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The State of Outside-The-School

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Highlights

Real Estate Market Prices & Floods

The Case of Downtown Budapest Schools

Discovering Thoughts, Inventing Future

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GEOGRAPHY, GEO-SCIENCES, ENVIRONMENTAL SCIENCE & DISASTER
MANAGEMENT

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Do Children go to Field? - The State of Outside-the-School Environmental Education in the Case of Downtown Budapest Schools

By Szőcs Levente Álmos, Angyal Zsuzsanna & Varga Attila

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Abstract- In the rapidly evolving world of the 21st century, scientific knowledge is becoming more and more valuable. Today's engineering and technological developments are inconceivable without specialists with excellent scientific knowledge. But how can today's young people be interested in science? In our opinion, this is no longer possible with traditional methods, practice-oriented experiential pedagogy is needed for this, preferably in a natural environment. But what can a downtown school do if it wants to hold a science class outside the school building? We are looking for the answer to this in our study.

Keywords: *out-of-school teaching, downtown schools, science, environmental education.*

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Do Children go to Field? - The State of Outside-the-School Environmental Education in the Case of Downtown Budapest Schools

Szőcs Levente Álmós ^α, Angyal Zsuzsanna ^ο & Varga Attila ^ρ

Abstract- In the rapidly evolving world of the 21st century, scientific knowledge is becoming more and more valuable. Today's engineering and technological developments are inconceivable without specialists with excellent scientific knowledge. But how can today's young people be interested in science? In our opinion, this is no longer possible with traditional methods, practice-oriented experiential pedagogy is needed for this, preferably in a natural environment. But what can a downtown school do if it wants to hold a science class outside the school building? We are looking for the answer to this in our study.

Keywords: out-of-school teaching, downtown schools, science, environmental education.

I. INTRODUCTION

Perhaps it is not an exaggeration to say that education is one of the fastest changing phenomena. However, this cannot be called a problem, as education was always meant to meet current needs. The question arises as to whether the needs of the present age are different from the needs of previous ages, or are there expectations that are essentially the same as the previous expectations, only new content is added? We think the answer is "yes and yes". There are new needs, but at the same time there are long-standing, constantly evolving expectations in education. Understanding the processes of nature and linking them to human activities, examining and understanding the relationship between the natural and artificial environment, and revising the use of our environment has always been a crucial task, one of the factors that organically determines education and its development. How to renew environmental education? We pursue an education where students build their knowledge through independent research and investigation processes through their own experiences. We believe that environmental education is effective when children work in nature, outside the school walls. But what can a metropolitan school do that, due to its location, is hindered from accessing natural environments? What are the main obstacles for such

schools and their teachers? In our research, we seek the answer to these questions through the example of Budapest.

According to our preliminary assumption and experiences, field activities are hardly implemented in downtown schools due to their handicaps. Implementation is hampered mainly by the financial background and the low level of methodological and practical support for environmental education teachers.

II. PROCESSING THE LITERATURE

In the development of a positive environmentally conscious attitude, both the foreign and the domestic literature emphasized the importance of the proximity of the natural environment and the positives of a self-organizing learning environment based on research and observation. (TASDEMİR, A. - KUS, Z. - KARTALC, T. (2012), SHY-YONG, J. (2007) and ZIMMERMANN, LK (1996), and HUS V. (2009) By exploring the literature related to the topic, it becomes increasingly clear that the perception of scientific education, including environmental education, has shifted towards child-centered education based on independent recognition and discovery, and experimentation. Thus, institutionalized education can be effective if we recognize that education about the environment can only be done well in the environment.

a) *The characteristics of Hungarian scientific education*

The Hungarian system of scientific education differs somewhat from the practice developed in Western Europe and the United States. A common feature is the still relatively high rate of theoretical and lexical knowledge transfer and the development of practical skills. This approach seems to be changing at the level of educational organization and management over the last decade (National Core Curriculum, 2020), but it is still very difficult to implement in school practice. This is mainly explained by the high average age of science teachers and the small number of young teachers starting their careers. Although methodological trainings at the universities already place great emphasis on practice-oriented, modern methodological directions that focus on the development of skills, older teachers are less open to them.

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In Hungary, the natural sciences are taught in a basically disciplinary form, only in a few places is the science-type education already proven in Western countries characteristic. Students learn environmental knowledge from 3rd to 4th grade of primary education, which, however, deals not only with the natural sciences but also with their social aspects. In 5th to 6th grade the subject called natural sciences is perhaps the most similar to the integrated science subject, but in fact here too the four disciplines (biology, physics, natural geography, chemistry) appear side by side rather than integrated, the connection points between them are missing. In many cases, within a subject, each discipline is also taught by different teachers. From 7th grade, most schools break down science into four different subjects, and in addition, students study not only natural geography but also social geography in geography. The students also graduate with a chosen scientific subject.

b) *The characteristics of the urban geography of Budapest and the concept of the downtown*

Budapest is the largest city in East-Central Europe. It is located at the confluence of two different landscapes, the plains and the Transdanubian Mountains. The Danube has always played an important role in its development, as it connected the city with the remote areas of the continent as a significant waterway. The city's natural endowments differ significantly on the right and left banks of the Danube. The hills and mountains of Buda, located on the right bank, are built of various sedimentary rocks. The wood and stone of the mountains have been an important raw material in urban construction for centuries. Although a significant part of the forests has been cut down and built upon due to the expansion of the city, the green areas of the Buda Hills play a very important role in improving the air quality of the city. Thanks to the medicinal waters of the springs at the foot of the mountains, Budapest is also a world-famous spa town. Pest was built on the left side of the river, on the lower Pest plain.

The term of the downtown was used based on the following. The center, i.e. the city center (in reference to European cities) is always a densely built-up area around the historic city center, which has undergone many functional changes during the city's existence. Most of them are high-value, with historically significant residential and centrally managed buildings, which in many cases are now service locations (financial sector, offices of ICT companies, etc.), as well as places dealing with tourism, or belonging to the R&D sector. Despite the ever-changing functions, the roles of traditional educational centers and school spaces in the city center remains of paramount importance (KOVÁCS Z. 2007). In another sense, the downtown is a socially based definition. It indicates the part of the city where the population lives in the central part of the settlement, in a densely built-up area, with high population density

(BERÉNYI B. E. 2010). From both formulations, densely built-up and high population density can be highlighted. Using these two factors, we can distinguish schools that occupy a downtown position in the urban space. The coverage of the city center in our research is not always aligned with the boundaries of the districts. However, we tried to create well-interpreted borders on both the Buda and Pest sides. On the Buda side, the I., II., and certain areas of the XII and XI. district. On the Pest side, the entire V., VI., VII., And VIII. districts and certain areas of the IX. And XIII. districts (Fig. 1.).

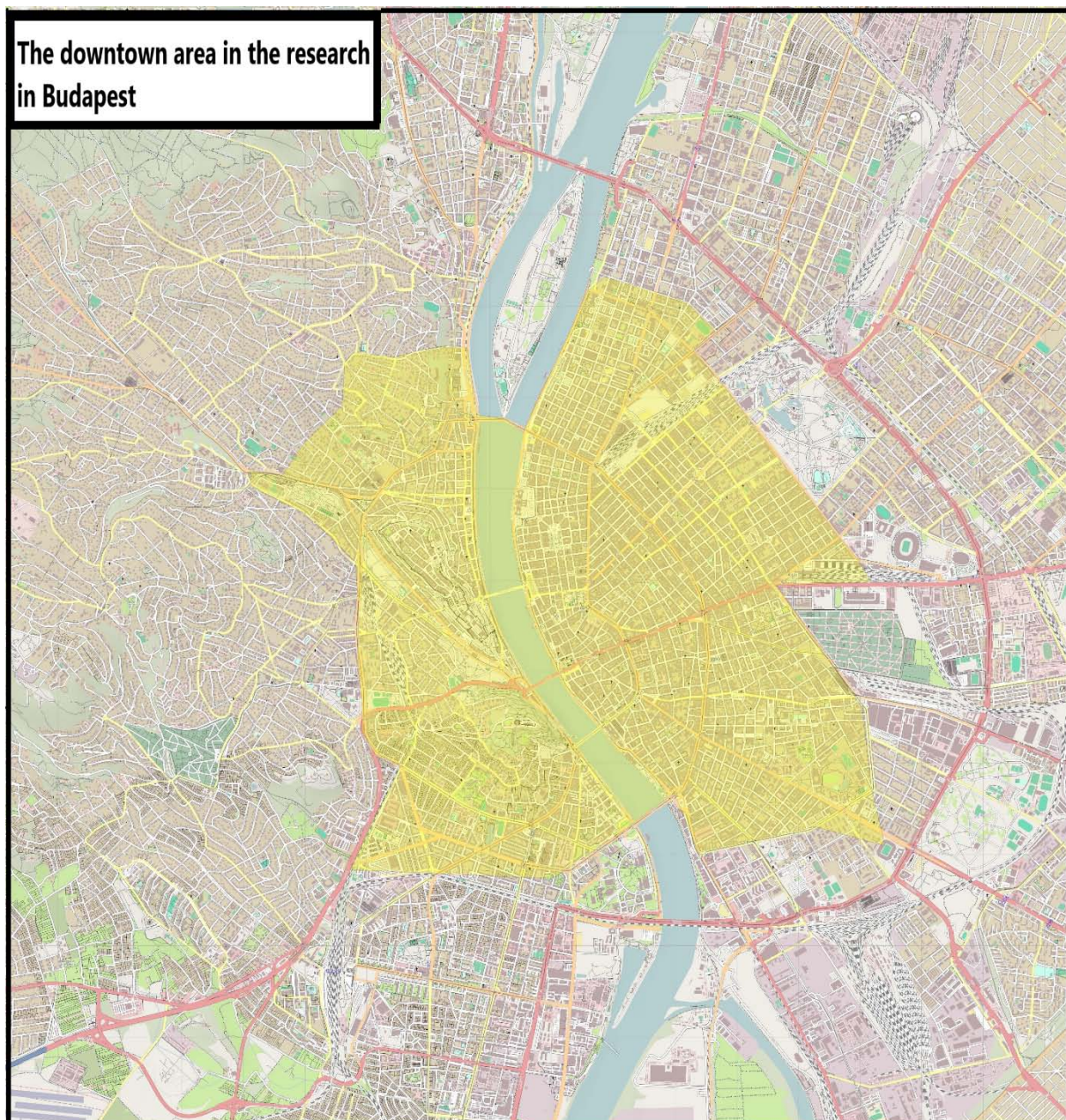


Fig. 1: Downtown districts involved in the research.

III. METHODOLOGICAL BACKGROUND

a) *The schools involved in the study*

We believe that schools that are physically far from the natural environment are the most hindered in terms of environmental education. Although the city center is frequented by public transportation, arriving to the natural environment takes a relatively long time. That is why the institutions involved in the research are all downtown schools. The type of educational institution (e.g. state-run, ecclesiastical or foundational) is irrelevant to the study. The survey included both primary and secondary schools, including grammar schools and vocational high schools, but also special institutions for the education of children with learning disabilities.

b) *Methodology of data collection*

While collecting the data, it was important for us that the responses received were easy to interpret and simple to process. It was important for our study to provide both qualitative and quantitative data, as there are quantifiable responses that can bring useful results (e.g. what percentage of teachers plan a field practice, how many hours they work in the field, etc.). But just as important is the qualitative characterization that enables the development of environmental education (e.g. the most important obstacles, the possibilities of helping teachers, etc.).

A significant portion of the study data was collected by completing an online questionnaire. The

questionnaire consisted of a total of 14 questions (Appendix 1). Among the questions, questions 1-2-3. applied equally to all respondents. In the third question, we asked whether teachers plan and / or hold field practices. We selected the respondents with the question and then treated the groups separately. Exploring the means of expected support was the task of the second part of the questionnaire. A central element of the research is to find out the factors that make environmental education on the field difficult. We believe that only with the knowledge of these factors and their backgrounds can further thoughtful help be provided. It is essential to highlight the main obstacles, because if we find that the same element proves to be a crucial problem for several schools, it is easier to create a comprehensive developmental strategy. This is why the 12th question asks about the main factor. In addition to the questionnaire survey, in several cases we received accurate information during personal interviews about the main problems that most determine the environmental education of downtown schools in Budapest. During the course of the survey and the subsequent interviews, we consciously separated the schools where environmental education outside the institution does not take place. The opinions and experiences of such institutions on the factors hindering field practice and the possibilities of developing environmental education are especially important. Barriers can be compared to those that limit schools that implement field practices. Finding out similarities,

but even key differences, can help to develop both groups.

The results of the research are based on the responses of 60 downtown schools to our questionnaire. The questionnaires were completed by teachers who head the work communities containing scientific subjects at the schools and by teachers who are organically involved in the regular conduct of field activities. During the data collection, we tried to emphasize the factors hindering out-of-school environmental education, as the exploration, description and interpretation of these factors is essential for the meaningful development of environmental education outside the institution.

IV. RESULT AND ASSESSMENT

a) *Realization of environmental education on the field*

After evaluating the results of the survey, it can be said that the vast majority of the 60 schools participating in the research implement environmental education on the field. There are 44 educational locations where these schools engage in some form of environmental education on the field. However, in terms of the number of field practices carried out throughout a school year, we get a very wide spectrum. Of the respondents, 16 are schools where they do not plan and do not hold field classes. This means that more than a quarter of the institutions surveyed do not have field practices. (Figure 2)

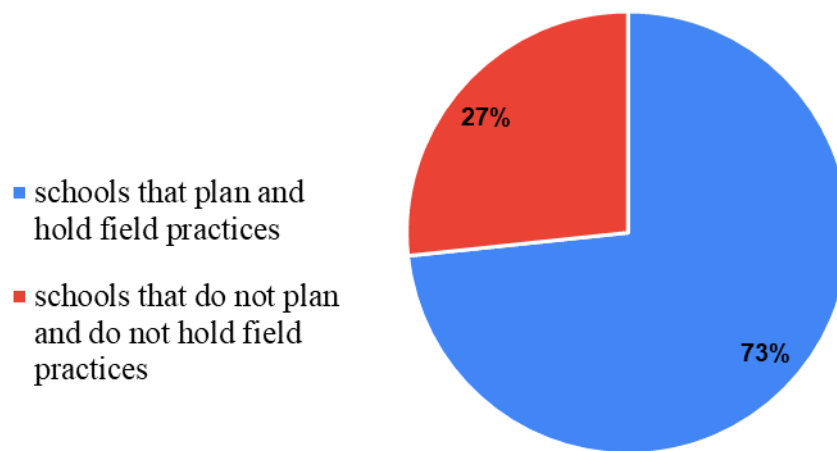


Fig. 2: The rate of implementation of out-of-school environmental education in the examined schools.

From the data, we can see that the circle of educators implementing environmental education on the field can be divided into two distinct groups (Figure 3). One group, to which most teachers belong, only takes its students to an outdoor location for 2-3 lessons a year. The textual answers to the questionnaire and the discussion in the interviews show that these few field

lessons do not fit organically into the current curriculum either. In most cases, the institution has set dates in the school year when out-of-school classes can be held. Teachers in the other group, on the other hand, hold field lessons more than ten times. Only two institutions hold 6-10 field sessions. The extremes of the implementation of out-of-school environmental

education are highly perceptible, as there are either very few field activities or very many. In any case, it should be

emphasized that there are nine downtown schools with more than ten lessons per year in external locations.

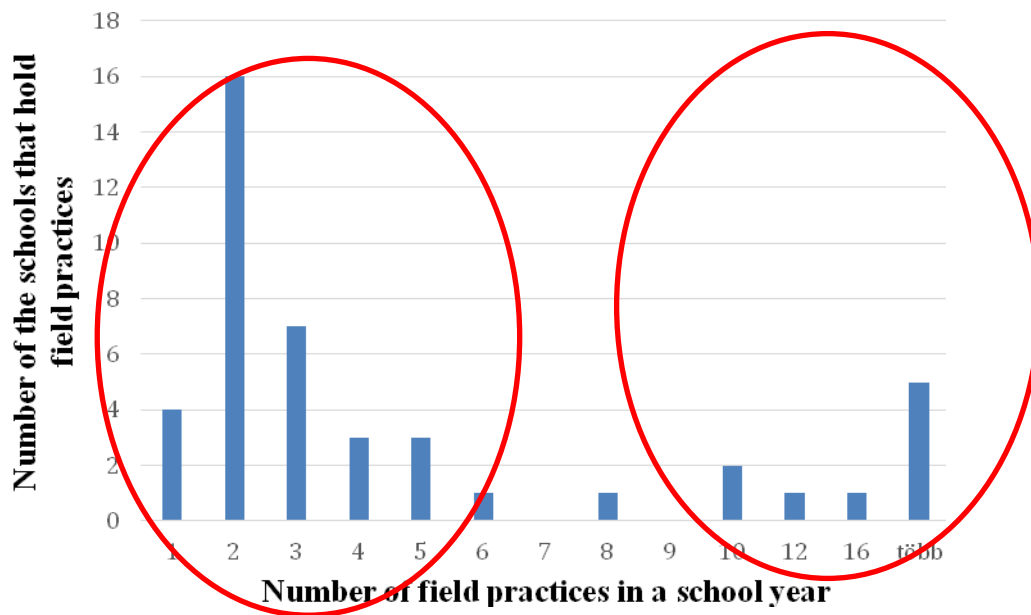


Fig. 3: Number and frequency of lessons held at outdoor sites.

b) *The results of teachers regularly holding field practices*

It is evident from the survey that the schools that plan and hold field practices (both the teachers who only implement a few occasions and the teachers who plan regular field practices) are hindered by the same circumstances as the schools that do not hold any programs outside the classroom. For the sake of

effective development, it is advised to hold such a professional dialogue in which teachers who plan and hold field practices are involved. Therefore, during the survey and the interviews it was of crucial importance that the teachers voice their opinions and the directions of development that they believe to be pivotal. Figure 4 shows the typical answers to obstructing circumstances, and their frequency.

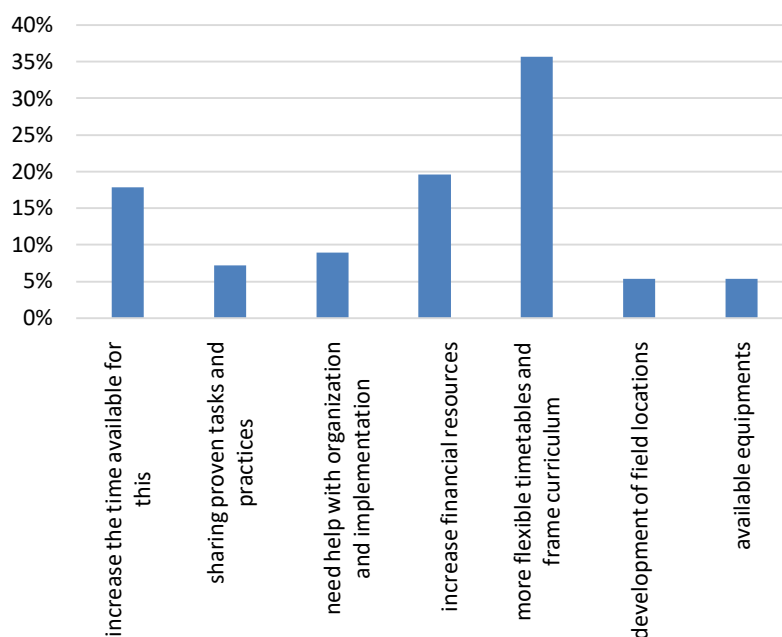


Fig. 4: Typical responses to the development of out-of-school environmental education and their frequency.

The answers show that the overwhelming majority of teachers would change the capacities/allowances of the class schedule and the framework curricula. According to the opinion of the majority of teachers participating in the research, if the curricular demands were to be moderated, and if it was possible to plan the institutional schedule with more flexibility, they would hold field practices more frequently. In many cases, they do not hold regular field practices because the schedule and the rigid adherence to the curriculum does not allow it. Many teachers think that if the demands of the curriculum were changed, there would be actual opportunities for realizing outside-the-school activities. Several teachers believe that with allocating the natural science classes to a single day, environmental education outside the classroom would become possible. With natural science classes on a single day, it would become to choose topics that could be discussed in a multidisciplinary manner during field practice. It must be noted here that not only natural science classes allow environmental education. Environmental education can be successfully implemented during history, foreign languages, literature, grammar, or even physical education classes. We believe it is entirely possible to implement field practices in the case of the humanities as well. According to the received answers, the second most important developmental direction would be the increase of monetary resources for environmental education. However, monetary assistance does not necessarily need to be a major investment. It was mentioned during multiple interviews that it would be a major financial aid if even just the costs of the trip (bus and train tickets) were covered. Several teachers said that just a small financial aid would be enough to increase the frequency outside the school lessons. Evidently, greater financial aid would open new opportunities for development, but the majority of teachers think that only a few tens of thousands of HUF (~50-100 €) per classes per year would increase the frequency of lessons outside the school.

Around 15% of the teachers asked say it would be enough to increase the time-allotment for field practices. In this case the teachers do not demand to change the constraints of the schedule and the curriculum. According to the answers belonging to this group most of the schools would be able to increase the number of field practices if they did not have a rigid system of rules about the dates and planning of outside programs. In 8 from the 44 schools participating in the research and realizing environmental education outside the classroom the dates of the off-school events are determined at the beginning of the school year. Most teachers working in these schools say that there would be actual change in the number of field practices if the time frame for such activities was determined by them. However, the background of stricter institutional and

management regulations and the cause of the execution of the rules can only be revealed within the frames of further research.

