol. 24, No7, pp. 1203-1205.

[29] Indjia, M., Gigauri, R., Gigauri, N., Gurgenishvili, L. 1982. Soobsh. AN GSSR, 105, 2, 301-304.

[30] Nasibulina, S.S. 1978. Razvitie issledovanii v oblasti chimii mishiakoorganicheshix soedinenii. *Dis. kand. chim. M.,* 190p.

[31] Robaqidze, N.I. 1997. 1,4-bis[dialkyl(diaril)arsino]-1,4dihidronaftalinebis simtezi da gardaqmnebi. qimiis mecnierebata kandidatis disertacia. TSU, p.127.

[32] Nakamoto, K. 1991. IR and Combination scattering spectrum of inorganic and coordination compounds, MIR.

[33] Gigauri, R. 2004. *Arsenic and the environment*. Tbilisi University Publishers. pp. 15-22.

[34] Khidasheli, A. 1996. Oxidation of arsenic ore sulfide forms. PhD Thesis, Tbilisi State University, Tbilisi, p. 153.

[35] Gigauri, N., Pareshishvili, N., Gigauri, R. 2006. Chemical study of the arsenic-containing production waste of Racha mining plant. *Georgian Chemical Journal*, 6 (6), pp. 599-604.

[36] Sakhvadze, L., Kaplanishvili, I., Tavadze, G. 2008. Certain physiological and bacterial features of Thiobacillus ferrooxidans found in sulfide ores and thermal sulfur waters. *Engineering News, #4,* pp. 152-155.

[37] Sakhvadze, L., Adamia, T., Buachidze, Z., Gvakharia, V., Chirakadze, A. 2009. Bacterial leaching of arsenic from arsenic ore waste and industrial production of arsenic compounds. Proceedings of Microbiology Institute of the Azerbaijan National Academy of Sciences.

[38] Zhang, J. *et al.* 2004. Bioleaching of arsenic from medicinal realgar by pure and mixed cultures. *Process Biochemistry, vol.* 42, (9), September pp. 1265-1271.

[39] Ji-Dong, G. 2003. *Int. Bioterior.& Biodegr*, 1, 52, 69-91.

[40] Howard, G.T. 2002. Int. *Bioterior.& Biodegr*, 4, 49, 242-252.

[4] Hazziza-Laskar, J. *et al.* 1995. *Journal of Applied Polymer Science*, 1*,* 58, 77-84.

[42] Koval, E.Z., and Sidorenko, L.P. 1989. Mycodestructores of the industrial articles. Kiev: Naukova Dumka, 192 (Rus.).

[43]. Savelyev, Yu.V., Markovs'ka, L.A., Savelyeva, O.A. *et al.* 2003*.* Pat. 33837 Ukraine*. Method of making polyurethane foams with biocompatibility and bactericidy.* Appl. 17.03. (UKR.).

[44] Savelyev, Yu., Akhranovitch, E., Pissis, P. 1998. *Polymer,* 15, 39, 3425-3429.

[45] Samakashvili, Sh. 2006. Diss. *Cand.Chem. Sci*. Ivane Javakhishvili Tbilisi State University.

[46] Dewar, J.S.M., Zoebisch, E.G., Healy, E.F., and Stewart, J.J.P. 1985. *J. Am. Chem. Soc*. 107, 3902-3909.

[47] Allinger*,* N.L. 1977. *J. Am. Chem. Soc.,* 99**,** 8127-8134.

[48] Lekishvili, N., Kopylov, V., Murachashvili, D., Sokol'skaia, I., and Kezherashvili, M. 2009. Aminohydroxysiloxanes Based on Siliconorganic Polyepoxides with Terminal and Side Epoxygroups: Synthesis, Properties and Use*. Oxid. Commun*., 32, 1, 298-320.

[49] Markarashvili, E., Lekishvili, N., Lomtatidze, Z., Samakashvili, Sh. 2006. Izvestia VUZOV. Khimia i Technologia (Rus.), , 48, 5, 117-119.

[50] Barbakadze, Kh., Zurabishvili, D., Lobzhanidze, T., Samakashvili, Sh., Pachulia, Z., Lomtatidze, Z., 2010. Antibiocorrosive covers and conservators based on new carbofunctional oligosiloxanes and biologically active compounds (with *Oxid. Commun. (Intern. J.),* 33, 1, 104-124.

THE IMPACT OF TOURISM ON ECONOMIC DEVELOPMENT

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Abstract:

Tourism is an economic activity which directly and indirectly affects the economic development of a country. Analyses of studies are the best indicator of how tourism affects the economic development of regions and districts of a country. To develop tourism in each country there are some preconditions. Countries with potential in tourism must make it functional, part of tourist offer. In this way tourism development affects the establishment of economic development by raising the local GDP and changing the physiognomy of the landscape of different regions and tourist areas.

Keywords - tourism, economic development, economic effects, the sectors of tourism, GDP.

1. Introduction

Tourism as an economic activity creates income from visitors. Visitors are seeking a range of services which should be in the service of their claims. Much of the workforce can participate in different ways in function of tourist services. Especially, the development of tourism in developing countries can provide economic impetus from various activities; such as supply of various local products, use of accommodation, use of transport, the development of tourism operators, etc. Role of the local businesses and public organizations is related to tourism and has economic impacts at the national, state and local level. Every country or area, where tourism is developed, as part of tourist offer is the use of natural and anthropogenic resources that are associated with the income of that country or community. Tourism has a multiplicative effect because the sectors in a community who benefit from tourism belong to a considerable number of economic activities.

Reference

[1] Adams, P.D., and Parmenter, B.P. 1995. An Applied General Equilibrium Analysis of the Economic Effects of Tourism in a Quite Small, Quite Open Economy. *Applied Econo*mics, Vol. 27, No. 10, 985-994.

[2] Blake, A. 2000. The Economic Effects of Tourism in Spain. Tourism and Travel Research Institute Discussion Papers, No. 2.

[3] Magazine of the World Tourism Organization. ISSUE 3/2010.

[4] Office for National Statistic "Travel trend" Issued by: Office for National Statistics, Government Buildings -Cardiff Road-Newport NP10 8XG.

[5] The International Centre for Responsible Tourism (Dr Harold Goodwin) and Scott Wilson Business Consultancy (Stuart Robson and Sam Higton), August 2004.

[6] Coles, T., Hall, C.M., and Duvall, D.T. 2006. Tourism and post-disciplinary enquiry. *Current Issues in Tourism,* 9(5), 293–319.

[7] Hall, C.M., Timothy, D.J., and Duval, D.T. (Eds.). 2003. Safety and security in tourism: Relationships, management, and marketing. New York: Haworth Hospitality Press.

[8] Faulkner, B., and Russell, R. 2000. Turbulence, chaos and complexity in tourism systems: A research direction for the new millennium. In B. Faulkner, G. Moscardo and E. Laws, (Eds.), Tourism in the 21st century: Lessons from experience (pp. 328–349).

[9] E-International Scientific Research Journalondon: The socio – Economic impact of tourism and entrepreneurship in Vigan city. ISSN: 2094-1749 Vol: 1 Issue: 1, 2009.

[10] Tourism Victoria. 2002. The Tourism Industry Strategic Plan 2002-2006, Available at: http://www.tourism.vic.gov.au (accessed in September 2009).

[11] UNCED (1992), Agenda 21, Rio Declaration on Environment and Development, United Nations Conference on Environment and Development, Rio de Janeiro, Available at: http://www.un.org (accessed in July 2009).

[12] WTTC (2009b), WTTC Results Show No Time for Rhetoric, World Travel & Tourism Council, PR 12 March 2009, Berlin, Available at http://www.wttc.org/ (accessed in September 2009).

[13].World Tourism Organisation (UNWTO) Statistics Departament.

[14] World Travel and Tourism Council (2004), Annual Report: Progress & Priorities 2004/05.

[15] Tooman, L.A. 1997. Tourism and Development. *Journal of Travel Research*, Vol. 35, No. 4, 33-40.

[16] Smith, S.L.J. 1995. The Tourism Satellite Account: Perspectives of Canadian Tourism Associations and Organizations. *Tourism Economics*, Vol. 1, No. 3, 225- 244.

[17] Paci, E. 1998. Report: The World Tourism Organization's Efforts in the Development of a Tourism Satellite Account. *Tourism Economics*, Vol. 4, No. 3, 279-283.