The improvement of the available equipment covers special demands. Only two teachers believe that the modernization of equipment is necessary for the increase of off-school lessons. They mentioned the improvement of available vehicles of the school (school bus, school kayaks, bicycles), the renovation of measuring tools used during field exercises and the attainment of supplies for research as examples.

One fifth of the answering teachers need such help for the increase of the number of field practices that could be given with decided professional cooperation in a short time. It would be a great help for at least five teachers if there would be support for their work with methodological recommendations and best practices related to specific locations. Around the same number of teachers would need help in organization and realization. It becomes evident from the answers that these teachers need platforms where they receive organizational recommendations for the given destination, and useful tips for successful realization. It must be mentioned that there are such initiatives. Collections describing different pedagogical practices were made, as well as civil databases, but these, on the one hand, will soon become outdated, and, on the other hand, schools often do not receive any information about these initiatives. However, there are teachers who believe that with the conscious development of some outside location off-school activities could be made more frequent. Planning of inner-city educational trails or the establishment and improvement of institutions supporting scientific education (e.g. the renewal of the Tabán educational trail and the reopening of the Planetarium in Népliget) were suggestions.

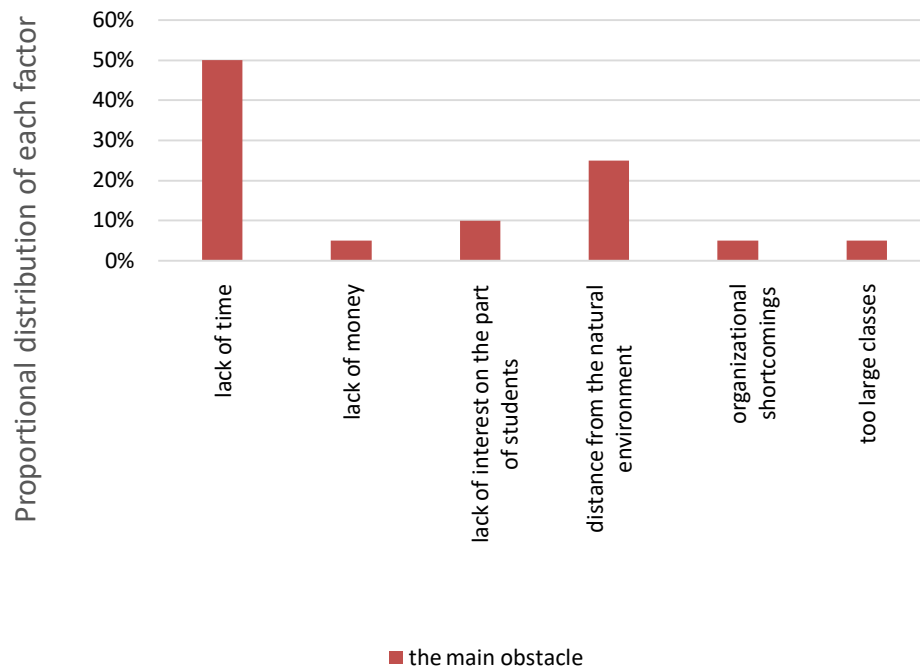
Looking at the suggestions made for the further development of environmental education out of the school it can be surmised that the majority of teachers holding field practices sees systemic change as the possibility of improvement. The overwhelming majority of teachers believe that making off-school education a frequent part of scientific education in the future can be achieved with drastic changes in the curriculum and educational organization. Only a small number of teachers would need methodological or practical help. However, supporting them is also important.

c) *The results of institutions that do not organize field practices*

In 16 of the institutions participating in the research no off-school environmental education is implemented during the school year. These schools do not differ in either the level or the system of education from the rest. They are scattered in the downtown area, so no findings can be made about location and territoriality. The reasons for the lack of field practices

should be based on other factors. Figure 5 shows the typical responses and their percentage distribution that were identified by schools participating in the research and not pursuing out-of-school environmental education

as important barriers. In this figure, I distinguished in red the percentage distribution of typical responses marked as the most important obstacles.



Typical responses to a barrier to planning and maintaining field learning

Fig. 5: The distribution of the barriers of planning and implementing field practices in institutions not holding outside-the-school environmental education

The responses to the questionnaire show that out of the 16 institutions where no field lessons are implemented, most identified a lack of time as a major barrier to extracurricular activities. The lack of time manifests itself more drastically in the everyday life of these schools. Several responses show that meeting the requirements of the framework curricula is also a huge problem for science colleagues working at the school. Nearly half of the respondents in this group believe that there is little time to implement “traditional” classroom activities, so they do not plan extracurricular activities in addition. Due to the lack of time, teachers do not even reach the planning phase of the field sessions, so environmental education outside the institution is further hindered by the fact that these teachers are not sufficiently prepared in terms of methodology and organizational skills, as the circumstances that characterize the school did not allow them to design such lessons. The lack of time reinforces two other factors. However, these were identified by only a few teachers as additional barriers. It is likely that changing the timeframes would also reduce the significance of barriers related to methodology and organization. Fifty percent of respondents identified lack of time as the most important barrier. This response is consistent with

responses from teachers who hold out-of-school environmental education, namely, that inflexibility in the framework curricula and lesson planning is the most important impediment.

Student disinterest and class size are typical responses that appeared only in this group. In two of the sixteen cases, the teachers do not hold a field practices because the motivation of the students does not allow for active extracurricular endeavors. In our opinion, this can be improved with appropriate methodological recommendations. Some teachers who hold out-of-school environmental education would be helped by a methodological handbook that makes implementation recommendations for the downtown environment and collects best practices that can be linked to specific locations. I think that with the knowledge of the learning paths specific to the class this obstacle could be overcome with the help of such a handbook.

In three cases, teachers identified distance from the natural environment as the main obstacle. In the case of out-of-school environmental education, we have already seen that there are a number of downtown and near-downtown areas available for the organization of lessons. Thus, resources that describe these places can help these teachers.

d) *Barriers occurring in both examined groups*

Similarities can be observed between the typical responses given by teachers in the latter group and the responses of teachers who hold the field practices. In both groups, the lack of time and the scarcity of financial resources appear as obstacles. It can be said that the aspects that appeared in both school groups may be obstacles that are characteristic of the entire Hungarian educational system. Although the establishment of accurate data would require further research, it is likely that the constraints of the framework curricula and the inflexibility of the schedule are major obstacles in most schools in Budapest. I believe that these factors also

determine field education or lack thereof in most schools in the country. Therefore, the correction of these factors at the national level could improve the quantity of environmental education outside the institution.

e) *Developmental suggestions*

Typical responses to the development of out-of-school environmental education are in line with the factors identified as the main barriers by schools that do not have field activities. Figure 6 shows the suggestions for the direction of development and their percentage distribution.

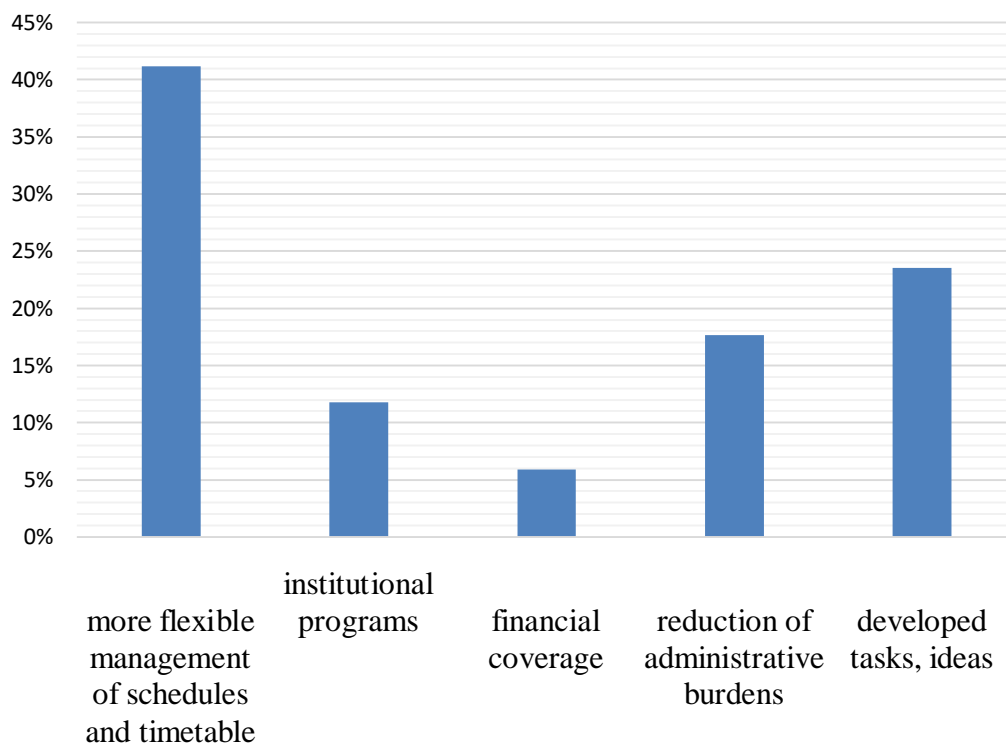


Fig. 6: Typical responses to the question about the development needs of out-of-school environmental education and their proportion for schools that do not conduct field lessons.

More than forty percent of teachers see the potential for improvement in the more flexible handling of schedules and time management. Several teachers gave the answer that by combining certain topics and subjects, it would be possible to hold field practices in which the students go around a certain topic from several points of view. The lack of time to do this unfortunately prevents cooperation with other teachers. At least six teachers also consider it a major concern that due to lack of time, meaningful communication between specialist teachers is not possible. However, the independent organization and holding of field practices could also be facilitated by the fact that an out-of-school occasion would take place through the group work of the teachers, so this experience could be used during independent organization as well.

As a possible avenue of improvement for teachers who do not hold environmental education outside the institution, the time and energy required to prepare for a field session could be reduced by sharing the ideas, tasks, and practices developed. Literature consisting of a list of practical assignments that can be linked to specific locations would certainly be of great help to teachers and schools where out-of-school environmental education does not take place at all. Less emphasis is placed on development proposals in terms of financial implications, institutional programs and reduction of administrative burdens. Interviews revealed that there are already ideas to cover the financial impact in several schools. The ideas that will work can be easily transposed into the learning and teaching environment of other schools. It would only help six teachers if there

was a change in these areas. It is definitely worth mentioning that in order to improve out-of-school environmental education, it is necessary to improve in these areas as well, but based on the answers received, we can state that most teachers see improvement in the change of scheduling.

V. CONCLUSION

The main aim of our research was to assess the factors that influence teachers in the downtown schools of large cities in the organization of out-of-school activities, especially those related to environmental education. We conducted our survey in 60 schools in Budapest. Our preliminary assumptions have only been partially confirmed, as we can see that although material conditions and the methodological support of teachers in environmental education have an impact on the implementation of field activities, the greatest problem at the moment is the inflexibility of educational organization. From the results of the research, we consider it important to highlight that the exploration of the individual factors and the search for the development paths related to them provide an opportunity to change the quality of environmental education in Hungary. There are obviously development paths and opportunities that can be realized in the short term through goal-oriented professional dialogue. Improving professional training and expanding the methodological background are tasks that do not encounter any obstacles at the moment. However, further studies are needed to explore and comprehensively analyze the systemic barriers that

characterize other schools in Budapest, as well as educational institutions in other cities.

REFERENCES RÉFÉRENCES REFERENCIAS

1. BERÉNYI B. E. 2010: Történelmi városrészek átalakulásának társadalomföldrajzi vizsgálata Budapest belvárosában. Eötvös Loránd Tudományegyetem Természettudományi Kar Földtudományi Doktori Iskola, Budapest. 12 p.
2. Hus V. 2009: The curriculum for the subject environmental studies in the primary school in Slovenia. University of Maribor, Maribor. 5 p.
3. KOVÁCS Z. 2007: Budapest történelmi városrészeinek átalakulása a rendszerváltozás után. In: ENYEDI Gy. (szerk): A történelmi városközpontok átalakulásának társadalmi hatásai. — Stratégiai Tanulmányok a Magyar Tudományos Akadémián. Budapest. pp. 51-68.
4. National core curriculum 2020. 5/2020 (I.31.) Korm. rendelet. Magyar Közlöny 17. pp. 290-447.
5. SHY-YONG, J. 2007: Innovations in science teacher education: Effects of integrating technology and team-teaching strategies-Computers & Education, 51/2. pp. 646-659.
6. TASDEMİR, A. – KUS, Z. – KARTALCI, T. 2012: Out-of-the-school learning environments in values education: science centres and museums. Ahi Evran University, Kirsehir. 6. p.
7. ZIMMERMANN, L. K. 1996: Knowledge, Affect, and the Environment: 15 Years of Research (1979–1993). The Journal of Environmental Education, 27/3. pp. 41-44.

APPENDIX 1 - QUESTIONNAIRE OF THE SURVEY

1. How long have you been teaching at the institution?
2. How long have you been teaching science, biology, geography?
3. Do you plan / hold outside-the-school activities while teaching science?

That is, do you plan / hold classes during which students study outside the school area, outside the school environment?

IF YES

4. How often?
5. On which topics?
6. In this case, what types of tasks do the students do?
7. Where do you keep these lessons / lesson fragments? (park / playground next to the school; nearby educational trail; more distant destination using public transport {Hármashatár Mountain, Kis-Sváb Mountain})
8. What age group do the students belong to?
9. What are the learning/teaching factors that make you want to take a lesson or part of a lesson outside the school walls?

10. What could help you to do outside-the-school activities with your students more than once?

IF NOT

11. What are the main influencing factors that prevent you from relying / not relying on outside-the-school activities? (e.g. no natural environments within reach, no curriculum available)
12. Which do you consider to be the main obstacle?
13. On what topics and how could you envisage outside-the-school activities?
14. What could help you to do outside-the-school activities with your students?

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Real Estate Market Prices and Floods in Rio Do Sul (Santa Catarina, Brazil): Evidences of Correlations under a Territorial Perspective

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Abstract- The city of Rio do Sul, State of Santa Catarina, Brazil, is marked since its colonization in the last years of the 19th century from frequent and intense floods that shaped its urbanization and relation of its residents with the environment. After the 1983 floods that reached the historical record of 13.56 meters over the riverbed and the 2011 events, the second-highest ever, researchers argued that the local, territorial dynamics of spatial segregation and real estate market changed and became attached to the floods quotas. However, none of them ever showed these conclusions by empirical data, what is the objective of this research. After collecting data from 200 terrain properties to sale on this city, the researchers applied geostatistical (specially kriging) and geoprocessing methods with Geographic Information Systems to identify if there is a relation of cause-effect with the different flood quotas reaching the properties with its market value. The results are that this association exists, but is not the only variable that explains value variations in Rio do Sul, with relevant weight from the city's centrality to real estate market prices.

Keywords: urban planning; spatial analysis; real estate market values; territorial relations; natural disasters.

GJHSS-B Classification: FOR Code: 040699



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Real Estate Market Prices and Floods in Rio Do Sul (Santa Catarina, Brazil): Evidences of Correlations under a Territorial Perspective

Rodrigo Sartori Bogo ^α, Eliézer Conceição ^σ & Eduardo Longo ^ρ

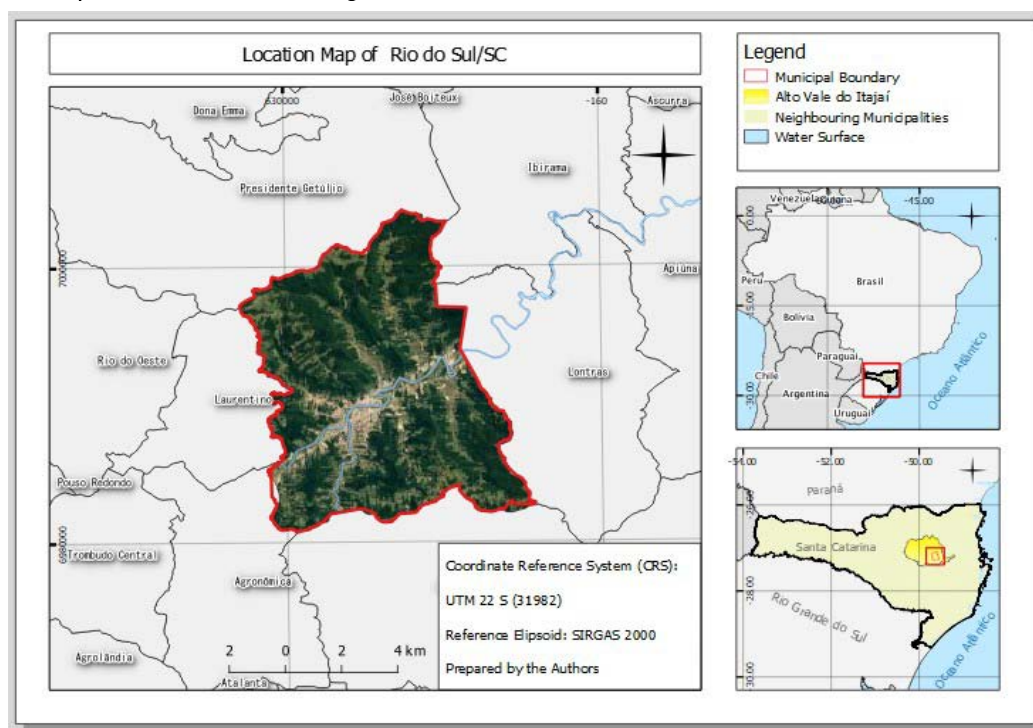
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away from the city center, where the lowest prices are in floodable places. In the same analysis, the researchers identified that the highest values are from properties free from floods and close to the central area, but not widely enough to confirm the hypothesis, considering its methodological limits.

Keywords: urban planning; spatial analysis; real estate market values; territorial relations; natural disasters.

I. INTRODUCTION

The Rio do Sul municipality location (Picture 01) is in the region known as Alto Vale do Itajaí (Itajaí's High Valley, in a free translation), at Santa Catarina state, southern Brazil. Its territorial limits are with the municipalities of Agronômica, Lontras, Laurentino, Presidente Getúlio, Ibirama, and Aurora, totalizing an area of 260,82 square kilometers, with an estimated population of 70 thousand inhabitants (IBGE, 2019).



Source: By the authors

Picture 01: Location map of Rio do Sul/SC municipality

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The city has a past and present of urban floods that, in historical terms were also responsible for reflecting in its urban development characteristics, concomitantly interfering in its territorial relations and real estate market prices dynamics (COLAÇO & KLANOVICZ, 1999; ESPÍNDOLA & NODARI, 2015; BOGO, 2020).

With the knowledge about its geographical characteristics and its socio-spatial formation, this research sought to analyze, with data collected from real estate market values, how the realty prices fluctuate according to some aspects. In this matter, we tried to understand how the variables (a) flood occurrence risk, (b) altitude/relief (that also determines the flood risk) and (c) urban centrality (what has relevant aspects such as better infrastructure, commerce flows and, services - being a variable that interferes in real estate market values) can influence land values and economic segregation in this urban space.

Therefore, from the use of geoprocessing technics and its methods of data manipulation and visualization, the researchers realized kriging processes and made cartographical products that sought to provide a better understanding and interpretation of this case of study.

II. THE RIO DO SUL'S FLOODS AND ITS RELATIONS WITH URBANIZATION

Whenever we treat about a study object that demands the use of the geographical science's principles, the two dimensions that compose must be present, being at a minimum stage contextualized in a way to understand the reality to be discussed and analyzed. As widely described by Massey (2005), these two dimensions are *time* and *space*, that must be understood together in every scientific investigation that applies the presets of Geography, composing the researchers "mind", as the author stated in a posterior paper (MASSEY, 2017).

So, this is valid also to study cities and their dynamics, with its variable scales (from small municipality centers to global megalopolis). Understanding its spatial and temporal processes that are part of wider national and regional socio-spatial formations are needed aspects for the urban studies, even when only for contextualization, as presented here.

In consequence, the Brazilian urban space is full of heterogeneous phenomena that vary regionally and according to the temporal processes that compose them. Even if the common sense thinking establishes that Brazilian cities never had any kind of urban planning, we know that a lot of nodal points that became urbanization cores were deliberately chosen with strategic purposes, accompanied by pre-made urban designs, representing each historical context and ideological *zeitgeist* of the governors from each period.

This is real for cities of large dimensions as Salvador, Aracaju, Macapá, Belo Horizonte, Goiânia, Brasília, and Palmas, among others; for the territorial occupation by small and medium-sized cities in the Centro-Oeste (mid-west) and Norte (north) regions of the country; and also for the planned cities promoted by private institutions like industrial ones (Volta Redonda and Ipatinga, for example) or created by colonization companies (like the Londrina and Maringá region, in Paraná state's north) (VILLAÇA, 2019).

However, as argued by the same author, these spatial acts previously planned and executed in the territory, such as infrastructure maintenance and the population needs didn't characterize by it some kind of national or even regional urban planning. Still, only punctual interventions and projects, without an effective integration or realization of long or very long term planning¹. Some consequences of this effect were the lack of thinking about the metropolitan reality that would become the norm in Brazil (over the municipality chambers) and the own disorderly growing of cities, in other scales.