[18] Gashi, M. 1986. Bazat e Turizmit"Universiteti i Kosovës, Prishtinë,

[19] Gashi, M. 1969. Vlerat turistike ne Kosovë" Plani regjional hapësinor i KSAK Prishtinë.

[20] Muhaxheri, N. 2005. Ekonomika dhe Menaxhmenti në Turizëm-Prishtinë.

[21] Gashi, M. 1977. Uslovi i mogćnosti za razvoj turizma SAP Kosovu, Prishtinë.

[22] Gashi, M. 1969. Osnovni potencial turističkih vrednosti Kosova",ekspertiza izrađena za potrebe i rade regionalnog prostornog plana Kosova, Priština.

[23] Todorovic, A. 1978. Metodologija istraživanja slobodnog vremena "Savremena administracija, Beograd.

[24] Ž. Jovičič:"Osnovi turizma" Naučna knjiga, Beograd 1976.

[25] Ž. Jovičić "Turistička Kretanja" Naućna Knjiga, Beograd1966.

[26] Boyer, M. 1970. *Le tourisme.* Paris.

[27] Dumazdier, J. 1972. *Vers une civilistaion de loisir.* Paris.

[28] Bičanić, R. 1968. *Tipologjia tržišta*. informator, Zagreb.

[29] Marković, S. i Z. 1967. Ekonomika turizma", Zagreb.

[30] Vukonić, B. 1986. *Marketing u turizam*. Zagreb.

[31] kabilo, J. 1980. *Ekonomike turizma.* Beograd.

[32] Millaku, B. 2008. *Tema e Magjistarures.* Prishtinë.

TOURISM AS AN OPPORTUNITY FOR ECONOMIC DEVELOPMENT, QUALITY MANAGEMENT REQUISITE FOR SUSTAINABILITY

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Abstract:

Now day's tourism is treated as an economical activity with a constant growth all over the world, this is also expected for Kosovo's tourism and nearby countries for coming periods of time. In some developed countries tourism is treated as an important exporter and in meantime as an absorber of labour force and this branch is important for softening unemployment. Management with total quality in tourist industry and catering has its own specifics. A big attention should be paid to standards that have to do with quality and insured goods supplied to hotels, and those provided in tourism. Quality care is being placed in the first place, in wholesale of successful tourist enterprises. Here it should be noticed the fact that there is a liaison between the quality, consumers pleasure and consumers loyalty.

Key words: tourism, quality, standards, management, development.

1. Introduction

Learning from advances of the countries of region Kosovo can make a bigger progression to increase tourist number not just during the main season of tourism (counting 3 months of summer) but also during the rest of the year. In this project total quality is described in tourism and hospitality. Management of total quality is one of the managing models that apply in business of enterprises in order of application, maintenance and progression of service quality and tourist product also. We can conclude that tourism development in Kosovo, in general it was not concentrated, due to distribution of tourism location and destination everywhere, so there is dispersion all over the country that results with socio-economic factors in different regions. Whether it is better that tourism development should be concentrated or distributed in geographic aspect, at the level of theory it cannot be given a final conclusion. This is because each shape, even the one when tourism and hospitality development becomes more and faster in some regions than others, or when tourism and hospitality development is concentrated in regions all around at the same time, or at the country level its has comparative advantages and disadvantages, so we suggest that reasoning of concentrated development or spread should be verified by concrete cases based also in socio-economic targets which we want to achieve with this development. Starting from the description of tourism and its quality we pass to standards that are applied in hospitality and tourism, variety and types of quality and its development, contributing the growth of business.

The future of the hospitality is in small hotels that will be the pillar of tourism development. However what should be suggested is caution to safety standards and health maintenance of guests in hotels. A great attention should be paid to standards dealing with quality and safety of goods supplied in hotels. Certainly that conclusion is, that tourism and hospitality to the Kosovo have a perspective, but this should be achieved by efforts to reach standards and total quality, and the most important is that once they are achieved they should be maintained and consistently introduced to innovations. In project we used deductive and inductive methods.

References

[1] Ebner, D., and Baumgartner, R.J. 2006. The relationship between Sustainable Development and Corporate Social Responsibility, www.crrconference.org.

[2] Ukaj, F. 2010. Marketing Concept as a Tool for Development of Tourism in Kosovo. *Journal of Environmental Management and Tourism* (JEMT), Volume I Issue1(1) Summer, ASERS Publishing House, pp. 57-62.

[3] Ukaj, F. 2010. Support of Small - Medium Size Enterprises (SME) - Opportunity for Kosovo to Overcome Economic Crisis", First on-line International conference "World's Economies In and After Crisis: Challenges, Threats and Opportunities" WECTO 2010, ASERS Publishing House, http://www.asers.eu/asers-publishing.

[4] Ukaj, F. Trashëgimia kulturore dhe historike si potencial i zhvillimit të turizmit- me fokus në regjionet e Kosovës /Cultural and historical heritage in Kosova as a potential for development of tourism - focus on the Kosova regions", University Library of Munich, Germany in its series MPRA Paper with number 2159, http://mpra.ub.uni-muenchen.de/21509/.

[5] Juran, J.M., and M.Gryna, F. *Planiranje i Analiza Kvalitete-od razvoja proizvoda do upotrebe*. Mate, Zagreb, 1993g.

[6] Ministry of Trade and Industry, Tourism Department, www.visitkosova.org.

[7] Kotler, P., and Keller, L.K. 2006. *Marketing Managment.* Pearson Education Inc, New Jersey.

[8] Qeveria e Kosovës&Kotas&GTZ. 2008. Projektet e Produktit Turistik në Rajonin Turistik të Bjeshkëve të Nemuna (Alpeve Shqiptare), Prishtinë, p 3-37, http://www.visitkosova.org/repository/docs/prospekti_shqip.pdf

[9] Schmidt Company. 2009. http://www.schmidt-kitchens.com/company/sustainabledevelopment.html.

[10] Nakuci, V., 2009. *Menaxhimi i Cilësisë.* Tiranë.

[11] World Trade Organisation. *Tourism Highlights*. Edition 2004, WTO, p.9.

THE MODELLING OF THE EVOLUTION OF THE CONCENTRATION OF PESTICIDES ON THE JIU RIVER COURSE

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Abstract.

Pesticides are among the most widely used chemicals in the world, and also among the most dangerous to human health. Pesticides can also have chronic health effects both because of acute poisonings and chronic exposure. Many studies have shown adverse health effects on humans. Many of the commonly used household insecticides are organophosphates. These have been linked in many studies to neurological damage in humans. The classic measurements used for pollution evaluation include the biological consumption of oxygen in a 5 days period of time and the chemical oxygen consumption, the amount of oxygen extracted from water by bacteria when agents of pollution are decomposing. The more organic matter can be found in discharged effluents the more the amount of oxygen necessary for decomposition of such pollutants increases and, consequently, the higher the pollution.

In this paper, a mathematical model of the evolution of concentrations of pesticides is widely studied. This model is a dynamic bi-dimensional system with three parameters. The variables of the system are the concentration of pollutant and the level of oxygen from water. We achieve this thing by determining both the time trajectories and the evolution of the degrees of oxygenating the waters as a function of the quantity of pollutant for various values of the parameters.

Keywords: pesticides, environment, dynamic bi-dimensional system, GC-MS.

1. Sustainable agriculture.

Environmental health, economic profitability, and equity are the goals of sustainable agriculture. The following concepts are integral to sustainable agriculture: understanding of the interrelationship between air, water, and soil; the need to provide farmer and consumer safety; and the commitment to a stewardship of the land. The movement for sustainable agriculture addresses many social and environmental concerns, in addition to promoting innovative and economically viable farming methods such as crop diversification and biological pest control. Sustainable agriculture brings together such aspects of agricultural science as pest management, soil and water conservation, food safety, and animal welfare (Pretty 1995).

Agriculture is a major user of land and water resources and has significant environmental impacts. The main category of pollutants that are found in water and that originate from agricultural activities is nutrients, particularly nitrates, phosphates, various pesticides, farm manure and food processing waste. Agriculture, essentially, is a large and widespread source of pollution.

References

[1] Pretty, J. 1995. *Regenerating agriculture: policies and practices for sustainability and self reliance,* Earthscan Publications, London.