According to Santos (2013) analysis, Brazil, predominantly rural until half of the 20th century, had internal migrations that had never occurred before and passed through a demographical explosion in the big cities², that became the focal point of a wide range of social phenomena of Brazilian space, with spotlight to social-spatial inequalities. This ends up overlapping with other urban problems and turns to evidence the different accesses to amenities from certain demographic groups. As a consequence of these inequalities, that occur especially from the territorialities practiced from spatial agents such as the Estate or the private market (like the real estate one) (CORRÊA, 1986), factors that involve the relation between marginalized populations and the environment tend to become costly for both sides: the human occupation is made in inadequate and polluting ways, interfering in its quality of life, and in the same time different ecosystems suffer from unregulated interference (DE PAULA, 2015).

As discussed before, the urban phenomena that occur in Brazil are consequences of its social-spatial reality, but manifest itself differently in each specific context, being in regional or local scales. As argued by Tucci (2007), there is an intense relationship between urban settlements in Brazil and the rivers that compose the country, being in the surroundings of river sources, valleys, or mouths, especially in coastal cities. Goularti Filho (2014) considers this phenomenon as

¹ As characterized by Souza (2010), urban planning must treat about long or very long periods, differently from the urban management, focused on short or medium prompts.

² Process that already occurred starting on the 1930 decade but became more intense with the centralization tradition imposed by the civil-military dictatorship that ruled in Brazil between the 1960 and 1980 decades (VILLAÇA, 1999.)

natural for the colonization and urban network consolidation processes since the rivers can be a source of potentially drinkable water, irrigation, energy generation, effluent discharge and, commodities and, people transportations. According to the author, this is notably strong in the Brazilian case since there is a huge hydrological network in most regions, excluding the dry northeast (that has the São Francisco basin, with high flow competence).

However, Grangeiro, Ribeiro & Miranda (2020) shows that this dynamic had (and still has) direct consequences on these cities urban planning and in the quality of life of its inhabitants, composing an unsustainable relation, resulted from the disorganized growing of urban spaces and the absence of integrated urban management. The authors criticize the public administration structure about themes evolving the urbanizations around the rivers in Brazilian reality. So, it is a context that there is no proper metropolitan management to deal with the urban conurbations that exist in urban centers of variable dimensions (as argued by Souza [2010] and Santos Júnior & Montandon [2011]), together with the segmentation of civil defense among the municipalities and the low deliberative capacity of the Agência Nacional de Águas (National Agency of Waters, in a free translation) hydrological basins committees, managements scale that could raise the quality of the above-mentioned scenario.

This isn't different for Santa Catarina state, where is located the municipality discussed here. This city has historical variations on the development of its regions, either by different forms of territory occupation and land use³, either by the significant environmental conditions, expressed especially by the local geomorphology, that impacted the occupation and dispersion models on the territory. However, considering the differences, Maar, Peron & Netto (2011) and Goularti Filho (2014) show the importance that the hydrological basins had to the colonization, production and, capital accumulation on the geographical space of Santa Catarina, on all its regions.

However, the Itajaí-Açu river valley, the biggest basin entirely in the state (SANTA CATARINA, 1986), receives a special spotlight for its dimensions and relatively huge urban network that formed there. Some of the most populous and economically relevant cities are on its stream way, forming dense and dynamic population cores, that maintain direct relations with other centers of higher dimensions of the country, like Florianópolis, Curitiba and São Paulo (SIEBERT, 1997; IBGE, 2020). Analyzing from a hypothetical longitudinal line from the coast to west, there are three regional

divisions: first, the river's mouth region, that has the Itajaí city as its center. This city⁴, with an estimated population of almost 220 thousand inhabitants, 6^o most populous of the state has its most important port and is the center of an urban conurbation that includes of economically and demographically relevant municipalities, such as Balneário Camboriú, Itapema, Camboriú e Navegantes, among others (IBGE, 2019; 2020).

After, distant a little bit more than 40 km to the west, in the river's midway, there is the city of Blumenau, the first point of the valley's colonization by European immigrants and today the third most populous Santa Catarina municipality (almost 360 thousand inhabitants), being a regional core of textile industry and services with relevant dimension and center of a conurbation that extends itself to others cities like Indaial, Gaspar, Timbó e Pomerode. On its surroundings, still forming what is known as "Médio Vale"⁵ (Intermediate Valley, in a free translation) is the city of Brusque, with its urbanization around the Itajaí-Mirim river (Itajaí-Açu's affluent), today has more than 130 thousand inhabitants, 12^o most populous of Santa Catarina, that specialized itself also in the textile industry, presenting integration (and also dependency) with both the above-mentioned urban centers (GOULARTI FILHO, 2014; IBGE, 2019; 2020).

Finishing the regional divisions, about 70 km to the west relatively to Blumenau, we find the third "region" that forms the Itajaí-Açu's hydrological basin, known as Alto Vale and has as its "capital" the municipality of Rio do Sul. This city, emancipated in 1930, formed its urbanization around the junction between the Itajaí do Oeste and Açu rivers (located at 337 meters above sea level), what Colaço & Klanovicz (1999) call its "structural node". Today with about 70 thousand inhabitants and conurbated in different levels with the municipalities of Agronômica, Lontras, Aurora e Laurentino, it became an industrial and services core for a region composed of around 30 municipalities, besides still being dependent of bigger centers such as Florianópolis and Blumenau (IBGE, 2019; 2020).

What the above paragraphs show is that the urban network that developed on this hydrological basin is historical and geographically dependent on its major rivers, with the urban center of relevant density located specially on its flood plains or the hills around them. There is, therefore, a combination of disorganized space occupation and natural dynamics that generates a context where there is a high susceptibility to environmental disasters. This factor, present in most of the state, something showed by the researches of Maar, Peron & Netto (2011) and Nodari, Espindola & Lopes (2015), intensifies itself even more in the Vale do Itajaí,

³ A classic example is the difference between the subsistence occupation that started with the Azoreans on the coast, the large farms model of the uplands and the characteristically small properties of European colonization in the South, West and Vale do Itajaí regions (GOULARTI FILHO, 2014).

⁴ According to the IBGE (2020), in terms of urban influence, Itajaí connects itself to Balneário Camboriú, forming an urban binary that is one of the main state centralities.

⁵ This is the very well-known name beside the city's center being only 16 meters above sea level.

by the correlation between anthropic elements and regional environmental conditions, like rain indexes, rock substratum, soils types, river dynamics, among others (DE PAULA, 2015; BOGO, 2020).

Discussing specifically Rio do Sul, part of the above-mentioned context and target of this research, it's possible to understand that its position isn't different from the regional norm, knowing that the spatial agents as the private sector, the State and the own civil society (regarding urbanization, considering migrations and self-building) generated interventions without territorial ordering in an unsustainable way, being the environment only a resource provider.

In institutional terms, it is well known from researches in the urban planning field that the making, approving and, application processes of the local participatory master plan (PMP) took too much time to be made and also hit low-quality standards. As described by authors like Poleza (2013), Lapolli (2013) and specially Bogo (2016, 2019, 2020), some general characteristics were identified about to two master plans presented since the publication of the Estatuto da Cidade (Cities Statute, in a free translation) law, being these published in 2006 and 2014: composition process made "by the book" not following the local needs, especially the 2006 edition, approved close to the deadline established by the federal law; low level of participation and distribution through the local population, that had minimal interference in its production; besides the technocratic model, the own municipality chamber dedicated lack of resources and funds to the PMP, made by a small group of its employees; and, the most relevant factor, both planning documents were not restrictive to urbanization in risk areas and almost didn't consider the city's relation with the floods, with minimal interference in the established reality.

But, after all, why the criticism of the last-mentioned element above is so relevant to the case of Rio do Sul? Because the city presents a long record of relation with urban floods that, in a dialectic understanding, were influenced by its urbanization at the same time that shaped it, interfering the territorial dynamics that happen there (COLAÇO & KLANOVICZ, 1999; ESPÍNDOLA & NODARI, 2015; BOGO, 2020). With colonization made by Europeans that began at the 19th-century end, becoming a municipality in 1930, the whole urbanization process and the anthropization escalation⁶, occurred on the Itajaí-Açu's river flood plains or on the hills surrounding it, according to the norm for the biggest cities that form Vale do Itajaí's urban network.

However, the parallels between the natural river floods and the human occupation on its surroundings are notably strong for this city and date back to before its foundation as a municipality. From historical records of the Municipal Chamber of Rio do Sul (PMRS, 2019) and from researchers such as Colaço & Klanovicz (1999) e Espíndola & Nodari (2015), we know that intense flood events already happened in the 19th century's end⁷, as well as on 1910, 1930 and, 1950 decades. However, this wasn't enough to stop the local economy and demographical growth that reached prosperity with the timber industry that reigned over most state regions between the 1950 and 1970 decades (GOULARTI FILHO, 2014; ESPÍNDOLA & NODARI, 2015; BOGO, 2016).

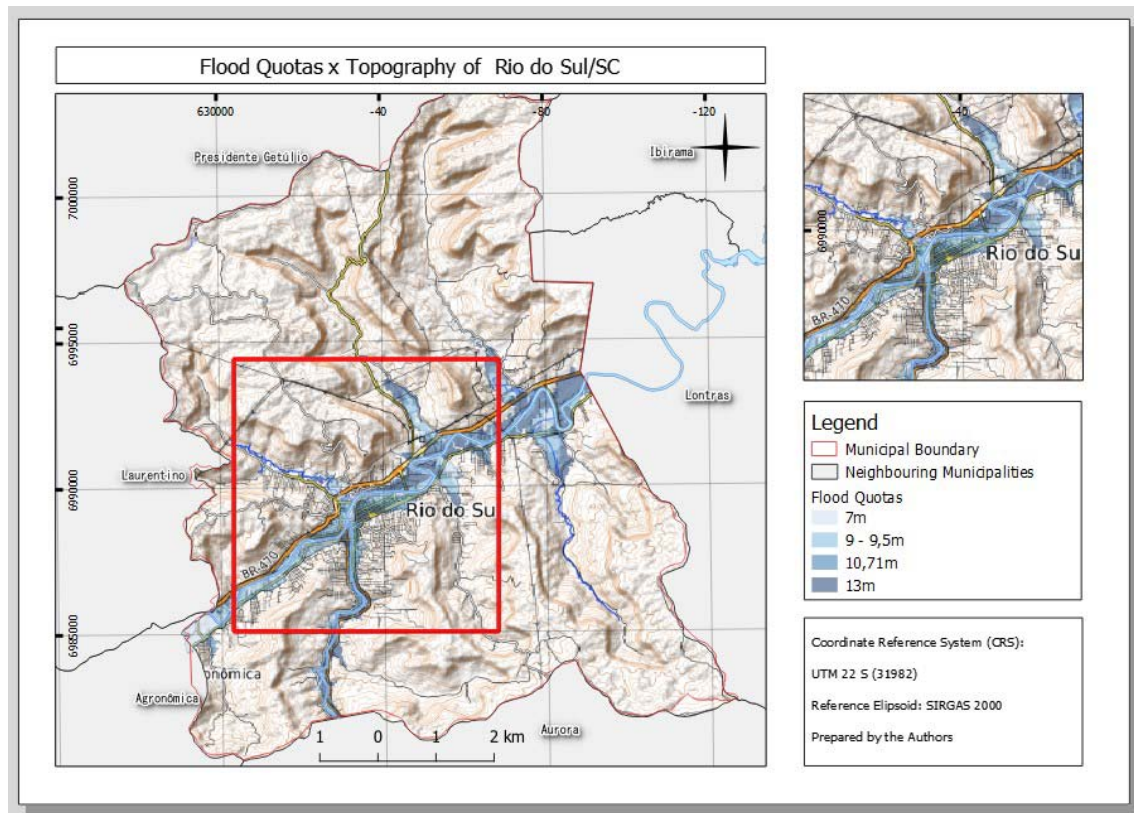
This fact takes us to the 1980s, when the population was already almost entirely urban, while the economy was showing clear signs of weakness, as results from the confluence between national economic crisis and restrictions to the wood cutting, then the major local source of economic goods. At this moment, there wasn't any relevant flood since 1958, which intensified the urbanization around the river, with permission from the municipal chamber government (COLAÇO & KLANOVICZ, 1999; ESPÍNDOLA & NODARI, 2015).

It is in this context that occurred the 1983 floods, hitting 13.58 meters over the riverbed, highest ever recorded in the city's history (PMRS, 2019), causing ruinous consequences in social and economic terms by reaching about 80% of the population and 95% of the industries. Beyond the material damages, this event became a historical symbolic mark for the locals and became a source for news even for the national media. After this event, an already weakened community and recovering from what happened the year before suffered again with the 1984 floods that, even though smaller⁸ than the 1983 one, it caused unprecedented impacts to the cities and its inhabitants (POLEZA, 2003; ESPÍNDOLA & NODARI, 2015). The following map (Picture 02) exposes the municipality's topography and its relation with the river.

⁶ The effects resulted were the river's silting up, impermeability raise, riparian forest deforestation and margins occupation (ESPÍNDOLA & NODARI, 2015).

⁷ This fact also happens in Blumenau, with colonization that started before and, located down the river basin (DE PAULA, 2015).

⁸ The flood quota was of 12.80 meters (PMRS, 2019).



Source: By the authors

Picture 02: Flood quotas and topography of Rio do Sul– SC

But, as argued by Lapolli (2013), another 25 years passed without huge floods that, together with the already established economic grounds, allowed Rio do Sul another period of growth, becoming a regional center focused on industries and services, being among the top 20 economies in the state and one of the best cities of Santa Catarina to live in terms of quality of life. However, these facts didn't prevent the 2011 floods that reached 12.56 meters above the riverbed (2^o highest ever), causing massive material and social prejudices again, with estimated values of R\$ 283 million⁹. Beyond that, this occasion was marked by criticism about the public power (municipal chamber and civil defense) inoperability in reference of preventing and managing the disasters (BOGO, 2016; 2020).

Differently of other huge flood events, that weren't or had just one following new consecutive occurrence (like the 1983-1984 cases), the 2010 decade marked the city for the atypical happening of floods, probably a result of more intense and unregulated raining combined with space anthropization. Besides 2011, other huge floods¹⁰ happened in 2013, 2015 and, 2017, turning the already severe city's relation with environmental disasters in something even worse

(BOGO, 2020). With this scenario, there is a question about the city's territorial relations and the public power's role: in which degree the more frequent floods (in different scales) interfere in the real estate market prices? To answer it is this research goal.

The process of land use devaluation of floodable areas that causes socio-spatial segregation insofar as the frequent urban floods turn the areas that are free of these disasters overvalued was already identified by other researches, something evident on the following citation

In Rio do Sul, it is possible to identify, in the last years, by the buildings and by the real estate market, the displacement of urban activities toward the higher areas, after its initial installation. This happened, especially, after the 1983/1984 floods, that changed the city's urban scenario deeply, inducing the opening of a lot of new neighborhoods and demographic transferences from upper areas to the lower and vice-versa. In general, the members of wealthier classes transferred themselves to upper areas, free from the floods, occurring the inverse with populations of lower-income. [...] So it is impossible to, in current days, work with construction in Rio do Sul not considering the floods as a variable. The possibility or not of a flood reaching a building redefines the form of volumetric and its market value. [...] The floods were always perceived as a serious problem, event that

⁹ Close to 168.5 million US dollars at the time.

¹⁰ It is also important to take note about the small scale floods that happen with more frequency and reach areas closer to the river, normally occupied by lower standards buildings (BOGO, 2019).

they affect, more directly, the residents of lower quotas, where people with lower incomes are living. (ESPÍNDOLA & NODARI, 2015, 74-76 pp.)

However, the above-mentioned authors and others that point the same phenomenon, as Colaço & Klanovicz (1999) e Bogo (2019; 2020) didn't show empirical evidence that there are spatial differences between higher and lower-income groups because of the floods in Rio do Sul¹¹. We believe that this phenomenon occurs in this city, being considered as this research hypothesis. To test it, we build a methodology focused on geostatistics and the use of geographical information systems (GIS), from the real estate data compilation and its prices.

III. COLLECTION AND DISCUSSIONS ABOUT RIO DO SUL'S REAL ESTATE MARKET DATA

This research sought to define, from the already known knowledge about the spatial frame discussed here, that it is possible to obtain evidence to show if there is spatial and economic segregation happening from some correlation with the urban floods upon the application of geoprocessing tools and methods.

The ground is, has been and is going to be one of the main needed resources for the cities' existence and the development of urban life - "is where the civilizations unroll happen". Beyond being the physical support for elements, flows and processes that give form, movement and life to cities, the ground must be served with a net of services, transportation infrastructure and several types of buildings so the urban activities can happen - "at this point the use and change values surge" (BAER, 2013, p. 221).

On property evaluation engineering, there are two central terms on discussions: value and price. Value is the monetary expression of a property. At the same time, price is the amount of cash needed to buy a property, being that by *property* we mean *something* that has a value, that can be used or become a thing with legal guarantees. In this context, there is a difference between market value, being this the more likely amount of money to be spent in a voluntary and conscious trade in a referenced data, following norms current in the market (ABNT, 2001) and, arbitrary value.

The last is obtained through property evaluation techniques to identify value, cost, produces and rights, together with viability indexes and its use for certain situations, goals and, dates, being the adopted value as the evaluation result, inside the limits established by the norms (15% more or less) (ABNT, 2011). It concerns a group of variables and characteristics that compose a

property, that when measured and added together, represents how much a property value, being a movable or immovable one. This, however, doesn't represent what *necessarily* is going to be paid in a trade, but how much the property value with its characteristics, considering location, benefits, or even the absences of it.

To this is added the venal value, being it an estimative gave by the public power that serves as reference for tax purposes. Also composed by its characteristics, is directly related to the generic values plant. This one is the basis for collection and calculation of taxes, as described by Silva (2006). As elements of the venal value, we spotlight position towards the street, area, building area, the property typology and, age (when it's relevant).

In terms of conceptualization, they are different nouns, even if used by common sense as synonyms. However, *price* means what is indeed paid for a property in a trade. So, it's not *necessarily* connected with the market value of a property, since that, considering the market dynamics, the will of both sides, together with the occasion needs, a property can be traded for thousands of dollars more or less beyond its value.

With this presentation, we worked with the real estate market data sample collected, focusing especially in data that expressed the properties' value, being that these contain some accountable attributes, with a spotlight to its geographical location. The methodology adopted follows the precepts stipulated by the ABNT (2001, 2011) norms and Silva's (1999, 2006) proposals. The NBR 14.653-1 (ABNT, 2001) norms predict the use of one out of four methods of property evaluation, being these: the involutive method; the evolutionary method; the income capitalization method; and the method base on direct comparison among the market's data. While we have followed the last, we are not going to value the properties, but to analyze the real estate market dynamics. We describe the data sample next.

The data sample collected is formed by 200 properties (only ground ones, without any building) on sale¹². We filtered only the announcement of terrain properties, as well as its characteristics (Picture 03). The sources were real estate agents (local and regional sized real estate offices¹³) and announcements found on aggregator websites like Zap Imóveis and OLX. The following variables were collected as the following picture shows.

¹¹ In Blumenau, De Paula (2015) says that the socio-spatial inequalities resulting from floods took the poor to displace themselves to the uphill, marked in this city by higher slopes and chances of mass movements events than Rio do Sul.

¹² The sampled data were collected remotely, using internet announcements (institutional or private ones).

¹³ The agents are Dalfovo real estate office; San Genaro real estate office; Habitterra properties; Habivale real estate office; Carneiro properties; Charles Cimardi realtor; Metropolitana properties; and Pacher real estate office.

Variable characteristics	Id	Font	neighborhood	Address
	Unique identify assigned to the ad that allows it to link with geometry	Identification of the ad source, allowing to know which advertiser offers the market event	Attribute that allows future filtering in analyzes by neighborhoods and zones	Location where the property is
Variable characteristics	east	north	area_tot	value_tot
	Latitude coordinate that allows the unequivocal location of the property	Longitude coordinate that allows the unequivocal location of the property	Property's total area, consisting of the lot's width x length dimensions	Price at which the market event is being offered

Source: By the authors

Picture 03: Characteristics collected for every property

When some essential characteristics for the data analysis couldn't be added to the list, the property got excluded.

a) Materials used

We used the following software as support tools for the data analysis: QGIS, on its 2.18.20 Las Palmas and 3.8.1 Zanzibar versions, open source software distributed by OSGeo; Google Earth Pro, 7.3.0 version, with free distribution by Google. For tabular data manipulation, we worked with Google Spreadsheets. At last instance, for the kriging applications together with the histometric analysis, we used SAGA, 2.1.3 version.

With the selling announcement data of the offered properties in the real estate office website and other sources, we prepared a spreadsheet with the data, with every case composed of eight columns. To every property, we gave a number as an identifier (id, as Picture 03). Then, geographical coordinates were included on the columns to include the properties on the Geographical Information System (GIS) for the geographical analysis.