[2] Cândea, M., and Bran, F. 2001. *Spațiul geografic românesc. Organizare. Amenajare. Dezvoltare*. Editura Economică, Bucureşti, *in Romanian*

[3] Hayes, T.B. 2004. There Is No Denying This: Defusing the Confusion about Atrazine. *Bioscience* 54 (112): 1138–1149.

[4] Shawi, A.W.AL., Dahl, R. 1999. The determination of cadmium and six other heavy metals in nitrate/phosphate fertilizer solution by ion chromatography. *Anal. Chem. Acta*, 391, 35-42.

[5] Pimentel, D. 1995. Amounts of pesticides reaching the target pests: environmental impacts and ethics. *J. Agric. Environ. Ethics* 8:17-29.

[6] Stoica, A.I., Stanescu, V., Baiulescu, G.E. 2003. The determination of the some ions on the Arges River Course using ionic chromatography, *Rev. Chim*, 54, Nr. 5, Bucharest, pp.386-389.

[7] Suess, M.J. 1982. *Examination of Water for Pollution.* Vol.1, Pergamon Press, Oxford.

[9] McMaster, C., McMaster, M.C. 1998. *GC/MS: a practical user's guide,* New York: Wiley.

[10] Beltrami, E. 1990. *Mathematics for Dynamic Modelling*. Academic Press, New York.

[11] Arrowsmith, D.K., Place, C.M. 1990. *An Introduction to Dynamical Systems*, Cambridge University Press.

[12] *** MAPM (Romanian Ministry of Environment and Water Management) order no.1146, 2002.

[13] *** World Health Organization: *The WHO Recommended Classification of Pesticides by Hazard*, 2005.

[14] Codru, N. 2007. Diabetes in Relation to Serum Levels of Polychlorinated Biphenyls and Chlorinated Pesticides in Adult Native Americans*, Environmental Health Perspectives 115: 1442*– 1447.

[15] Dacre, J.C., Jennings, R.W. 1970. Organochlorine insecticides in normal and carcinogenic human lung tissues, *Toxicol. Appl. Pharmacol*. 17: 277.

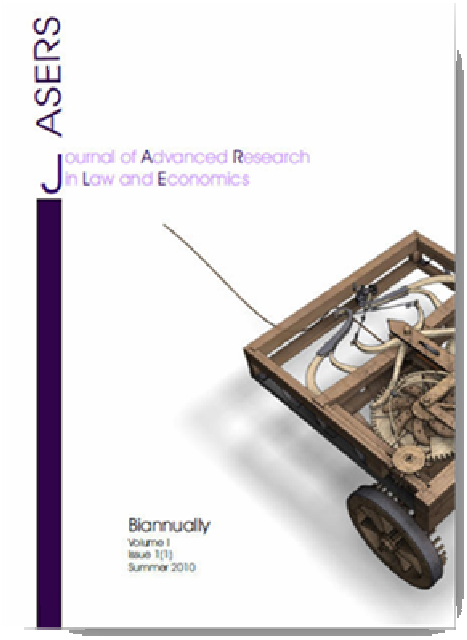
[16] Kolpin, D.W., Furlong, E.T., Meyer, M.T. 2002. Pharmaceuticals, hormones, and other organic wastewater contaminants in U.S. streams, 1999–2000: A national reconnaissance*. Environ Sci Technol.*; 36(6):1202–1211.

[17] VettorazzI, G. 1976. Carbamate and Organophosphorous Pesticides Used in Agriculture and Public Health. *Residue Reviews* 63:1- 44.

[18] Ackerman, F. 2007. The Economics of Atrazine. *International Journal of Occupational and Environmental Health,* vol. 13 no. 4, pp.441-449.

[19] Ungureanu, L. 2009. A dynamical Model for the Pollution of Water*. Journal of Environmental Protection and Ecology* book.1, Vol 10/.

[20] Barbu, C.M., Popescu, AL., Selişteanu, D., Preda, A. 2008. The study of the concentrations of the heavy metals from the Jiu River, in post communist Romania*. Journal of Environmental Protection and Ecology***,** book 3, Vol 9, pp. 522-530.