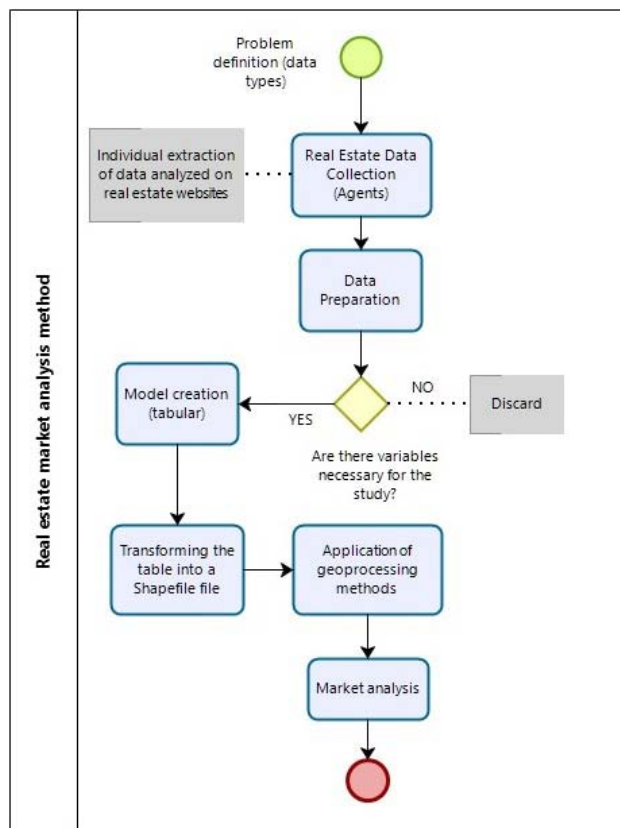
We obtained the coordinates with the help of Google Earth Pro software, open to free access offered by Google. Searching for addresses available on the announcements, the software finds the property location, marking it on the map, then we gave it an id, crossing it with the spreadsheets. This identifier method allows the properties spatialization in a simplified manner.

The data analysis and also the cartographic products are from QGIS software application. This one has a simplified graphic interface for attributes edition,

linking and, manipulation, chosen to the final print layout production. QGIS plugins permitted the use of base maps that allowed raster overlap from remote sensing images from Bing or Google Satellite. These base maps are used for map compositions manners and graphic support on the flood quotas analysis. The vector data about parcels, streets, neighborhoods, hydrology, and, floods shapes were provided by Rio do Sul's Municipal Chamber and it's Civil Defense, considering the scientific purpose of this research.

b) Method

The data collection followed the activities flow presented on Picture 04, below.



Source: By the authors

Picture 04: Activities flowchart

In the context of this flowchart application, we worked with the above-mentioned GIS software, characterized as geoprocessing tools that allow complex geographical analyses, crossing diverse data from N sources, including the creation of georeferenced databases (CAMARA *et al.*, 2001). Today they offer different plugins that ease statistical analysis; among them, we can spotlight the important allowance of spreadsheets upload, like the Google ones. When a GIS software like QGIS, imports spreadsheets it is possible to interpret columns that can be of different types, like integer, date/time, string, and real (decimal numbers).

With the data collected and uploaded to QGIS we filtered them and proceeded to the analysis phase, focusing on obtaining a spatial product that could reflect the local real estate market dynamics. Then, we calculated the square meter (m²) value through the division: *sale value/total dimension* for every property. This way we obtained the value for each property, comparing it to others between characteristics and geographic position.

So then it was possible to link the properties with the spreadsheets, crossing, merging and aggregating more than one table at a time. On the

process of working with the properties price data, we ran validation tests, eliminating outliers, and preparing data for the last step of the analysis.

In this context, some concepts created by statistical scientists are useful for geographers in some research fields, where its methods allow the construction of visual layers from data samples together with geostatistics proceedings like kriging, which is helpful for associating uncertainty measures (CAMARA *et al.*, 2001).

The graphical analysis that translates punctual data to raster can be done by different methods. The GIS application allows the projection of numerous hypothetical scenarios with some methods like closer neighbor, distance pattern, lines/areas length amounts, and kriging interpolation.

By kriging we mean a validgeostatistical method for finding a hypothetical value for the analyzed properties, been characterized as

(...) this method allows the interpolation of non-sampled variable values from sampled neighbors. The quota of some point of interest is calculated by the weighted average of the neighbor samples, determined by geostatistical analysis, which provides coefficients that describe the spatial variability of the analyzed data.

(VALERIANO, 2008, *apud* BRITO *et. al.*, 2013)

Kriging is based on the regionalized variables theory, having a polynomial equation in its fundamentals, through a multiple regression process between the properties market values and its locations (geographic coordinates). And this method has its divisions. There is the "simple kriging", in which the estimative are based upon an already known and constant average (m) value. However, in the "ordinary kriging" there's no need for previous knowledge of the m value.

Besides that, values obtained by "block kriging" are smoother than "punctual kriging", what made our choice for the first. So, for the error diminish, it is needed to use a m number of samples. The vast application of the ordinary model can be explained by its simplicity (weighted average), which uses structural information provided by a variogram model, supplying de uncertainty connected to estimation (YAMAMOTO & LANDIM, 2013).

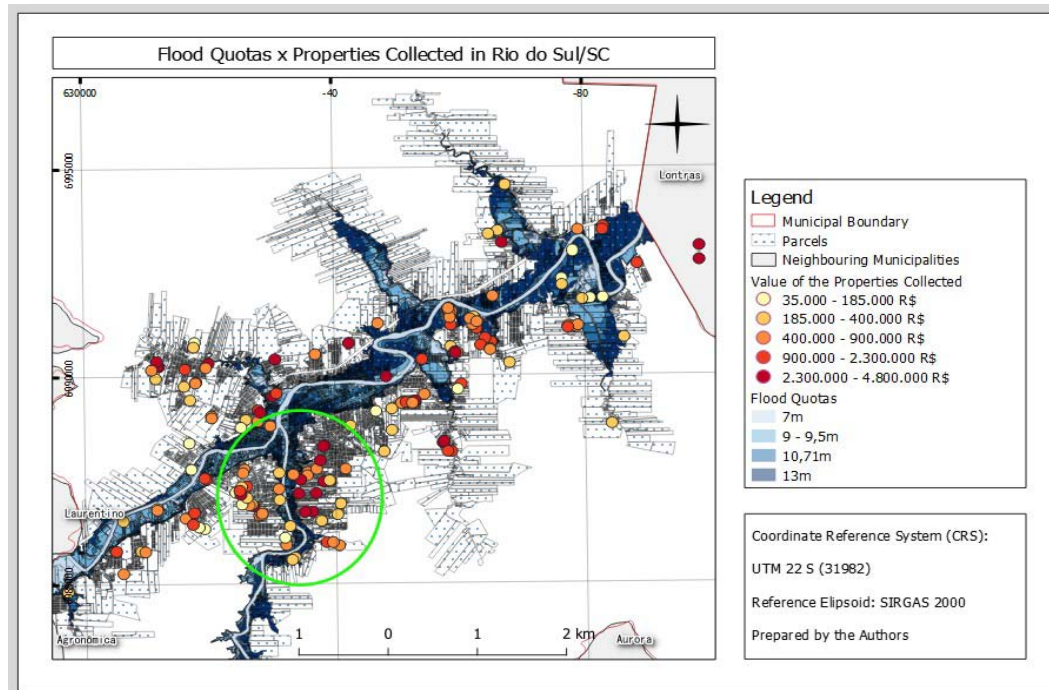
To compare possible analysis methods, we know that in simple linear interpolation, the weights are all the same ($1/N$), defining in which the N variable under the distance's square inverse that separates interpolated values and collected values. In kriging, the proceeding is close to the interpolation by weighted moving average, except that is this case, the defined weights come from spatial analysis. With this process, it provides non-biased estimations and with minimal variance. Therefore, the difference between kriging and

other interpolation methods is the way how the samples receives its weights. Values obtained by this method in blocks are smoother than punctual ones (VALERIANO, 2008 *apud* BRITO *et al.*, 2013), justifying its application for real estate market analysis.

The steps needed for a scientific work that applies kriging techniques, according to Druck *et al.* (2004), are (I) exploratory data analysis; (II) structural analysis (spatial correlation models); and (III) statistical surface interpolation. Thus, with QGIS support, we analyzed the collected values seeking outliers, very high or very low prices, with the sample distribution histogram. Following it, we proceeded to data filtering and outlier exclusion, seeking a better data distribution and homogenization, looking for higher quality in the analysis.

c) Results obtained

The properties' spatialization was created by GIS tools, allowing the different *layers* overlapping, with themes that describe some variables of Rio do Sul's urban elements. The following Picture (05) shows the overlapping between properties values with the flood quotas. They are divided into four classes, for analysis purposes: 7 meters quota¹⁴; 9-9.50¹⁵ meters; 10.71 meters (from the 2015 floods); and 13.56 meters (from the historical record of 1983), being these measured from the riverbed.



Source: By the authors

Picture 05: Overlapping of collected properties with flood quotas¹⁶

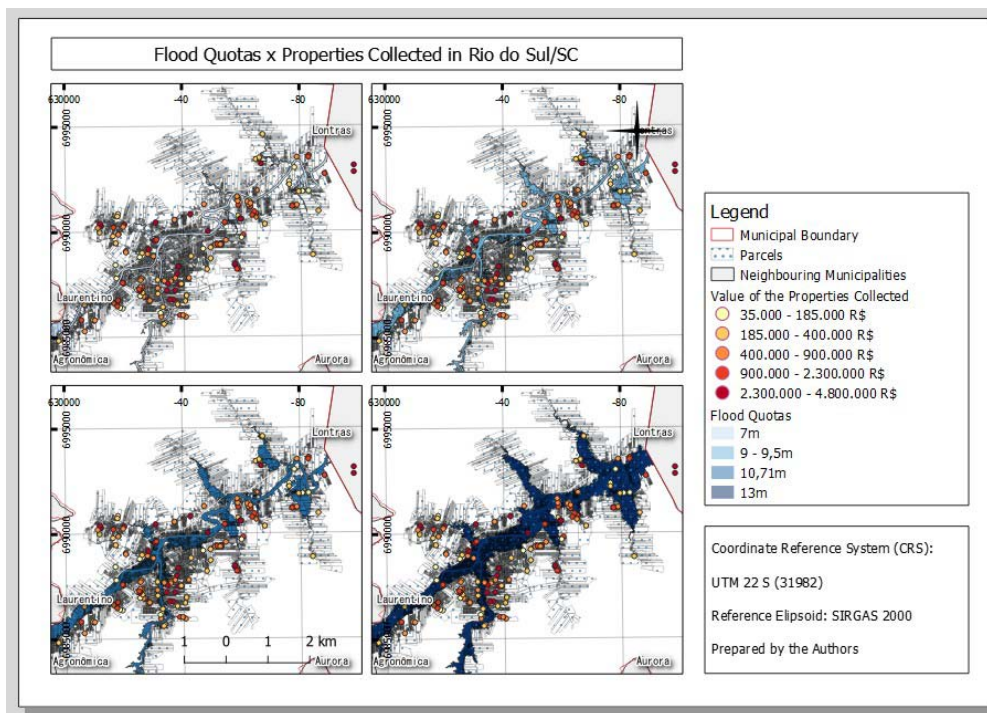
¹⁴ According to Bogo (2019), this quota has the most frequent flood occurring, tending to reach low-income populations, in most cases attached to the "informal city".

¹⁵ From PMRS (2019) data, it's one of the most frequent flood quotas.

¹⁶ For interpretation purposes, every Brazilian Real (R\$) equals 0.2 US Dollar (US\$). This exchange rate must be read through the rest of the paper.

Seeking a better visualization, we generated a group of maps that show the areas reached for each class, together with the properties and value distribution. The following Picture 06 shows this information. Through the collected properties, we can identify more density of high-value ones (classes with darker tons and marked in

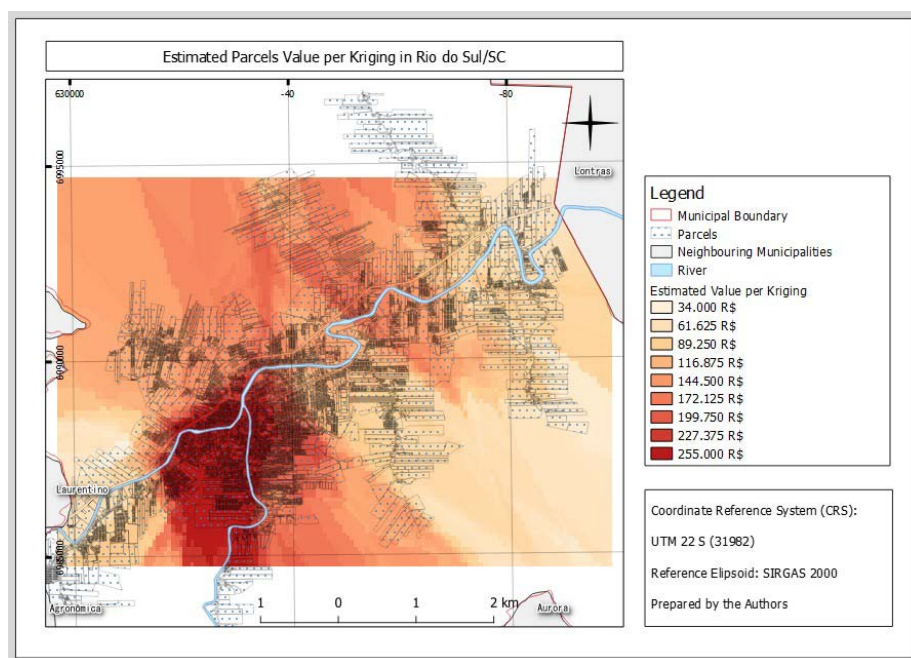
the map inside the green circle) on the central region, especially in Centro, Jardim América, and Sumaré neighborhoods, including some of flood reachable ones. In the maps that form the picture, it is possible to see the unitary flood classes.



Source: By the authors

Picture 06: Unitary flood quotas, overlapped with the properties collected

Applying SAGA's software tools, it was crafted an interpolation between properties values and its m² values, from the ordinary kriging method, focusing on data distribution analysis. The results are available in Picture 07.

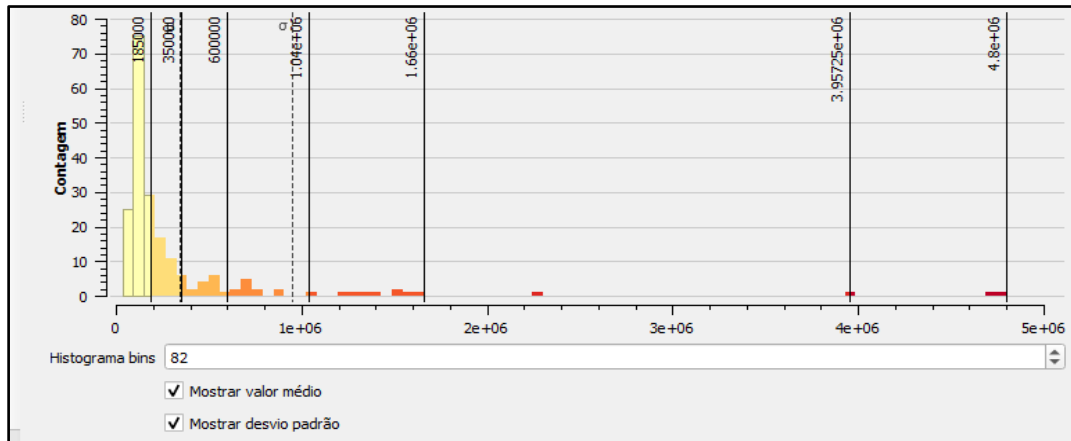


Source: By the authors

Picture 07: Total value variable kriging results

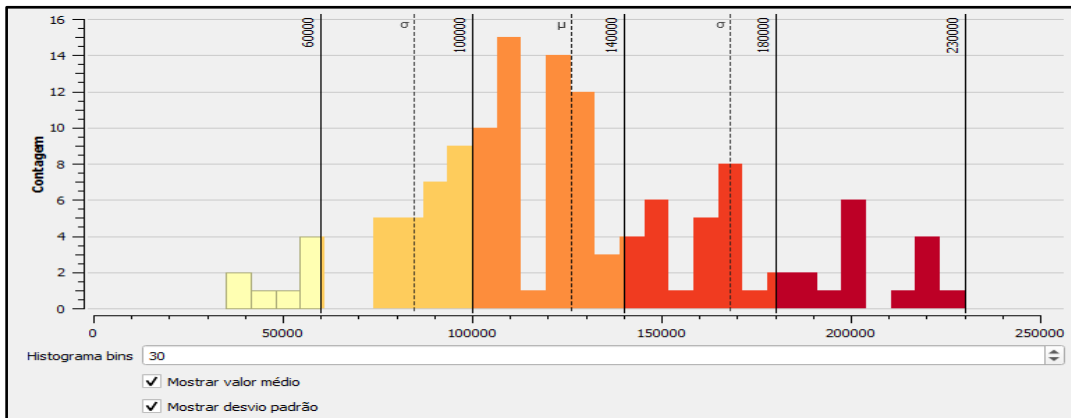
In the analysis, properties over 2,500 m² (26 cases) and prices over R\$ 350.000 were discarded, which could show distortions in the results, setting the already mentioned outliers. Therefore, 152 properties

served for the total value kriging process. The resulting values histograms can be seen, in sequence, in the Pictures 08 and 09.



Source: By the authors

Picture 08: Histogram before data filtering

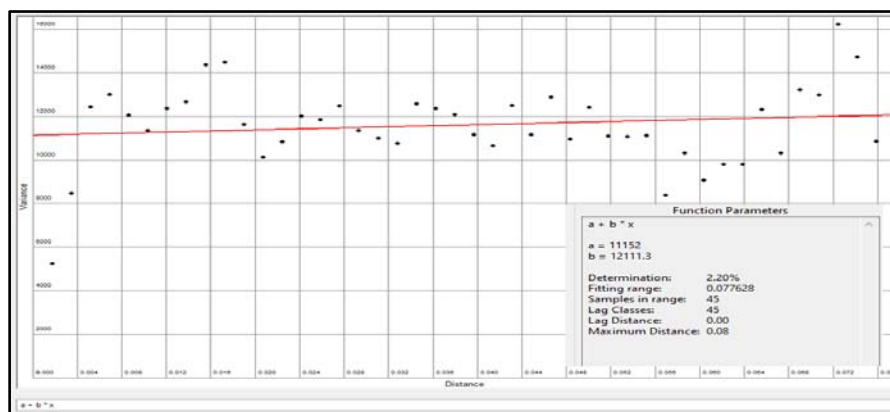


filtering Source: By the authors

Picture 09: Histogram after outliers

The sample basis for the average m² value kriging didn't have the problem of few cases because of the 200 properties only 36 were discarded, with 164 used for the final analysis, respecting the minimal limit

and respecting the NBR 14653-1 and NBR 14653-2 norms (ABNT, 2001; 2011). The variogram is available in Picture 10.

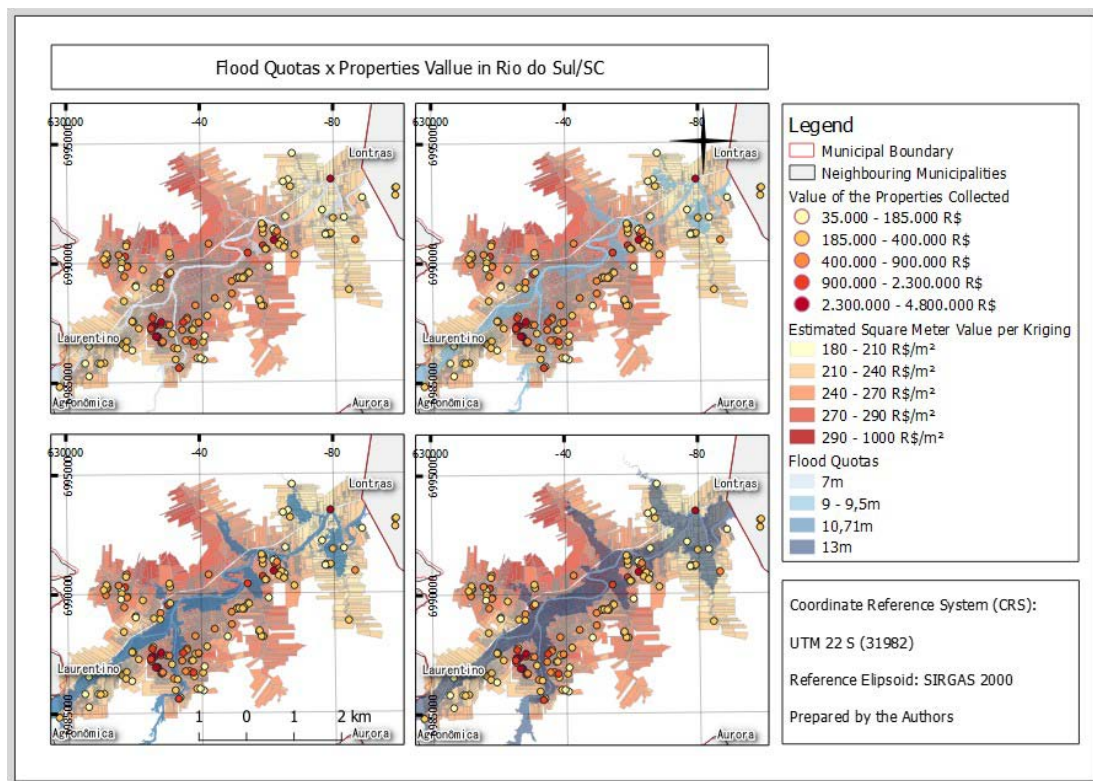


Source: By the authors

Picture 10: Kriging variogram of the average m² value

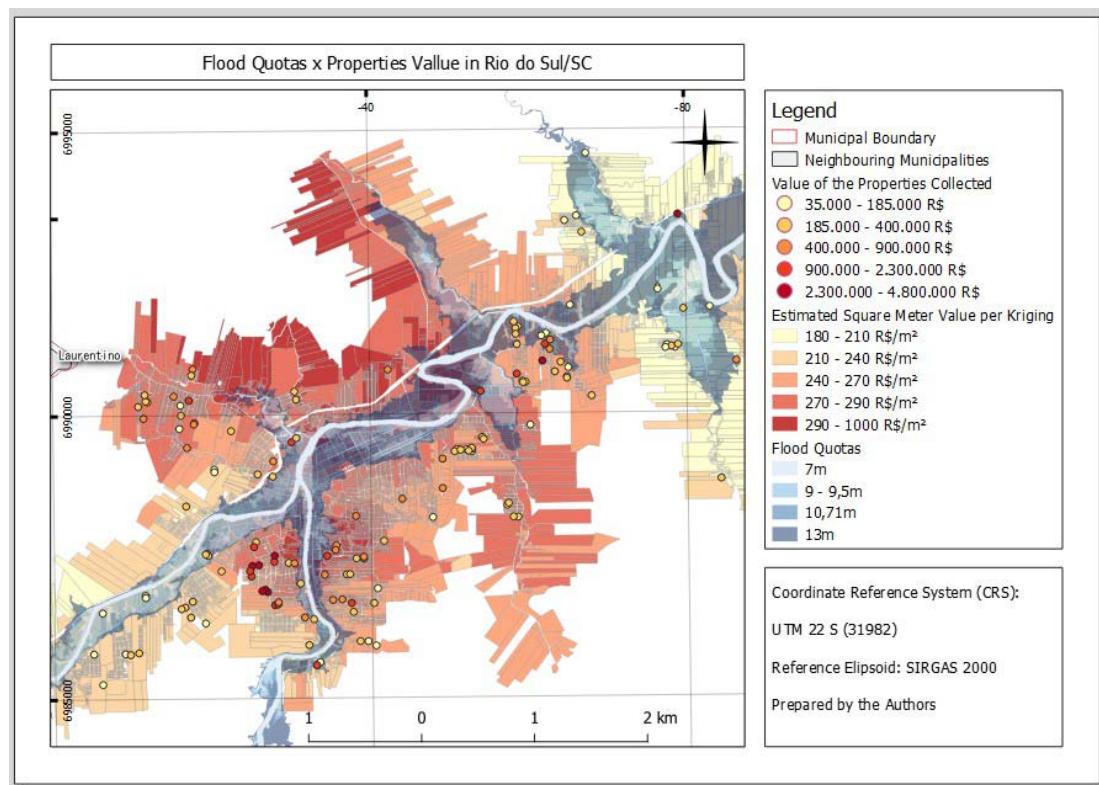
With the kriging done, QGIS and its plugins served as tools to the process of extrapolating the pixel values (in m^2) for the lots (parcels) polygons. We adopted the square meter (m^2) as variable to this research step based upon that the total values can present some distortions since the price of a property is composed of various characteristics. That heterogeneity is an inherent factor to the real estate market analysis. In this sense, the estimated m^2 value based on the samples showed itself as the suited alternative for the analysis.

As the last graphic result, two maps (Figure 11 and 12) were made, with the m^2 value extrapolated to the lots and with the punctual collected data, both overlapped with the floods layers (respectively separated and together), seeking to identify from the spatial analysis if the flood quotas influence in the properties averages m^2 value and if in some way the prices change for being located in areas reached by floods (or if they are free of them), influencing the local socio-spatial segregation.



Source: By the authors

Picture 11: Correlation between separated flood quotas and properties values



Source: By the authors

Picture 12: Correlation between overlapped flood quotas and properties values

Even if we consider that the maps above are our last product and are also self-explicative, a brief analysis is needed to help our comprehension before the final remarks.

What the pictures 11 and 12 show are two clear tendencies. The first one is about the fact that there is a strong property evaluation tendency as a result of its relationship with the central area, pointing that the more distant neighborhoods (Santa Rita, Rainha, Barragem, Barra do Trombudo, among others), both to the northeast or southwest, contain most of the lower market value properties collected. In these cases, the lower classes presented in the maps, containing m^2 values between R\$ 180 to R\$ 240, prevail among these areas samples and in the estimations after them.

Thus, it is possible to see about higher value classes is the prevalence of it around the city center, including neighborhoods like Centro, Jardim América, Sumaré, and Eugênio Schneider. The collected points and the extrapolation related to that are between R\$ 270 to R\$ 1,000 per m^2 are found only in these regions, what can be understood as evidence of how the "structural urban node" that formed already in the 1950 decade (COLAÇO & KLANOVICZ, 1999) still being the major focus of the services private market and the city's amenities aggregator, raising the prices of the available terrain properties on its surroundings.

The second tendency involve this research's objective, being the values relations with floods. What

can be seen from the graphic products is that there is relevant evidence that the floods have an influence on real estate market prices, with the spotlight to where the waters hit more often. It is possible to assume that because some of the most valuable properties collected are reached just by the higher quota ever (from 1983) and not by the others. Besides that, not just only the investigation identified that the most valuable m^2 (and its extrapolations) are in general located close to the city's center and free from floods, in areas where the public power supports long term urbanization (BOGO, 2016; 2020), but also how the lower prices can be seen especially in farther neighborhoods that are hit by the waters, including the ones that happen more often.

So, what we can understand is that the real estate market values (and prices) are guided by the following "equations": free from floods + close to city center = higher prices; reached by floods + away from the city center = lower prices. So, there is a tendency of intensification of the current socio-spatial segregation because of this phenomenon.

However, the research doesn't entirely confirm the affirmations from Colaço & Klanovicz (1999) and Espíndola & Nodari (2015), as the floods aren't the only factor to influence the real estate market prices and dynamics. The central neighborhoods, due to its access to services, amenities and better infrastructure are still responsible for properties' high evaluation, making residents and, shop owners to continue dealing with the

floods, not being responsible for such an intense displacement of local activities as the authors argue. But, we consider that we have hit some methodological limits considering that the lower areas on the central neighborhoods as well as on the "informal city" cases tend to have a higher number of buildings (so, lower terrain properties available), that aren't included in this scientific investigation, what is again discussed in the following final remarks.

IV. FINAL REMARKS

After the application of the methods presented on this research (geoprocessing techniques together with kriging), we ascertained some spatial correlations about the real estate market values concerning its spatial locations, being reached by floods or not, concluding that this factor has territorial relevancy. However, it is not the only and excluding variable on this matter.

Especially in areas that are reached by 7 and 9 meters' floods, in other words, areas that the river waters hit more often, we identified the decrease of property values. But, this factor is not so relevant in the city center and its close neighborhoods, with the spotlight to Jardim América, Centro, Sumaré and, Eugênio Schneider. From these findings, we believe that this phenomenon occurs because the central region has an urban core of complex nature, centering in it the most important commercial structures, businesses, among others, causing consequences on the tendencies of properties evaluation.

Therefore, this causes some kind of partial "neutralization" of floods risk influence, considering the characteristics marked on this case of study. Oppositely, the neighborhoods located in floodable areas that are also far away from the city center present a deeper tendency of properties devaluation when these are reached by the waters.

That is, in a first general analysis: (I) it is possible to understand that the altitude factor - that reflects in less flood risk in comparison with lower areas - demonstrated itself as a relevant factor to variations among the properties prices in Rio do Sul; (II) About the neighborhoods centrality - regarding its connection with better infrastructures and more services available - presents itself as a variable that guides a small "neutrality" of the cause-effect relation between floods and properties prices.

Considering the maps made, they show these variations through the city's territory, deepening the evidence about the floods influence in real estate market dynamics, also on the central region, where the highest prices are seen in floods free places.

Partially, the attributes that appear as more relevant in the analysis are the degree of "centrality" and "flood risk". A critical analysis together with the historical

descriptions and field knowledge showed that the above-mentioned variables influence a possible fragmentation among economic classes in Rio do Sul's socio-spatial dynamics, considering that the properties with the highest prices, both close and far from the city center, seem more protected to floodable areas.

The case of study object complexity suggests that the research and its methods attended its expectations and brought information to craft others and more complex discussions about this territory. From that, other scientific investigations can take advantage of this "window of opportunity" to identify and analyze which other variables could complement the correlations between properties value/price on this regions, collecting data, for example, of rent prices, buildings for sale or real estate market prices for already built places. These variables could complement the current analysis from the method presented here and expand the comprehension about the territorial transformations of Rio do Sul municipality, also opening new interpretations about the acts of its spatial agents.

Therefore, the affirmative that "how higher the flood risk, the lower the property values" showed itself partially correct, considering that the variable "urban centrality" have relevant influence in prices, making that the cause-effect relation of the floods devaluating the properties raised on the hypothesis before is not entirely true, even that we identified that most of the expensive properties are located in areas free from the river waters. But, specifically in the cases of the distant neighborhoods the premise above was confirmed as true. However, we believe that the research's central problem isn't entirely resolved and new scientific investigations, using other variables together with flood studies must be done, seeking for the confirmation or refutation of the hypothesis proposed here.

ABBREVIATIONS

ABNT– Associação Brasileira de Normas Técnicas (Brazilian Association of Technical Norms)
GIS – Geographic Information Systems
IBGE – Instituto Brasileiro de Geografia e Estatística (Brazilian Institute of Geography and Statistics)
PMP – Participatory Master Plan
PMRS – Prefeitura Municipal de Rio do Sul (Rio do Sul's Municipal Chamber)
SC – Santa Catarina state

REFERENCES RÉFÉRENCES REFERENCIAS

1. ASSOCIAÇÃO BRASILEIRA DE NORMAS TÉCNICAS – ABNT (2001). *NBR-14653-1. Avaliação de Bens - Parte 1: procedimentos gerais.*
2. ASSOCIAÇÃO BRASILEIRA DE NORMAS TÉCNICAS – ABNT (2011). *NBR-14653-2. Avaliação de Bens - Parte 2: imóveis urbanos.*

3. BAER, L. (2013). *Princípios de economia urbana y mercados de suelo*. in: ERBA, Diego Alfonso (Org.), *Definición de políticas de suelo urbano en América Latina: teoría y práctica*. Viçosa, MG. 2013. 283 p.
4. BOGO, R. S. (2016). *Plano diretor participativo, território e inundações em Rio do Sul/SC*. Trabalho de conclusão de curso. Florianópolis. Departamento de Geociências, Universidade Federal de Santa Catarina.
5. BOGO, R. S. (2019). Impacto das inundações de 7 metros em Rio do Sul/SC: o Plano Diretor Participativo como objeto de análise. *Rio do Sul: Nossa História em Revista*, Rio do Sul, 23 (6), pp. 07-31.
6. BOGO, R. S. (2020). Participatory master plan, territory and floods in Rio do Sul/State of Santa Catarina. *Cadernos da Metrópole*, São Paulo, 22 (48), pp. 555-577. Disponível em: https://revistas.pucsp.br/metropole/article/view/2236-9996.2020-4810/pdf_e. Acesso em: 29 jun. 2020.
7. BRASIL (2001). Law n. 10257, July 10th, 2001. Regulate the articles 182 and 183 of the Federal Constitution, establishes general directions of the urban politics and gives other measures. *Estatuto da Cidade*. Brasília, Available at: <http://www.planalto.gov.br/Ccivil_03/leis/LEIS_2001/L10257.htm>. Access in: Aug 2nd 2018.
8. BRITO, C. R. et al (2013). Geoestatística aplicada na geração de modelos numéricos de elevação. *Geografia Ensino & Pesquisa*, 17 (3), pp. 143-152.
9. COLAÇO, T. L.; KLANOVICZ, J. (1999). "Urbanização". In: KLUG, J.; DIRKSEN, V. *Rio do Sul: uma história*. Rio do Sul, Editora da UFSC. Cap. 3, pp. 121-149.
10. CORRÊA, Roberto L. (1986). *Espaço Urbano*. 1 ed. Rio de Janeiro, Ática.
11. DE PAULA, S. M. (2015). As enchentes em Blumenau: um desastre anunciado. In: NODARI, E. S.; ESPÍNDOLA, M. A.; LOPES, A. R. S. (org.). *Desastres Socioambientais em Santa Catarina*. São Leopoldo: Oikos. pp. 52-67.
12. DRUCK, S. et al [eds.] (2004). *Análise Espacial de Dados Geográficos*. Brasília, EMBRAPA.
13. ESPÍNDOLA, M. A.; NODARI, E. S. (2015). Desastres surpreendentes: enchentes rotineiras. In: NODARI, E. S.; ESPÍNDOLA, M. A.; LOPES, A. R. S. (org.). *Desastres Socioambientais em Santa Catarina*. São Leopoldo: Oikos. pp. 68-94.
14. GOULARTI FILHO, A (2014). *Portos, Ferrovias e Navegação em Santa Catarina*. Florianópolis: Editora UFSC. 322 pp.
15. GRANGEIRO, E. L. de A.; RIBEIRO, M. M. R.; MIRANDA, L. I. B. de (2020). Integração de políticas públicas no Brasil: o caso dos setores de recursos hídricos, urbano e saneamento. *Cadernos da Metrópole*, São Paulo, 22 (48), pp. 417-434. Disponível em: <https://revistas.pucsp.br/metropole/article/view/2236-9996.2020-4804>. Acesso em 29 jun. 2020.
16. INSTITUTO BRASILEIRO DE GEOGRAFIA E ESTATÍSTICA – IBGE (2019). *Santa Catarina*. Disponível em: <https://cidades.ibge.gov.br/brasil/sc/panorama>. Acesso em: 30 jun. 2020.
17. INSTITUTO BRASILEIRO DE GEOGRAFIA E ESTATÍSTICA – IBGE (2020). *Região de Influência das Cidades 2018*. Brasília: IBGE 187 pp. Disponível em: <https://www.ibge.gov.br/geociencias/cartas-e-mapas/redes-geograficas/15798-regioes-de-influencia-das-cidades.html?=&t=acesso-ao-produto>. Acesso em: 29 jun. 2020.
18. LAPOLLI, Aderbal Vicente (2013). *O Plano diretor e o plano de gerenciamento de enchentes do município de Rio do Sul – SC: A construção de um território seguro?* Dissertação de mestrado. Florianópolis, Centro de Ciências Humanas e da Educação, Universidade do Estado de Santa Catarina.
19. MAAR, A., PERON, A., & NETTO, F. D. (2011). *Santa Catarina: História, espaço geográfico e meio ambiente* (2nd ed.). Florianópolis, SC: Insular.
20. MASSEY, D. (2005). *For Space*. London: Sage Publications. 232 pp.
21. MASSEY, D. (2017). A mente geográfica. *Geographia*, Niterói, 19 (40), pp. 36-40. Traduzido por Ana Angelita da Rocha e Maria Lucia de Oliveira. Disponível em: <https://periodicos.uff.br/geographia/article/view/13798/8998>. Acesso em: 30 jun. 2020.
22. NODARI, E. S.; ESPÍNDOLA, M. A.; LOPES, A. R. S. [org.] (2015). *Desastres Socioambientais em Santa Catarina*. São Leopoldo: Oikos, 302 pp.
23. POLEZA, Maristela Macedo (2003). *Mudanças na estrutura urbana de Rio do Sul em decorrência das enchentes de 1983*. Dissertação de mestrado. Blumenau, Universidade Regional de Blumenau.
24. PREFEITURA MUNICIPAL DE RIO DO SUL - PMRS (2019). *Quadro de cheias ocorridas em Rio do Sul*. Available at: <<https://defesacivil.riodosul.sc.gov.br/index.php?r=externo%2Fplanilha>>. Access in: Oct 5th 2019.
25. SANTA CATARINA [Gabinete de Planejamento e Coordenação Geral] (1986). *Atlas de Santa Catarina*. Rio de Janeiro, Aerofoto Cruzeiro. 173 p.
26. SANTOS, M. (2013). *A Urbanização Brasileira*. 5. ed. São Paulo: Edusp, 174 p.
27. SANTOS JÚNIOR, O. A. dos; MONTANDON, D. T. [Org.] (2011). *Os Planos Diretores Municipais Pós-Estatuto da Cidade: balanço crítico e perspectivas*. Rio de Janeiro, Letra Capital. 295 pp.
28. SIEBERT, C. F. (1997). *Estrutura e desenvolvimento da Rede Urbana do Vale do Itajaí*. Blumenau, Editora da FURB. 118 p.
29. SILVA, E. (2006). *Cadastro Técnico Multifinalitário: base fundamental para Avaliação em Massa de*

Imóveis. Tese de Doutorado em Engenharia de Produção. UFSC. 201 pp.

29. SILVA, E. (1999). *Proposta de avaliação coletiva de imóveis*: aplicação aos imóveis do tipo apartamento na cidade de Blumenau – Santa Catarina. Florianópolis. Dissertação de Mestrado em Engenharia Civil. UFSC. 95 pp.
30. SOUZA, M. L. de (2006). *A Prisão e a Ágora*: reflexões em torno da democratização do planejamento e da gestão das cidades. Rio de Janeiro: Bertrand Brasil. 632 pp.
31. SOUZA, M. L. de (2010). *Mudar a cidade: uma introdução crítica ao planejamento e à gestão urbanos*. 6. ed. Rio de Janeiro, Bertrand Brasil. 556 pp.
32. TUCCI, C. E. M. (2007). *Inundações urbanas*. Porto Alegre, ABRH/RHAMA. 393 pp.
33. VILLAÇA, F. (1999). Uma contribuição para a história do planejamento urbano no Brasil. In: DEÁK, C.; SCHIFFER, S. R. (Org.). *O processo de urbanização do Brasil*. São Paulo: Edusp. Cap. 6. pp. 169-243.
34. YAMAMOTO, J.K.; LANDIM, P.M.B (2013). *Geoestatística*: conceitos e aplicações. São Paulo, Oficina de Textos. 215 p.





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Ecopoetics in Thoreau: Nature Ethics, Life, Purity and Ontology

By Keshav Raj Chalise

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Abstract- The most discussed philosopher and the writer from American transcendental writing, Henry David Thoreau, has composed and published more than two hundred individual poems. With Walden he has come up with his philosophy of nature and has pertinently idealized the transcendence of the soul through nature. Nature is the prominent theme in his writing along with the politics of contemporary society in which he has justified himself as a social and political disobeyer. He has realized the nature as the resource to understand the 'Supreme Being', but at the same time he has observed nature with the ethical perspective in which he has engrossed on the individuality and individual freedom of nature and how humans are the part of the nature's system. This research article examines on how he has undergone an ecopoetics through the emphasis on ecology, nature, human-nonhuman relation, nature's purity and ontology in his seminal poems.

Keywords: *ecopoetics, ontology, environmental ethics, purity.*

GJHSS-B Classification: *FOR Code: 060299*



Strictly as per the compliance and regulations of:



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Keshav Raj Chalise

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Keywords: *ecopoetics, ontology, environmental ethics, purity.*

I. ECOPOETICS AND THOREAU

Etymologically, 'ecopoetics' from 'ecopoetry' is the combination of 'eco' referring to ecology or nature and 'poetry' referring to the mode of making or writing poetry, or 'poetics' as the art of writing poetry, hence the term; 'ecopoetry' refers to the poetic expression on and about nature and ecology. Ecopoetics consists many meanings- it is the structuring and studying of rustic poetry, or poetry of wilderness and deep ecology; it is also the poetry that searches the human aptitude of realizing the sense of animal essence, and also ethically defied relation of humans to other nature and life forms; it is poetry that raises the issue of tragedies and environmental prejudices, including the difficulties and opportunities of urban environments; and ecopoetics is not a matter of theme, but of how certain poetic methods model ecological processes like complexity, non-linearity, feedback loops, and recycling. Ecopoetics therefore is the branch of making, generating and studying poetry from ecological perspective, "ecopoetics seek a heightened consciousness, a reconsideration of verbal practices that involve categorizing, naming, or identifying with natural objects" (Killingsworth 16). Jonathan Skinner has firstly inspired the term "ecopoetics" to address to the link between creative writing, especially American writing and ecology. In this sense, ecopoetics reveals the reality of the link between human creativity, especially

literary or poetic practices and the ecology around, hence, not just nature writing alone.

In an interview with Robert Hass, Brenda Hillman, Evelyn Reilly and Jonathan Skinner, Angela Hume has disclosed Hass's idea about ecopoetics to "mean writing about poetry whose subject is, broadly speaking, ecological" (Hume 754). In this sense, ecopoetics is the poetry about nature, more specifically about ecology and Hass further elaborates:

It could also refer to the imagination of what used to be called "nature" and of the relation between natural and manmade objects and processes. Or, it could signal that the person using the term is aware of the fact that we are living in a relationship of crisis as members of the human species—to the whole of nature, and to our manmade environments. (754)

Similarly in Brenda Hillman's words "Ecopoetics, or ecopoetry, evokes a whole picture of the relationships between the human and the nonhuman" (754). Jonathan Skinner thinks it a way to 'pursuit the connection that has a link beyond human interest and the frame of the work of art'. With these references, the poem, which primarily focuses on the making of the poetry about the ecology, no matter of the artistic frame, but within the frame of ecology, environmental relation of creation is an ecopoetics.