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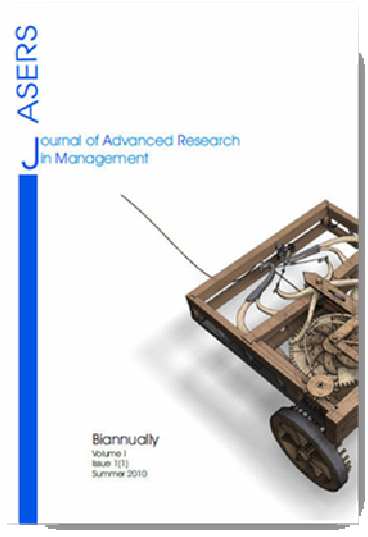

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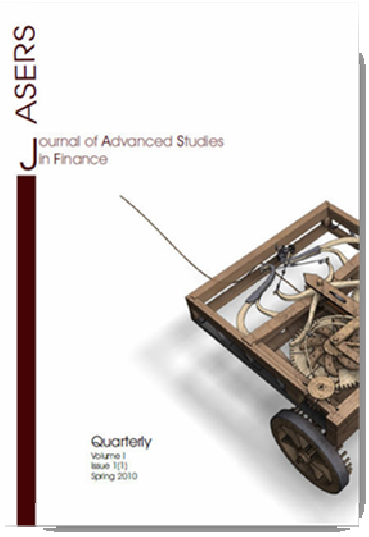

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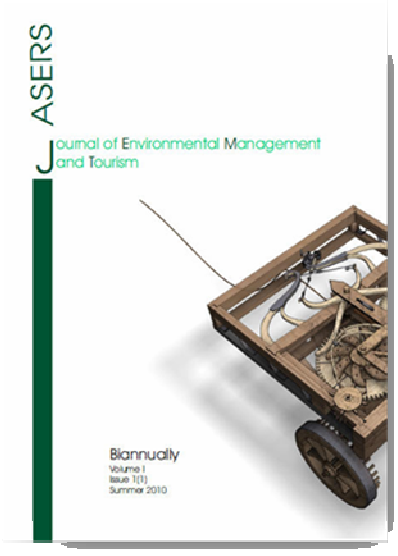

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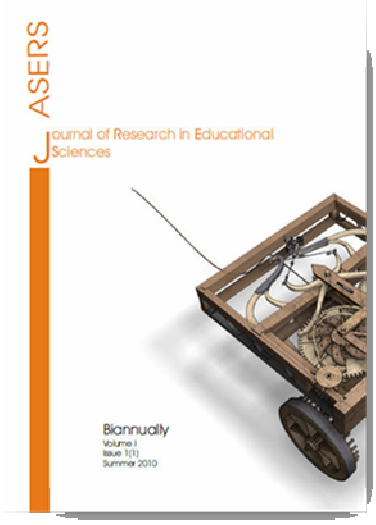

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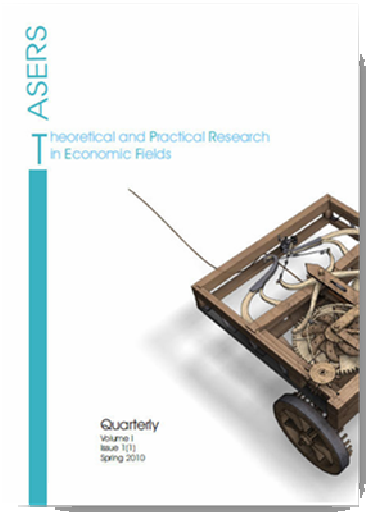

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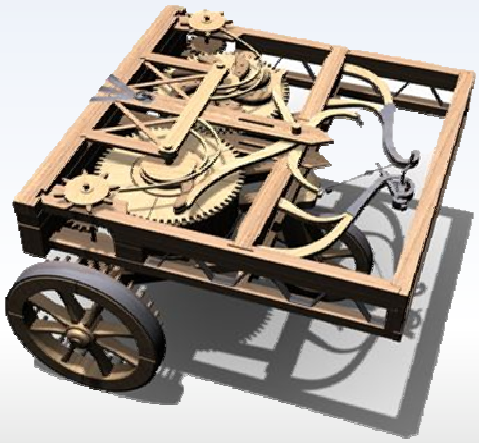

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