Familiar with the transcendental club and its principles, and as the disciple of Emerson, Thoreau has published his poems mostly in *the Dial*; he has chosen to spend some time closer to the nature and has spent twenty six months and two days in *Walden Pond* which has helped him to live with natural simplicity in his life, as he has felt, "I love a life whose plot is simple" (Conscience), and also his experience with *Walden* has given him an insight to feel nature into his veins, and nature into the blood of his poetry. As poetically the resonant American Romanticist and indirect communion with nature consciousness and attentive with a more modern realism, which suggests a Romantic outlook in passive, Thoreau "sees nature as a retreat from urban mania and a benchmark for human development and in its activist version uses nature as a perspective for critiquing the human world" (Killingsworth 14) and has focused on the way a human looks nature as pure and natural, suggests for the life in the way nature prefers and prefers to assimilate himself and his creations to nature and in nature even sometimes having no

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humiliation to negate the public socialization. Though he has composed his poems centuries earlier than the exact conceptualization of ecopoetics was developed, his poems are eco (ecologically) speaking, and echo (sounding) nature in language, symbols and making of the poetry. While writing his poems, he thinks nature; he feels nature; he lives with nature and if it could be possible, he makes nature not on paper but on the ideology and making nature as the way of his making his life and poetry.

II. THOREAU'S INTEGRITY OF LIFE AND ONTOLOGY IN EARTH

Has nature its life? If yes, is it similar to humans or different? Nature has been humanized in accordance with certain modes of strongly instrumental rationality of human beings, "nature is socially constructed, and thus that all nature has been humanized or else that all culture is natural" (Stephens 268), and is evaluated from human-based values and such questions become relevant, but the query on the nature's ontological existence has no question at all, because nature, in Calicott's term should be 'free, wild and independent' but is not. The search of environmental value of nature views nature not less than humans and not the matter of human subjugation and observes the power of its own. The feeling of nature having its life is not the matter of rationality; rather it is the matter of emotion, truth and fact. Nature has long been the part of social constructivism and nature becomes the victim of social value establishment resulting to the position of nature not as 'one' but as 'other' and ultimately the purity of nature has been evaluated from the impurity of human perception and human logics. Unlike these human perceptions, Thoreau, with his pure sense perception supposes nature as pure and having the life.

Thoreau, an American Romanticist and Transcendentalist, has approved him as the man accompanied with nature, the man in nature and the man with the real sense of nature within. His twenty-six months isolation from the human corporation, the society, and his attachment with Walden Pond has further nurtured his love for nature and has produced his writing with repeated theme of preserving nature, especially his search of wilderness and human harmony with nature. He understands the universe as an organic whole in which mind and matter are inseparable. Human sense perceptions, sights, sounds, and textures, are not free from nature and nature elements; and humans are not permanent as incorporeal consciousness like the lifeless mechanism; rather, they are emotional and responsive beings engrossed in sensory world. With this sense of human emotional and responsive aptitude, humans learn the essential facts of life with nature only through the entire environment, as the earth, though seemingly is an object, is living earth as believed to be

the motherland, has the existence like the life though not moving as such, "Pray to what earth does this sweet cold belong, Which asks no duties and no conscience?" (Thoreau PTWED 4244), the earth asks no tribute, expects no duty and conscience from humans, but ever provides warmth to humans and to the whole worldly mechanism. Having the immense sense of love of inclusive existence "All things invite this earth's inhabitants, To rear their lives to an unheard-of height," (OC 4243), the earth is not only the soil and the rock; the earth means all the things on earth and their life and their chain-based existence with change and transformation, hence the indication of life.

With the knowledge of eastern Hindu tradition of worshipping the earth, 'the mother goddess' and with his isolation and nearness to nature in the Walden pond, he feels the life in the pond and the whole environment having the life, "The moon goes up by leaps her cheerful path" (PTWED 4244), personified as her, the moon and her regularity is a part of earth's life, "The snow dust still emits a silvery light" (4244) and the mountain stands; with every perfection of the life, the living earth becomes a more adventurous wanderer of each and every happenings, hence, the earth is worth worshipping, "pray to what earth does" (4244). The earth includes living things in it as together,

All things are current found

O'er the uneven ground.

Spirits and elements

Have their descents. (Thoreau ATAC.4297)

Having their existence from origin to present, chronology and interdependence that all living things, the plants, creatures and the earth in total, "the undecaying ground" (4297) have rights that humans should recognize, Thoreau implies, as his philosophy of nature speaks, we have a responsibility to respect and care for nature rather than destroying it with his assertion, "every creature is better alive... pine-trees, and he who understands it alright will rather preserve its life than destroy it" (Neimark 94). All these phenomena, as the regularity of everyday existence, hence the life in themselves, are attached with the earth and so, the earth has a life for life is not just the breath or the bodily movement; rather the life is the combination of the system in the chain of living.

With metaphorical analogy, the earth, not humanized, but personalized and spiritualized in various forms, represents itself as heaven or the way to the heaven imprinted into the mind and serves in real experience "when little hills like lambs did skip... Nor budged an inch Fair Haven" (FH 4063), the life and innocence of the hills like the lambs foresee the course to the fair heaven. The earth consists of many forms and strides, ups and downs, subjectivity and objectivity, means and mediums, "If there's a cliff in this wide world... 'S, a stepping stone to heaven," (4063) with the

expectation of pleasure. It is the beginning and the end of life forms and the earth, hence is the way to get the extreme pleasure of heaven, the feeling and experiencing in life smooth and uneven at a time, "have I climbed thy craggy steep," (4063) because Thoreau supposes earth not just as an earth, but a heaven, "For love of thee, Fair Haven" (4063). He has imagined the beauty, pleasure, essence of life and the value, both intrinsic and extrinsic in nature regarding his existence as a part of nature's existence, but not apart from nature as he has no "difficulty of reconciling claims for our unity with nature" (Stephen 270) when he realizes the ultimate essence of his life at the warmth of the earth,

when I take my last long rest,
And quiet sleep my grave in,
What kindlier covering for my breast,
Than thy warm turf Fair Haven. (Thoreau FH 4063)

He never supposes nature as 'other' than humans and thinks of any human roughshod riding over nature where he, as a dependent creature on nature expecting warm turf of the earth even at the last point of the journey of his life, shows strong faith to nature "to retain some real independence from humanity" (Stephen 270) because the earth is not just an object, but a life as he imagines the feeling of warmth of earth in his grave being covered by the earth, the earth as a heaven itself.

Thoreau's picture of earth validates his belief of the earth complete in herself, personified 'she' to earth, "depending upon the context, personification can be allied with any one of three politically rich attitudes toward the natural world: nature as object, nature as resource, and nature as spirit" (Killingsworth 12), as the source of creation and life factors, can make the change in herself that the earth, "Which seems so barren once gave birth, To heroes" (TE 4059). The heroes are the ones who have power, ability, potentiality to make a complete change from barren earth to the complete fertile one because the heroes that the earth gives birth to, "plowed her seas and reaped her grains" (TE 4059) to make the earth complete and free, hence the earth as the creator, the harvester, the producer, lover, protector and therefore a mother for the unitary creation; the earth as an ontology, which "explains how humanity can consistently be seen as both a part of and apart from nature" (Stephen 270). His imagined heroes can be humans and nonhumans, but they ultimately fulfill her desire to be free and complete, and so humans are part of nature earth and also apart from her to leave her as natural; his focus of "leaving nature undisturbed, the need for all humans to have contact with nature, and the relationship between humans and other living things" (Neimark 94). Humans, like he anticipates himself, have connection with the earth and the earth stands free for herself at a time.

Also he has seen uniqueness in earth and human attributes in the parts of earth, "handsome rounded hill" and he wants to be the part of the country and the nature, "hickory trees wishing to see the country from its top" (TICHRH 4402). Thoreau wants to climb up the handsome hill- making a successive effort with the earth, and wants to observe the whole beauty of the earth, "looked many miles over a woody low-land" (4402) from the top of the tree- nature for nature; he himself is a part of nature and he climbs up the nature and observes the earth nature and sees everything natural and leaves nature as natural with full cognition. It is his response to the earth having cognitive aspect that the earth behaves humans at the level of understanding earthly inhabitants; moral aspect with the earth, which 'asks no duties and no conscience'; and metaphysical aspect of earth as the symbol of life and creation for which he has connected with knowing the objects of the earth through his language, hence his emotive link with the earth and earth's lively relation with him.

Feeling close and face to face with the earthly elements like the hills, rocks and valleys, the poet does not feel alienated from the very ground of his experience "thingness" of the environment, but still he has felt the dramatic recognition within the things, "e'en the hills and rocks, Do forward come, so to congratulate" (TJMP 4404) with potential liveliness and vibration feeling difference, but again his realization transfers the earth to the human attributes, "Onward they move, like to the life of man" (4404). The hills, the valleys and the steeps have liveliness not very different from men, which does not mean that they are humans but they have the ability to get changed, to change others and to transfer the energy with difference, the disparity is on the static physical existence but change in the way they make people realize something unusual. Alive are the mountain and the valley hills and moving always seeks for perfection, "Eastward a mount ascends" (FIMD 4417) and for the living humans, this ascending to perfection leads to the sense "now we've gained life's valley, No longer may'st thou dally" (LTOM 4072). This idealization of nature within him shows that he has deep inclination to see himself reflected in nature with the status of an object that appears to depend upon its metaphysical or psychological value for him in particular and for all in general.

Because quality and significance of nature is not just for the human sense of pleasure, and in a more comprehensive and supreme understanding, it inherently establishes a link and confidence for representation as a model for human interaction with the earth and nature that humans can realize the peace and pleasure of nature not for humans for the nature itself as Thoreau has seen mountains on their ways to heavenly peace,



May pleasant meads await thee,
Where thou may'st freely roll
Towards that bright heavenly sea,
Thy resting place and goal. (4072)

It does not mean that the earth in the form of the mountain just dwells searching for its heavenly resting place, but also its connection with the down hill is not disconnected where the humans again interact with its pleasure-inebriated physical appearance with the human cognitive realization from the valleys and down-hills,

"And when thou reach'st life's down-hill,
So gentle be thy stream,
As would not turn a grist-mill
Without the aid of steam." (4072)

Life is not always as high as the peak of the mountain, but it is as low as the valley, is as gentle as the stream, as bright as the "heavenly sea" (4072) and as pure as the "crystal fountain" (4072), hence life compared with the mountains, valleys, down-hills, sea and the fountain, for all these elements having their base with the earth, the earth, in totality, is the life and has liveliness that we could find some kind of higher reality by looking beyond nature and urges to hear "the language which all things and events speak without metaphor" (Walden 1693). Provided the person who is seldom moved by the beauty of things on earth is the one with an inadequate conception of reality, since it is the neutral observer who is less well aware of the world as it is. Thoreau, hence, has treated the earth nature as having the life undergoing the change almost in the way modern science supposes the attributes to be the life in beings.

III. THOREAU'S PURSUIT OF PURITY AND ETHICS IN NATURE

Purity is always the matter of value, and nature is valuable- there is no question. But the question is on what kind of value does nature preserve- does it have the value for human beings or the value for itself? The value notions include purely human perceptions such as, life, consciousness, and activity; health and strength; pleasures and satisfactions. Other values related to the cognitive domain are truth, knowledge, understanding and wisdom. Likewise, other modes of seeing the things from value perspective are beauty, harmony, and proportion in objects contemplated; aesthetic experience, virtues, mutual affection, love, friendship. These factors, one or many at a time, determine the value of a person, thing, nature, earth, sky or anything else. The search of the purity is also analogously complex on which any particular factor determines it; is there a single factor or multiple factors of the thing or the perceiver- and so does it happen in case of nature.

Along with these notions, the basic problem in the determination of the value of nature is on the human perception; generally humans have understood as valuable just in the relative aspect of human desire, interest, attributes and priorities, however the concept and the feeling of purity can be crystal pure beyond all the human prejudices.

Purity and value factor go ahead side by side in case of nature and environment. What it means by the purity in nature- purity for the purpose of humans or purity for the purpose of nature itself? The question certainly demands the answer from the point of value ethics. The value for human usefulness is instrumental value and the value for nature itself is intrinsic value; instrumental value focuses on the purpose, pain, pleasure, and satisfaction of the user, humans, hence the object as the means or instrument for human satisfaction or dissatisfaction, but something besides pleasure and pain has intrinsic value and "central to a comprehensive environmental philosophy is a consideration of the nature and scope of value" (DesJardins 129). Because natural objects do not speak their values in themselves; they do not make response to any of the misbehaviors over them; and they do not react or revolt, human beings are the value determiners, and the problem is on how much humans can keep nature completely detached from their utility is another ethical problem and "value determines the ethical domain by helping to define what objects have moral relevance or what objects deserve consideration. Ethics is concerned with how we should live, how we should act, and the kind of persons we should be (129). So it happens while considering nature and acting with and to nature either in real or in the creation, ecopoetics, making of nature and ecology in poetic expression. From ethical aspect, all writing or poetry about nature cannot be ecopoetry, and all creation about the environment cannot be the environmental writing; rather the question is on whether they address nature as an ethics, environment under crisis, ecology endangered or preserved and the growing issues related to nature, environment and ecology.

So far, Thoreau, familiar with the modern trend of farming, logging, mining, dam building, and rapid population growth, has realized the need of purity in nature with the knowledge, "nature's independence is vital to its meaning and value as a context larger than ourselves" (Stephen 270), and has primarily written on nature and about nature making subtle remarks on serious ecological crisis. Not much affected by the instrumental value and ethics of the nature, his prime concern is on intrinsic value of nature and purity dwells on it, "All things decay & so must our sleigh" (ATD 4421). Nothing remains permanent, even humans values to themselves and to the things; the change is necessary and nature has a changing attribute; and why should it be the means but not the end. He knows it

well that humanity transcends it's centrism and works together to save our environment here on earth as the world or nature is our habitat, our surroundings, everything we interact with, "Love is to me a world" (F 4076), the love with no purpose, the love with no return from it and the love not for man's need but a pure like "close connecting link, Tween heaven and earth" (F 4076), it is the love and connection pure and selfless, hence nature for intrinsic value.

With awareness about the modern trend of natural disaster, he has imagined its possible consequences, "I have seen his slender clan, Clinging to hoar hills with their feet, Threading the forest for their meat" (TMYWO 4331). He is serious on why people are negotiating with nature for the individual, group or institutional advantage; it is the human iniquity to nature if humans understand nature as commodified object with instrumentalized experiences, "We grub the earth for our food, We know not what is good" (4332). Isn't it an irony to human ignorance who is born in the earth, gets shelter and surrounding, receives warm welcome by the earth and again, as its return, separates the earth and its purity with human mischiefs, population, pollution and many more impurities because we "define nature, and then defend nature experience, by reference to the extent to which the natural areas have not been instrumentalised according to the dictates of particular types of anti-naturalistic instrumental rationality" (Stephens 273). Thoreau reinforces the emphasis on the purity of not only the nature but also the purity of human reason and sensation and the modern truth is that "reason, defined as quite separate from natural feeling" (275) with a strong debate of culture and nature relation and distinction; reason, developed from the social understanding, is a cultural domain; and nature, coming from within, is a natural domain, hence the purity in culture and purity in nature are guided concepts as culture and nature dichotomy. Thoreau's question in "we do not know what is good?" is a question on present human understanding of cultural supremacy over nature- pure reason over impure nature as a modern trend, and poses his further question, "Where does the fragrance of our orchards go" (4332), to the supremely civilized humans, "A finer race and finer fed, Feast and revel above our head." (4332), nature, then is not really the means of celebrating for humans, however it happens at the level of perceiving nature because our linkage to our surrounding exists as per the previous conceptual knowledge than the structure of the real nature, hence human evaluative and cognitive domain to nature is always subjective but not really objective, and Thoreau's question is on the subjective cognitive sphere of the humans.

Materially guided principles suppose nature with consummate commodity, negotiable object and instrumental matter, but Thoreau's response to nature marks on human frailty of purposeful appealing to the

entity of nature and unmediated experience of nature for socializing purpose,

"tints and fragrance of the flowers & fruits
Are but the crumbs from off their table
While we consume the pulp and roots
Some times we do assert our kin" (4332)

His arguments stand that objects have a value or worth that is independent of the value and worth ascribed to them by human beings. This implies that "we do something wrong when we treat an object that has a value in itself and of its own as though it has value only in relation to us" (DesJardins 130). We just are guided by the instrumental value of nature with a function of usefulness and we serve the nature as the crumbs at the table and suppose it as a kin. An object with instrumental value possesses that value, because it can be used to attain something else of value. Thinking of natural objects in terms of resources of life is to treat them as having instrumental value, and so do we and focus on the preservation of nature for human tenacity and Thoreau is aware of this truth.

He feels the intrinsic value as the purity of nature, and also his argument is that nature should be natural, leave it natural, and give it be wild for natural wilderness. Also Thoreau has the sense of the difference between preserved nature and the wild nature between which he prefers for the wilderness and searches the purity in it, "My nature grows ever more young, The primitive pines among." (DABWW 4341). We should protect and conserve the nature and its wilderness, because it is the storehouse of vast resources that humans can use. Clean air and water are valued, because without them human health and wellbeing are endangered and the respectable people are the ones who dwell in nature and feel pleasure. Thoreau observes the power of nature to make humans feel even immortal in the poem, "To Respectable Folks" and realizes on how men can be respectable when they respect nature,

The respectable folks,
Where dwell they?
They whisper in the oaks,
And they sigh in the hay,
Summer and winter, night and day,
Out on the meadow, there dwell they. (TRF 4365)

People dwell in the pasture, live with summer and winter, chat with trees in the garden leaving nature free for its own as if nature has its value and humans have the lifestyle of their own and the value of their own and with the value together, "The well-being and flourishing of human and non-human life on Earth have value in themselves (synonyms: intrinsic value, inherent worth). These values are independent of the usefulness of the non- human world for human purposes" (Naess 68), and only then they are well thought of and respectable. Men are respected back when they respect

nature and use it without violation and destruction; use nature for the way to live naturally but not in the artificial and mechanical way. He further elaborates,

They suck the breath of the morning wind,
And they make their own all the good they find.
They never die,
Nor snivel nor cry,
For they have a lease of immortality. (TRF 4365)

Are men completely different from rest of nature to evaluate nature differently- or they are interlinked so that their evaluation of the value of nature, in isolation, becomes quite meaningless because "Man is in the world and his ecology is the nature of that in-ness. He is in the world as in a room, and in transience as in the belly of a tiger or in love. What does he do there in nature? What does nature do there in him?" (Paul 131). With the similar philosophy of nature-man attachment, Thoreau posits that men have no problem, no disease, no pain as such and they do not feel dying accompanied with nature; dying with nature and dying in nature is no death at all because the death in natural way, as men are also the part of nature, is not the death, but the natural transformation. Human life and nature as they form a mesh or pattern going beyond historical time and beyond the conceptual bounds of other humane studies" (132). It is necessary to look into natural history of what it means to be human and what it means to be natural or ecology as the circular connection one for another, and so does Thoreau in the poem that men become immortal in the way nature becomes with constant change as the chain or the cycle. There are the elements of nature in men in the way there is the life in nature,

A sound estate forever they mend,
To every asker readily lend,
To the ocean wealth,
To the meadow health,
To Time his length,
To the rocks strength,
To the stars light
To the weary night,
To the busy day,
To the idle play,
And so their good cheer never ends,
For all are their debtors and all the. (TRF 4366)

He knows it well, all this happens as the part of human life for them just because there is nature and therefore the preservation of plant and animal species, earth and weather, sky and hills, meadows and gardens, rivers and oceans has the essence for nature's wilderness as well as for human welfare with "the vast potential therein for medical and agricultural uses"

(DesJardins 131). With all this conditioning, the happiness of the men and nature never ends, naturalness of nature is never destroyed and purity is preserved. When an object has inherent or intrinsic value of its own, it survives, it flourishes, exists and coexists, and again it is not valued simply for its uses. It does not mean that the intrinsic value of nature does not have any connection to the instrumental value or to the outside value, rather it certainly has, "Some things we value, because we recognize in them a moral, spiritual, symbolic, aesthetic, or cultural importance. We value them for themselves, for what they mean, for what they stand for, and for what they are, not for how they are used" (DesJardins 131). No man can be a man without nature; no nature would be nature as such without realization of its value because "Richness and diversity of life forms contribute to the realization of these values and are also values in themselves" (Naess 68). So, Thoreau supposes those human beings as respectable folks who always partake in nature, respects its processes and assimilates within nature to immortalize them.

Essentially, Thoreau has arrived to the point of the importance of purity in nature and ethical understanding of nature both as intrinsic and instrumental in humans with the conclusion that nature is home to more than just people – it is home to plants, animals, and microscopic organisms alike, all of which the human race relies on for survival, and the totality of pure nature, pure human reason, pure lifestyle, self realization of the respect to the ethics of each and individual human and nonhuman identity.

IV. CONCLUSION

Thoreau has used images from nature to convey universal truths- the truth of nature and the truth of life. His primary way of using nature images is to show nature as perfect, self-sufficient, the source of eternal change and the teacher to guide the whole nature as endless system. There is a practical reason for this use, since nature continues to take care of its own, there is no need to have human intrusion for its self survival; as the birds build nests, the trees disseminate their seeds, and the waters keep themselves fresh and clean with no man's help, and Thoreau has admired this self abundance, wealth and richness of nature through his poems with the foresight to human trend of destroying the nature in the name of using it and preserving it; for him nature must be left natural. Nature is the meeting point of the ideal and the physical; therefore, by observing nature, Thoreau was observing the ideal at work.

Nature provides man with a substance through which man can approach his/her ideal, an ideal life and ideal relationship with nature and with other men by coming close to nature both physically and spiritually,

and man can free himself/herself from worldly bonds. Nature, he believes, consists of its self value- value of its own growth, change and the nature's ethics for its own as intrinsic value and also as Thoreau supposes nature as the inspiration and the source of human eco-culture and ecological civilization, certainly has the instrumental value, but he is always against the material, human and technological interfere to nature as he believes in the preserved wilderness as the purity in nature and purity in human behaviour.

Our future turns on a simple, nearly forgotten, truth is that we humans are living beings born of and nurtured by a living earth and lively nature as a system. Our health and wellbeing depend on the health and wellbeing of nature, our life depends on the life of nature, and so, nature cares for us, we must also care for nature. It is, as Thoreau has frequently focused on, the foundational premise of the emerging vision of the possibilities of an ecological civilization grounded in a new enlightenment understanding of beauty, wonder, meaning, and purpose of creation. Spirited with transcendental understanding of identifying nature as the means of realizing the supreme power- super soul, Thoreau's poems speak to make aware of the need of humanity's emerging vision of an eco-civilization grounded in our deepest human understanding of creation's purpose, life's organizing principles, and our human nature and possibility as discerned by the converging insights of indigenous wisdom keepers, the great spiritual teachers, and leading-edge scientists. Focusing all these philosophies and ideologies of values, ethics, purity, eternity, wilderness and a transformation of nature's essence into the lifestyle through his poetic expression, Thoreau, even from a far back from the principle of ecopoetics in the time zone, has developed ecological writing in this poems as a trendsetter from American writing.

Abbreviations used in the article

ATAC -All things are Current

ATD- All things decay

DABBWW- Die and be buried who will

F- Friendship

FH- Fair Heaven

FIMD-Forever in my dream

LTOM- Like torrents of Mountains

OC- Our Country

PTWED- Pray to What Earth Does

TE- The Earth

TICHRH- Today I Climbed a Handsome Rounded Hill

TJMP- The just made perfect

TMYWO- Tell me ye wise ones if ye can

TRF- The respectable folks

REFERENCES RÉFÉRENCES REFERENCIAS

- Buell, Lawrence. *The Environmental Imagination: Thoreau, Nature Writing and the Formation of American Culture*, London: Princeton UP, 1995.
- Cafaro, Philip. "Thoreau, Henry David". *Encyclopedia of Environmental Ethics and Philosophy*. Eds. J. Baird Callicott and Robert Frofeman. New York: Gale, 2009.
- Callicott, J. Baird. *Earth's Insights: A Survey of Ecological Ethics from the Mediterranean Basin to the Australian Outback*. London: University of California Press, 1994.
- Complete Works of Henry David Thoreau*. Delphi Classics, 2013. <https://bok.cc/book/4991703/36adc7>
- DesJardins, Joseph R. *Environmental Ethics: An Introduction to Environmental Philosophy*. 5th ed. Boston: Wadsworth, 2013.
- Dewey, A. *Common Faith*. New Haven: Yale University Press, 1934.
- Eames, S. Morris. *Pragmatic naturalism: An Introduction*. Carbondale: South Illinois UP, 1977.
- Elliot, Robert. "Instrumental Value in Nature as a Basis for the Intrinsic Value of Nature as Whole". *Environmental Ethics*. 27. 1. <https://www.researchgate.net/publication/265285656>
- Ford, Arthur L. *A Critical Study of the Poetry of Henry David Thoreau*. (Unpublished) PhD Dissertation, Bowling University, 1964.
- Garrard, Greg. *Ecocriticism*. New York & London: Routledge, 2004.
- Hume, Angela. "Imagining Ecopoetics: An Interview with Robert Hass, Brenda Hillman, Evelyn Reilly, and Jonathan Skinner". *Interdisciplinary Studies in Literature and Environment (ISLE)*. 19. 4. 2012. isle.oxfordjournals.org
- Killingsworth, M. Jimmie. *Walt Whitman and the Earth: A Study in Ecopoetics*. USA: University of Iowa Press, 2004.
- Kuperus, Gerard. "An Ecology of the Future: Nietzsche and Ecological Restoration". *Ontologies of Nature*. Eds. Gerard Kuperus and Marjolein Oele. Springer Publication, 2017.
- Morrison, Ronald P. "Wilderness and Clearing Thoreau, Heidegger and the poetic". *Interdisciplinary Studies in Literature and Environment (ISLE)* 10.1 (Winter 2003).
- Naess, Arne. "The Deep Ecological Movement, Some Philosophical Aspects". *Deep Ecology for the 21st Century*. Ed. George Session. Boston and London: Shambhala, 1995.
- Neimark, Peninah, and Peter Rhoades Mott. *The Environmental Debate: A Documentary History*. Westport: Greenwood Press, 1999.

17. Nelson, Michael P. "Wilderness". *Encyclopedia of Environmental Ethics and Philosophy*. Eds. J. Baird Callicott and Robert Frofeman. New York: Gale, 2009.
18. Orr, David W. *The Nature of Design*. New York: Oxford UP, 2002.
19. Paul, Shephard. "Ecology and Man: A Viewpoint". *Deep Ecology for the 21st Century*. Ed. George Session. Boston and London: Shambhala, 1995.
20. Slovic, Scott. *Seeking awareness in American Nature Writing*. Salt Lake City: University of Utah Press, 1992.
21. *Stanford Encyclopedia of Philosophy*. <https://plato.stanford.edu/entries/thoreau/>
22. Stephens, Piers H.G., "Nature, Purity, Ontology." *Environmental Values* 9, no. 3, (2000): 267-294. <http://www.environmentandsociety.org/node/5801>
23. Thoreau, Henry David. "Walden." *The Norton Anthology of American Literature*. Ed. Nina Baym. et al. 3rd ed. vol. 1. New York: W. W. Norton and Company, 1989. 1588-1849.
24. Weiner, Gary. *Social Issues in Literature: The Environment in Henry David Thoreau's Walden*. Farmington Hills: Greenhaven Press, Gale Cengage Learning, 2010.
25. Westling, Louise, ed. *Literature and the Environment*. New York: Cambridge UP, 2013.





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Glaucomatous Process in Conditions of Sharply Continental Climate: Chronobiological Clinical Features and Forecasting Issues

By Ne'matjon S. Mamasoliev, B. M. Nazarov & Ziyadullo N. Mamasoliev

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At the same time, with regret, representatives of many large ophthalmological schools argue that the percentage of blood glucose from blood glucose is high and this allows glaucoma to be considered a medical-social-economic disease (15), which is quickly moving forward on the priority plan with AIDS, TB with systematic infection and Non-communicable diseases (10,11).

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Glaucomatous Process in Conditions of Sharply Continental Climate: Chronobiological Clinical Features and Forecasting Issues

Ne'matjon S. Mamasoliev ^α, B. M. Nazarov ^σ & Ziyadullo N. Mamasoliev ^ρ

Abstract- The data of the general literature testify that at present glaucoma and or glaucomatous processes (GP) still remain in the leading group of diseases leading to "ophthocontinium" (blindness, disability, decay of visual functions), regardless of place of residence and standard of living (1,2,3,). Researchers agree on the purpose of the distribution of GP in various climatic-meteo-geographical regions around the globe and or within individual countries and their dependence not only on epidemiological and genetic factors, but also on meteorological (9,14), social (4), climatic (8, 15) and ethnic factors (5,7).

At the same time, with regret, representatives of many large ophthalmological schools argue that the percentage of blood glucose from blood glucose is high and this allows glaucoma to be considered a medical-social-economic disease (15), which is quickly moving forward on the priority plan with AIDS, TB with systematic infection and Non-communicable diseases (10,11).

I. INTRODUCTION

Today, about 60.5 million people in the world suffer from glaucoma. It is predicted that this year (by 2020) it will increase to 79.6 million (12). Analysis of modern literature is intended to assert the key points in the problem of GP: a) the development of issues of prevention of GP are among the most important scientific and practical problems: b) if there is an urgent need for active and widespread measures for its early screening (prenosological) diagnosis, treatment and prevention, c) epidemiological study, clinical and meteorological observation and active prevention of the population and patients with GP in different climatic and geographical zones of the globe is a decisive saving factor in the fight against the emergence of "ophthocontinuum" from glaucoma, d) development of new equipment, the introduction of modern treatment methods (medication, laser and surgical), based on the presentation on the etiology and pathogenesis of GP,

do not lead to a decrease in life-threatening complications of glaucoma (6,13).

The purpose of the research is to study glaucomatous processes in a sharply continental climate, develop a system for forecasting and meteorological prevention of glaucoma among the population.

II. MATERIAL AND METHODS

To achieve this goal, we have developed and used a special dynamic observation map, consisting of clinical and meteorological parts, which corresponded to international experiments in recording the ceiling dynamics in patients and fluctuations in meteorological conditions.

The map was used for studying and measuring atmospheric pressure (AP), air temperature (AT), relative air humidity (RAH) and solar glare (SG) for the development and course of the GP.

In the conditions of the regional eye dispensary of Andijan (the city's climate acquires a sharply continental character: cloudy weather, frequent precipitation, strong winds are rare, winter is stable, spring and autumn are warm, summer-dry and hot) using the method of 3-year clinical meteorological studies examined and analyzed 1112 patients with GP at the age of 15 - 70 years. There were 401 (36.0%) men and 711 (64.0%) women.

In the conditions of the regional eye dispensary, special cards were used to register the calls of the population about glaucoma with an accuracy of minutes: a chart-graph of the appealability was built with a conditional allocation of the time of day with a high, average and reduced circulation of the GP, the role of meteopathic effects of atmospheric processes was studied V.F. Ovcharova (1982).

In the course of three years of clinical meteorological observation of patients with GP in the conditions of the Andijan regional eye dispensary, a periodic review of meteorological and weather factors from the journals TM-1, TM - 12 and TM - 15 of the local hydrometeorological department was obtained. solar fusion, total solar radiation, AP, AT, RAH, SG, amount of precipitation and atmospheric phenomena. The ratios of the frequency of GP in the daytime and nighttime were

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recorded by months and seasons during the year, the average daily, maximum and daily variability of each meteorological element was calculated with the characteristics of the noted phenomena. To determine the importance of individual meteorological factors (MF) in the development, flow and softening of the GP, the method of multivariate analysis (Razorenkov G.I. et al, 1985) and the functional model of statustometry (Ivchik T.F. et al. 2001) were used. Prediction of meteorotropic reactions was carried out according to the method of Z. Zununov (2002).

During the statistical processing of the obtained data, the Spriman method, Microsoft Excel program, nonparametric Velikikson test, paired and unpaired Student's tests, covariance-regression analysis with determination of β -coefficients and odds ratios were used. The critical level of statistical significance was taken as the probability of an error-free prediction equal to 95% ($P < 0.05$).

III. RESULTS AND DISCUSSION

The introduction of methods of medical forecasting of meteorological conditions leads to an improvement in the quality of life and the equivalents of "healthy life years" at the population level. It is from this position that this problem has become a priority in all climatic and geographical regions of the world. Our analyzes in this direction showed that under the conditions of the sharply continental climate of the Fergana Valley (Andijan), spring and summer turned out to be comparatively pathogenic in the development of HP, while autumn and winter are less dangerous seasons. Thus, the most frequent GPs were registered in two seasons - spring (32.6%) and winter (32.6%).

Compared with the imaginary frequency, they were detected in summer (17.9%) and autumn (17.0%). The same tendencies were established with all forms of HP in spring, summer, autumn and winter, respectively, with the following frequent incidence: acute-angle glaucoma (OAG) - 34.4%, 16.7%, 22.2% and 26.7% each (differ in 2 times, $P < 0.01$), angle-closure glaucoma (ZUG) - 36.9%, 20.0%, 18.1% and 25.0% each (differ by 2.4 times, $P < 0.01$), mixed glaucoma (MG) - 19.2%, 34.6%, 19.2% and 26.9% each (differ by 1.3 times, $P < 0.05$) and acute attacks of glaucoma (AGA) - 30 each, 2%, 9.3%, 2.3% and 58.1% (vary 29 times, $P < 0.001$). The chronobiological features of the development of HF in different months of the year under the climatic conditions of the Fergana Valley (Andijan) were analyzed, and somewhat different regularities were approved. Thus, with regard to the development and clinical manifestation of GP, the most unfavorable months of the year were March, February, May, and April; January, September, June and October were comparatively less pathogenic ($\tau = +0.94$, $P < 0.001$).

In different months, depending on the degree of disturbance of the meta-factors of the studied region of the Fergana Valley of Uzbekistan, SOs are characterized with the following frequency indicators: in March-14.4%, in February - 34.8%, and in May - 13.5%, in April - 12.7 %, in January - 9.8%, in June - 8.4%, in September- 2.0% and in October - 5.2%. With an imaginary frequency, more than 7 times less frequent, were detected in September and October. During the year, GPs were detected with a difference in frequency of 12.4% ($\tau = + 0.94$, $P < 0.001$).

Further, it can be seen from our data that special ophthalmological and clinical symptoms (mixed injection) have a clearly pronounced seasonality: clinical manifestations of GP (ocular and extraocular) with the greatest frequent increase are detected in summer (with an increase to 33.6%) and in the spring (with an increase to 31.8%), during the year, low rates of pathology symptoms were observed - in the fall (20.1%) and winter (14.5%). "Clinical disturbance" of the HP during the year, depending on the fluctuations of atmospheric elements (AP, AT, RAH and SG) differ by more than 2.3% times ($P < 0.001$). Thus, decreased vision and ophthalmic hypertension in different seasons of the year were observed with a difference in the following levels: in the spring - 33.2% and 34.4% each, in the summer - 30.9% and 30.4% each, in the fall - 20.0% each. and 20.0%, in winter - 15.9% and 15.1% each.

Eye pains and headaches were also observed with a difference in different seasons of the year: in spring - 34.0% and 31.9% each, in summer - 30.4% and 23.9%, in autumn - 22.8% and 23, 9%, in winter - 13.2% and 13.3% each.

The detection rate of extraocular symptoms (nausea and vomiting) fluctuated with a difference in levels of more than 3 times ($P < 0.01$): the highest frequency is observed in spring (30.2%) and summer (36.6%), low rates are observed in autumn (20.8%) and in winter (12.4%).

Thus, under the conditions of the sharply continental climate of the Fergana Valley of Uzbekistan, a relationship has been established between MF and the clinical course of GF: there is a seasonality in the progression of clinical manifestations of GF under the influence of an unfavorable meteorological regime, which manifests itself with sharp shifts in the indicators of clinical and ocular response in patients with HF during fluctuations in atmospheric processes. Further, on the basis of generally accepted methodology using non-parametric statistics methods (χ^2 , the Pearson and Spearman correlation coefficient), forecast tables, bioclimatograms and the GP meteorological system have been developed in accordance with the levels of fluctuation of meteorological factors of the first order - AP, AT, RAH and SG.

Based on the data obtained in this direction, it was confirmed that the total risk of HP development and acute attacks of glaucoma and or their complications in accordance with the levels of MF fluctuations increase with the following regional specifics: due to an increase in the level and fluctuations of AD, the risk of HP development and or complications increases by 25, 0%, the assumed level of the risk of developing HF does not increase by 24.2% with an increase in SG, this MF turned out to be a priority in the studied region and under the influence of their risk of GP development increases more than 8 times.

Presented in tables and bioclimatograms, these materials are recommended for clinicians and practitioners are recommended as a working tool for daily use in the development of recommendations for the rotation of the lifestyle of patients with GH, prescribing a conservative or surgical strategy, and, most importantly, with the active implementation of regional preventive programs and rehabilitation and preventive intervention in relation to this pathology.

IV. CONCLUSIONS

1. There is a direct correlation between meteorological factors (AP, AT, RAH and SG) and the development "Ophthalmic continuum" from glaucomatous processes. Fluctuation of the main regional meteorological factors of the first order is the risk factors for the development and progression of GP.
2. In order to optimize and improve the therapeutic, prophylactic and rehabilitation programs of the GP, it seems appropriate to use the developed regional methods of clinical meteorological observation and meteorological prevention, based on the use of the forecast table and bioclimatograms.

REFERENCES RÉFÉRENCES REFERENCIAS

1. Akhrorova Z.D. Primary glaucoma in Tajikistan (clinical-epidemiological and medical-social research)//wedge ophthalmolo 2002, 3 (2): 57-58.
2. Avdeev R.V., Alexandrov A.S., Basinsky A.S. et al. Clinical and epidemiological studies of risk factors for the development and progression of glaucoma // Russian Ophthalmological Journal - 2013 - 6 (3): 5-9.
3. Diagnostics and treatment of primary open-angle glaucoma // Federal Clinical Recommendations of the Interregional Society. org. "Association of ophthalmologists" Moscow - 2013. - p - 3.
4. Egorov E.A., Astanov Yu.S., Erichev V.P. National Guidelines for Glaucoma Practitioners. M: GEOTAR-Media, 2015: 451-455.
5. Kiselova O.A., Kasanyan S.M., Yakubova L.V. et al. Potophysiological features of development, clinical picture and manifestation of malignant glaucoma//

- Ophthalmologic Vedamesty-2019-T-12, - No. 03 - C 60-63.
6. Tarasov K.L. Complex preventive surgical postoperative malignant glaucoma // Abstract of the thesis. dis ... cand. Med.nauk - M- 2014- C 27-29.
7. Kuraedov A.V., Krinitsina E.A. et al. Changes in the structure of clinical and epidemiological indicators of primary out-of-angle glaucoma over 10 years in patients undergoing surgery// Ophthalmologicheskie vedomosti-2019 - T. 12-t No. 3 - C 206-207.
8. Kanyukov V.N., Voronima A.U., Borshchuk E.L. Medical and social characteristics of patients with primary open-angle glaucoma in the Orenburg region // Bulletin of the Orenburg State University-2015- № 9 (184). - From 77-80.
9. Sharaf Vakdi Muhammadi Epidemiological features of the clinical course of glaucoma depending on social, ecanomical, ethnic and geographical factors // National Journal of Glaucoma - 2014. - № 1 - C 69-74.
10. Tielsch j / M / The epidemiology of grimary open-angle glaucoma || Ophthalmol Clin NA m 1991; 4: 649-654.
11. Mandal AK The pediatric glaucomas//hondon.-Netlan.-2006.-P.156.
12. Quigley HA Nutber of people with glaucoma worldwide // Br J ophthalmol 1996; 80 (5): 389-392.
13. Finger RP, Koberlein-Neu J. et al. Trends in inpatient treatment in ophthalmology in Germany// Ophthalmolge 2013; 110 (3): 225-228.
14. Foster P. J., Baasanhu J. et al. Glaucoma in Mongolia//Arch Opt halmol 1196: 114: 1235-1239.
15. Gao D. W., Kubota T. et al. Astatistical comparison study of glaucoma in the Third Affiliated Hospital of china Medical College and Kyshu University Japanese // Acta Soc Ophthalmol Jap 1989; 93 (4): 458-462.

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PREPARING YOUR MANUSCRIPT

Authors can submit papers and articles in an acceptable file format: MS Word (doc, docx), LaTeX (.tex, .zip or .rar including all of your files), Adobe PDF (.pdf), rich text format (.rtf), simple text document (.txt), Open Document Text (.odt), and Apple Pages (.pages). Our professional layout editors will format the entire paper according to our official guidelines. This is one of the highlights of publishing with Global Journals—authors should not be concerned about the formatting of their paper. Global Journals accepts articles and manuscripts in every major language, be it Spanish, Chinese, Japanese, Portuguese, Russian, French, German, Dutch, Italian, Greek, or any other national language, but the title, subtitle, and abstract should be in English. This will facilitate indexing and the pre-peer review process.

The following is the official style and template developed for publication of a research paper. Authors are not required to follow this style during the submission of the paper. It is just for reference purposes.



Manuscript Style Instruction (Optional)

- Microsoft Word Document Setting Instructions.
- Font type of all text should be Swis721 Lt BT.
- Page size: 8.27" x 11", left margin: 0.65, right margin: 0.65, bottom margin: 0.75.
- Paper title should be in one column of font size 24.
- Author name in font size of 11 in one column.
- Abstract: font size 9 with the word "Abstract" in bold italics.
- Main text: font size 10 with two justified columns.
- Two columns with equal column width of 3.38 and spacing of 0.2.
- First character must be three lines drop-capped.
- The paragraph before spacing of 1 pt and after of 0 pt.
- Line spacing of 1 pt.
- Large images must be in one column.
- The names of first main headings (Heading 1) must be in Roman font, capital letters, and font size of 10.
- The names of second main headings (Heading 2) must not include numbers and must be in italics with a font size of 10.

Structure and Format of Manuscript

The recommended size of an original research paper is under 15,000 words and review papers under 7,000 words. Research articles should be less than 10,000 words. Research papers are usually longer than review papers. Review papers are reports of significant research (typically less than 7,000 words, including tables, figures, and references)

A research paper must include:

- a) A title which should be relevant to the theme of the paper.
- b) A summary, known as an abstract (less than 150 words), containing the major results and conclusions.
- c) Up to 10 keywords that precisely identify the paper's subject, purpose, and focus.
- d) An introduction, giving fundamental background objectives.
- e) Resources and techniques with sufficient complete experimental details (wherever possible by reference) to permit repetition, sources of information must be given, and numerical methods must be specified by reference.
- f) Results which should be presented concisely by well-designed tables and figures.
- g) Suitable statistical data should also be given.
- h) All data must have been gathered with attention to numerical detail in the planning stage.

Design has been recognized to be essential to experiments for a considerable time, and the editor has decided that any paper that appears not to have adequate numerical treatments of the data will be returned unrefereed.

- i) Discussion should cover implications and consequences and not just recapitulate the results; conclusions should also be summarized.
- j) There should be brief acknowledgments.
- k) There ought to be references in the conventional format. Global Journals recommends APA format.

Authors should carefully consider the preparation of papers to ensure that they communicate effectively. Papers are much more likely to be accepted if they are carefully designed and laid out, contain few or no errors, are summarizing, and follow instructions. They will also be published with much fewer delays than those that require much technical and editorial correction.

The Editorial Board reserves the right to make literary corrections and suggestions to improve brevity.



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It is necessary that authors take care in submitting a manuscript that is written in simple language and adheres to published guidelines.

All manuscripts submitted to Global Journals should include:

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The title page must carry an informative title that reflects the content, a running title (less than 45 characters together with spaces), names of the authors and co-authors, and the place(s) where the work was carried out.

Author details

The full postal address of any related author(s) must be specified.

Abstract

The abstract is the foundation of the research paper. It should be clear and concise and must contain the objective of the paper and inferences drawn. It is advised to not include big mathematical equations or complicated jargon.

Many researchers searching for information online will use search engines such as Google, Yahoo or others. By optimizing your paper for search engines, you will amplify the chance of someone finding it. In turn, this will make it more likely to be viewed and cited in further works. Global Journals has compiled these guidelines to facilitate you to maximize the web-friendliness of the most public part of your paper.

Keywords

A major lynchpin of research work for the writing of research papers is the keyword search, which one will employ to find both library and internet resources. Up to eleven keywords or very brief phrases have to be given to help data retrieval, mining, and indexing.

One must be persistent and creative in using keywords. An effective keyword search requires a strategy: planning of a list of possible keywords and phrases to try.

Choice of the main keywords is the first tool of writing a research paper. Research paper writing is an art. Keyword search should be as strategic as possible.

One should start brainstorming lists of potential keywords before even beginning searching. Think about the most important concepts related to research work. Ask, "What words would a source have to include to be truly valuable in a research paper?" Then consider synonyms for the important words.

It may take the discovery of only one important paper to steer in the right keyword direction because, in most databases, the keywords under which a research paper is abstracted are listed with the paper.

Numerical Methods

Numerical methods used should be transparent and, where appropriate, supported by references.

Abbreviations

Authors must list all the abbreviations used in the paper at the end of the paper or in a separate table before using them.

Formulas and equations

Authors are advised to submit any mathematical equation using either MathJax, KaTeX, or LaTeX, or in a very high-quality image.

Tables, Figures, and Figure Legends

Tables: Tables should be cautiously designed, uncrowned, and include only essential data. Each must have an Arabic number, e.g., Table 4, a self-explanatory caption, and be on a separate sheet. Authors must submit tables in an editable format and not as images. References to these tables (if any) must be mentioned accurately.



Figures

Figures are supposed to be submitted as separate files. Always include a citation in the text for each figure using Arabic numbers, e.g., Fig. 4. Artwork must be submitted online in vector electronic form or by emailing it.

PREPARATION OF ELETRONIC FIGURES FOR PUBLICATION

Although low-quality images are sufficient for review purposes, print publication requires high-quality images to prevent the final product being blurred or fuzzy. Submit (possibly by e-mail) EPS (line art) or TIFF (halftone/ photographs) files only. MS PowerPoint and Word Graphics are unsuitable for printed pictures. Avoid using pixel-oriented software. Scans (TIFF only) should have a resolution of at least 350 dpi (halftone) or 700 to 1100 dpi (line drawings). Please give the data for figures in black and white or submit a Color Work Agreement form. EPS files must be saved with fonts embedded (and with a TIFF preview, if possible).

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TIPS FOR WRITING A GOOD QUALITY SOCIAL SCIENCE RESEARCH PAPER

Techniques for writing a good quality human social science research paper:

1. Choosing the topic: In most cases, the topic is selected by the interests of the author, but it can also be suggested by the guides. You can have several topics, and then judge which you are most comfortable with. This may be done by asking several questions of yourself, like "Will I be able to carry out a search in this area? Will I find all necessary resources to accomplish the search? Will I be able to find all information in this field area?" If the answer to this type of question is "yes," then you ought to choose that topic. In most cases, you may have to conduct surveys and visit several places. Also, you might have to do a lot of work to find all the rises and falls of the various data on that subject. Sometimes, detailed information plays a vital role, instead of short information. Evaluators are human: The first thing to remember is that evaluators are also human beings. They are not only meant for rejecting a paper. They are here to evaluate your paper. So present your best aspect.

2. Think like evaluators: If you are in confusion or getting demotivated because your paper may not be accepted by the evaluators, then think, and try to evaluate your paper like an evaluator. Try to understand what an evaluator wants in your research paper, and you will automatically have your answer. Make blueprints of paper: The outline is the plan or framework that will help you to arrange your thoughts. It will make your paper logical. But remember that all points of your outline must be related to the topic you have chosen.

3. Ask your guides: If you are having any difficulty with your research, then do not hesitate to share your difficulty with your guide (if you have one). They will surely help you out and resolve your doubts. If you can't clarify what exactly you require for your work, then ask your supervisor to help you with an alternative. He or she might also provide you with a list of essential readings.

4. Use of computer is recommended: As you are doing research in the field of human social science then this point is quite obvious. Use right software: Always use good quality software packages. If you are not capable of judging good software, then you can lose the quality of your paper unknowingly. There are various programs available to help you which you can get through the internet.

5. Use the internet for help: An excellent start for your paper is using Google. It is a wondrous search engine, where you can have your doubts resolved. You may also read some answers for the frequent question of how to write your research paper or find a model research paper. You can download books from the internet. If you have all the required books, place importance on reading, selecting, and analyzing the specified information. Then sketch out your research paper. Use big pictures: You may use encyclopedias like Wikipedia to get pictures with the best resolution. At Global Journals, you should strictly follow [here](#).



6. Bookmarks are useful: When you read any book or magazine, you generally use bookmarks, right? It is a good habit which helps to not lose your continuity. You should always use bookmarks while searching on the internet also, which will make your search easier.

7. Revise what you wrote: When you write anything, always read it, summarize it, and then finalize it.

8. Make every effort: Make every effort to mention what you are going to write in your paper. That means always have a good start. Try to mention everything in the introduction—what is the need for a particular research paper. Polish your work with good writing skills and always give an evaluator what he wants. Make backups: When you are going to do any important thing like making a research paper, you should always have backup copies of it either on your computer or on paper. This protects you from losing any portion of your important data.

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10. Use proper verb tense: Use proper verb tenses in your paper. Use past tense to present those events that have happened. Use present tense to indicate events that are going on. Use future tense to indicate events that will happen in the future. Use of wrong tenses will confuse the evaluator. Avoid sentences that are incomplete.

11. Pick a good study spot: Always try to pick a spot for your research which is quiet. Not every spot is good for studying.

12. Know what you know: Always try to know what you know by making objectives, otherwise you will be confused and unable to achieve your target.

13. Use good grammar: Always use good grammar and words that will have a positive impact on the evaluator; use of good vocabulary does not mean using tough words which the evaluator has to find in a dictionary. Do not fragment sentences. Eliminate one-word sentences. Do not ever use a big word when a smaller one would suffice.

Verbs have to be in agreement with their subjects. In a research paper, do not start sentences with conjunctions or finish them with prepositions. When writing formally, it is advisable to never split an infinitive because someone will (wrongly) complain. Avoid clichés like a disease. Always shun irritating alliteration. Use language which is simple and straightforward. Put together a neat summary.

14. Arrangement of information: Each section of the main body should start with an opening sentence, and there should be a changeover at the end of the section. Give only valid and powerful arguments for your topic. You may also maintain your arguments with records.

15. Never start at the last minute: Always allow enough time for research work. Leaving everything to the last minute will degrade your paper and spoil your work.

16. Multitasking in research is not good: Doing several things at the same time is a bad habit in the case of research activity. Research is an area where everything has a particular time slot. Divide your research work into parts, and do a particular part in a particular time slot.

17. Never copy others' work: Never copy others' work and give it your name because if the evaluator has seen it anywhere, you will be in trouble. Take proper rest and food: No matter how many hours you spend on your research activity, if you are not taking care of your health, then all your efforts will have been in vain. For quality research, take proper rest and food.

18. Go to seminars: Attend seminars if the topic is relevant to your research area. Utilize all your resources.

Refresh your mind after intervals: Try to give your mind a rest by listening to soft music or sleeping in intervals. This will also improve your memory. Acquire colleagues: Always try to acquire colleagues. No matter how sharp you are, if you acquire colleagues, they can give you ideas which will be helpful to your research.

19. Think technically: Always think technically. If anything happens, search for its reasons, benefits, and demerits. Think and then print: When you go to print your paper, check that tables are not split, headings are not detached from their descriptions, and page sequence is maintained.



20. Adding unnecessary information: Do not add unnecessary information like "I have used MS Excel to draw graphs." Irrelevant and inappropriate material is superfluous. Foreign terminology and phrases are not apropos. One should never take a broad view. Analogy is like feathers on a snake. Use words properly, regardless of how others use them. Remove quotations. Puns are for kids, not grunt readers. Never oversimplify: When adding material to your research paper, never go for oversimplification; this will definitely irritate the evaluator. Be specific. Never use rhythmic redundancies. Contractions shouldn't be used in a research paper. Comparisons are as terrible as clichés. Give up ampersands, abbreviations, and so on. Remove commas that are not necessary. Parenthetical words should be between brackets or commas. Understatement is always the best way to put forward earth-shaking thoughts. Give a detailed literary review.

21. Report concluded results: Use concluded results. From raw data, filter the results, and then conclude your studies based on measurements and observations taken. An appropriate number of decimal places should be used. Parenthetical remarks are prohibited here. Proofread carefully at the final stage. At the end, give an outline to your arguments. Spot perspectives of further study of the subject. Justify your conclusion at the bottom sufficiently, which will probably include examples.

22. Upon conclusion: Once you have concluded your research, the next most important step is to present your findings. Presentation is extremely important as it is the definite medium through which your research is going to be in print for the rest of the crowd. Care should be taken to categorize your thoughts well and present them in a logical and neat manner. A good quality research paper format is essential because it serves to highlight your research paper and bring to light all necessary aspects of your research.

INFORMAL GUIDELINES OF RESEARCH PAPER WRITING

Key points to remember:

- Submit all work in its final form.
- Write your paper in the form which is presented in the guidelines using the template.
- Please note the criteria peer reviewers will use for grading the final paper.

Final points:

One purpose of organizing a research paper is to let people interpret your efforts selectively. The journal requires the following sections, submitted in the order listed, with each section starting on a new page:

The introduction: This will be compiled from reference matter and reflect the design processes or outline of basis that directed you to make a study. As you carry out the process of study, the method and process section will be constructed like that. The results segment will show related statistics in nearly sequential order and direct reviewers to similar intellectual paths throughout the data that you gathered to carry out your study.

The discussion section:

This will provide understanding of the data and projections as to the implications of the results. The use of good quality references throughout the paper will give the effort trustworthiness by representing an alertness to prior workings.

Writing a research paper is not an easy job, no matter how trouble-free the actual research or concept. Practice, excellent preparation, and controlled record-keeping are the only means to make straightforward progression.

General style:

Specific editorial column necessities for compliance of a manuscript will always take over from directions in these general guidelines.

To make a paper clear: Adhere to recommended page limits.



Mistakes to avoid:

- Insertion of a title at the foot of a page with subsequent text on the next page.
- Separating a table, chart, or figure—confine each to a single page.
- Submitting a manuscript with pages out of sequence.
- In every section of your document, use standard writing style, including articles ("a" and "the").
- Keep paying attention to the topic of the paper.
- Use paragraphs to split each significant point (excluding the abstract).
- Align the primary line of each section.
- Present your points in sound order.
- Use present tense to report well-accepted matters.
- Use past tense to describe specific results.
- Do not use familiar wording; don't address the reviewer directly. Don't use slang or superlatives.
- Avoid use of extra pictures—include only those figures essential to presenting results.

Title page:

Choose a revealing title. It should be short and include the name(s) and address(es) of all authors. It should not have acronyms or abbreviations or exceed two printed lines.

Abstract: This summary should be two hundred words or less. It should clearly and briefly explain the key findings reported in the manuscript and must have precise statistics. It should not have acronyms or abbreviations. It should be logical in itself. Do not cite references at this point.

An abstract is a brief, distinct paragraph summary of finished work or work in development. In a minute or less, a reviewer can be taught the foundation behind the study, common approaches to the problem, relevant results, and significant conclusions or new questions.

Write your summary when your paper is completed because how can you write the summary of anything which is not yet written? Wealth of terminology is very essential in abstract. Use comprehensive sentences, and do not sacrifice readability for brevity; you can maintain it succinctly by phrasing sentences so that they provide more than a lone rationale. The author can at this moment go straight to shortening the outcome. Sum up the study with the subsequent elements in any summary. Try to limit the initial two items to no more than one line each.

Reason for writing the article—theory, overall issue, purpose.

- Fundamental goal.
- To-the-point depiction of the research.
- Consequences, including definite statistics—if the consequences are quantitative in nature, account for this; results of any numerical analysis should be reported. Significant conclusions or questions that emerge from the research.

Approach:

- Single section and succinct.
- An outline of the job done is always written in past tense.
- Concentrate on shortening results—limit background information to a verdict or two.
- Exact spelling, clarity of sentences and phrases, and appropriate reporting of quantities (proper units, important statistics) are just as significant in an abstract as they are anywhere else.

Introduction:

The introduction should "introduce" the manuscript. The reviewer should be presented with sufficient background information to be capable of comprehending and calculating the purpose of your study without having to refer to other works. The basis for the study should be offered. Give the most important references, but avoid making a comprehensive appraisal of the topic. Describe the problem visibly. If the problem is not acknowledged in a logical, reasonable way, the reviewer will give no attention to your results. Speak in common terms about techniques used to explain the problem, if needed, but do not present any particulars about the protocols here.



The following approach can create a valuable beginning:

- Explain the value (significance) of the study.
- Defend the model—why did you employ this particular system or method? What is its compensation? Remark upon its appropriateness from an abstract point of view as well as pointing out sensible reasons for using it.
- Present a justification. State your particular theory(-ies) or aim(s), and describe the logic that led you to choose them.
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Approach:

Use past tense except for when referring to recognized facts. After all, the manuscript will be submitted after the entire job is done. Sort out your thoughts; manufacture one key point for every section. If you make the four points listed above, you will need at least four paragraphs. Present surrounding information only when it is necessary to support a situation. The reviewer does not desire to read everything you know about a topic. Shape the theory specifically—do not take a broad view.

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Procedures (methods and materials):

This part is supposed to be the easiest to carve if you have good skills. A soundly written procedures segment allows a capable scientist to replicate your results. Present precise information about your supplies. The suppliers and clarity of reagents can be helpful bits of information. Present methods in sequential order, but linked methodologies can be grouped as a segment. Be concise when relating the protocols. Attempt to give the least amount of information that would permit another capable scientist to replicate your outcome, but be cautious that vital information is integrated. The use of subheadings is suggested and ought to be synchronized with the results section.

When a technique is used that has been well-described in another section, mention the specific item describing the way, but draw the basic principle while stating the situation. The purpose is to show all particular resources and broad procedures so that another person may use some or all of the methods in one more study or referee the scientific value of your work. It is not to be a step-by-step report of the whole thing you did, nor is a methods section a set of orders.

Materials:

Materials may be reported in part of a section or else they may be recognized along with your measures.

Methods:

- Report the method and not the particulars of each process that engaged the same methodology.
- Describe the method entirely.
- To be succinct, present methods under headings dedicated to specific dealings or groups of measures.
- Simplify—detail how procedures were completed, not how they were performed on a particular day.
- If well-known procedures were used, account for the procedure by name, possibly with a reference, and that's all.

Approach:

It is embarrassing to use vigorous voice when documenting methods without using first person, which would focus the reviewer's interest on the researcher rather than the job. As a result, when writing up the methods, most authors use third person passive voice.

Use standard style in this and every other part of the paper—avoid familiar lists, and use full sentences.

What to keep away from:

- Resources and methods are not a set of information.
- Skip all descriptive information and surroundings—save it for the argument.
- Leave out information that is immaterial to a third party.



Results:

The principle of a results segment is to present and demonstrate your conclusion. Create this part as entirely objective details of the outcome, and save all understanding for the discussion.

The page length of this segment is set by the sum and types of data to be reported. Use statistics and tables, if suitable, to present consequences most efficiently.

You must clearly differentiate material which would usually be incorporated in a study editorial from any unprocessed data or additional appendix matter that would not be available. In fact, such matters should not be submitted at all except if requested by the instructor.

Content:

- Sum up your conclusions in text and demonstrate them, if suitable, with figures and tables.
- In the manuscript, explain each of your consequences, and point the reader to remarks that are most appropriate.
- Present a background, such as by describing the question that was addressed by creation of an exacting study.
- Explain results of control experiments and give remarks that are not accessible in a prescribed figure or table, if appropriate.
- Examine your data, then prepare the analyzed (transformed) data in the form of a figure (graph), table, or manuscript.

What to stay away from:

- Do not discuss or infer your outcome, report surrounding information, or try to explain anything.
- Do not include raw data or intermediate calculations in a research manuscript.
- Do not present similar data more than once.
- A manuscript should complement any figures or tables, not duplicate information.
- Never confuse figures with tables—there is a difference.

Approach:

As always, use past tense when you submit your results, and put the whole thing in a reasonable order.

Put figures and tables, appropriately numbered, in order at the end of the report.

If you desire, you may place your figures and tables properly within the text of your results section.

Figures and tables:

If you put figures and tables at the end of some details, make certain that they are visibly distinguished from any attached appendix materials, such as raw facts. Whatever the position, each table must be titled, numbered one after the other, and include a heading. All figures and tables must be divided from the text.

Discussion:

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Position your understanding of the outcome visibly to lead the reviewer through your conclusions, and then finish the paper with a summing up of the implications of the study. The purpose here is to offer an understanding of your results and support all of your conclusions, using facts from your research and generally accepted information, if suitable. The implication of results should be fully described.

Infer your data in the conversation in suitable depth. This means that when you clarify an observable fact, you must explain mechanisms that may account for the observation. If your results vary from your prospect, make clear why that may have happened. If your results agree, then explain the theory that the proof supported. It is never suitable to just state that the data approved the prospect, and let it drop at that. Make a decision as to whether each premise is supported or discarded or if you cannot make a conclusion with assurance. Do not just dismiss a study or part of a study as "uncertain."



Research papers are not acknowledged if the work is imperfect. Draw what conclusions you can based upon the results that you have, and take care of the study as a finished work.

- You may propose future guidelines, such as how an experiment might be personalized to accomplish a new idea.
- Give details of all of your remarks as much as possible, focusing on mechanisms.
- Make a decision as to whether the tentative design sufficiently addressed the theory and whether or not it was correctly restricted. Try to present substitute explanations if they are sensible alternatives.
- One piece of research will not counter an overall question, so maintain the large picture in mind. Where do you go next? The best studies unlock new avenues of study. What questions remain?
- Recommendations for detailed papers will offer supplementary suggestions.

Approach:

When you refer to information, differentiate data generated by your own studies from other available information. Present work done by specific persons (including you) in past tense.

Describe generally acknowledged facts and main beliefs in present tense.

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BY GLOBAL JOURNALS

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Topics	Grades		
	A-B	C-D	E-F
<i>Abstract</i>	Clear and concise with appropriate content, Correct format. 200 words or below	Unclear summary and no specific data, Incorrect form Above 200 words	No specific data with ambiguous information Above 250 words
<i>Introduction</i>	Containing all background details with clear goal and appropriate details, flow specification, no grammar and spelling mistake, well organized sentence and paragraph, reference cited	Unclear and confusing data, appropriate format, grammar and spelling errors with unorganized matter	Out of place depth and content, hazy format
<i>Methods and Procedures</i>	Clear and to the point with well arranged paragraph, precision and accuracy of facts and figures, well organized subheads	Difficult to comprehend with embarrassed text, too much explanation but completed	Incorrect and unorganized structure with hazy meaning
<i>Result</i>	Well organized, Clear and specific, Correct units with precision, correct data, well structuring of paragraph, no grammar and spelling mistake	Complete and embarrassed text, difficult to comprehend	Irregular format with wrong facts and figures
<i>Discussion</i>	Well organized, meaningful specification, sound conclusion, logical and concise explanation, highly structured paragraph reference cited	Wordy, unclear conclusion, spurious	Conclusion is not cited, unorganized, difficult to comprehend
<i>References</i>	Complete and correct format, well organized	Beside the point, Incomplete	Wrong format and structuring



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