

CROSS-BORDER SOCIO-ECONOMIC IMPACT OF GAS TERMINAL PROJECTS IN THE GULF OF TRIESTE AND AT ŽAVLJE/ZAULE ON THE SLOVENIAN TOURIST TRADE

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Abstract

Italy plans to erect two gas terminals (LNG terminals) in immediate vicinity of the Slovenian state border. No cross-border impact is indicated in the reports produced by the Italian side, despite high probability of cross-border impacts. The present contribution is an expert assessment of the cross-border impact of the LNG terminals on the Slovenian tourist trade. The impacts of this project on the local environment are presented in a descriptive way, based on the impact assessment scale on tourism. In the discussion section, the mitigating measures are specified which could contribute to reduce the impact.

Key words: gas terminals, cross-border impacts, tourism in Istria, Kras, sustainable tourism

ČEZMEJNI SOCIOEKONOMSKI VPLIVI PROJEKTOV PLINSKIH TERMINALOV V TRŽAŠKEM ZALIVU IN V ŽAVLJAH NA SLOVENSKI TURIZEM

Izvleček

Italija načrtuje gradnjo dveh plinskih terminalov v neposredni bližini slovensko-italijanske državne meje. Pričujoči prispevek je ekspertna ocena čezmejnih vplivov načrtovanih plinskih terminalov na turistično gospodarstvo Slovenske Istre in Krasa, v kateri je prikazano stanje in potencialni vpliv načrtovanih plinskih terminalov. Vplivi izvedbe posega na okolje so podani opisno, na podlagi ocenjevalne lestvice vplivov na turizem. V diskusiji so predlagani omilitveni ukrepi s katerimi bi lahko zmanjšali vplive na okolje.

Ključne besede: plinski terminali, čezmejni vplivi, turizem v Slovenski Istri, turizem na Krasu, trajnostni turizem

I. INTRODUCTION

The effects of ecological changes are already visible worldwide. The global negative impact of human behaviour on the environment can no longer be denied, any economic activity that can help to reduce negative environmental impacts is valuable. Tourism economy (and its products) is directly dependent on the quality of environment and natural resources at a destination. The increase in international tourism arrivals from the present level of about 0.8 billion per annum to 1.6 billion per annum by 2020 (UNWTO 2007), implies that tourism will have an increasing global significance as a consumer of natural resources in the future.

These trends have captured the attention of destination managers and tourism planners who now see a need to incorporate environmental issues in their tourism planning (Dolnicar and Leisch 2008, 672).

According to Notarstefano (2008, 44), the European Commission, recognizing the important role of tourism in the European economy and the significant contribution of tourism to meet the key challenges facing Europe in the 21st century, has been increasingly involved in tourism since the early 1980s, in co-operation with the Council, the European Parliament, the European Economic and Social Committee and the Committee of the Regions.

I.1. Sustainable development of tourism

The Slovenia's Development Strategy 2006–2013 (2005) defines tourism as an important developmental and business opportunity for the Slovenian economy. Given the present level of tourism in Slovenia and the current inherent potential for development in the short-term perspective, tourism could become one of the leading growth sectors of the Slovenian economy and thus significantly contribute to achieve the envisioned developmental goals for Slovenia, in particular the economic objectives (improved competitiveness, GDP growth, creating new jobs and employment opportunities, improving the educational structure of workforce in tourist trade, building-up the principles of sustainable development, supporting a harmonious regional development, higher quality of life and welfare of the population, strengthening the cultural identity and improving the recognizability of Slovenia in international environment).

The role of tourism in Slovenia and its share in the structure of Slovenian economy is presented in greater detail in the fundamental strategic document of the Government of the Republic of Slovenia – the Development plan and policies of Slovene tourism 2007–2011 (Uran et al. 2006). In the past, the Slovene tourism was relying on the development and completion of the infrastructure and superstructure – the relevant and indispensable groundwork for achieving progress in this branch of industry, however, they are not sufficient for the social and economic efficiency of this industry. The so-called soft developmental elements were neglected to date: quality in the broadest meaning, streamlined education for tourism and HR development, promotion of creativity and innovation for the development and production of marketable, innovative and high quality integral products in the tourist trade. Also, the destination management was inadequate, lacking a sound support of the public-private partnership as an underlying factor for maintaining the competitiveness in the market of global tourism.

According to Ovsenik (2003, 392) the paradigm of tourism activities has changed. In fact, completely new conceptual forms are emerging. Tourism has more profound impact on the life of a nation and its identity and culture than other activities, carving the landscape to such an extent that a co-natural development cannot be assured.

To achieve a qualitative and competitive tourism, Slovenia must develop tourism in an environmentally-friendly way (sustainable tourism). Delivering sustainable development means striking a balance between three pillars (UNEP and WTO 2005, 9):

- Economic sustainability, which means generating prosperity at different levels of society and addressing the cost-effectiveness of all economic activities. Crucially, it is about the viability of enterprises and activities and their ability to be maintained in the long term;
- Social sustainability, which means respecting human rights and equal opportunities for all in society. It requires an equitable distribution of benefits, with a focus on alleviating poverty. There is an emphasis on local communities, maintaining and strengthening their life-support systems, recognizing and respecting different cultures and avoiding any form of exploitation;
- Environmental sustainability, which means conserving and managing resources, especially those that are not renewable or are precious in terms of life-support. It requires action to minimize pollution of air, land and water, and to conserve biological diversity and natural heritage.

»Tourism is in a special position in the contribution it can make to sustainable development and the challenges it presents. Firstly, this is because of the dynamism and growth of the sector, and the major contribution that it makes to the economies of many countries and local destinations. Secondly, it is because tourism is an activity which involves a special relationship between consumers (visitors), the industry, the environment and local communities.« (UNEP and WTO 2005, 9)

According to Inskeep (1991, 349) and Dolnicar (2006), the new marketing techniques can also be used to attract environmentally-oriented tourists who respect the environment and are conservation-minded.

The key strategic orientation of Slovenian Tourist Board is green tourism which undeniably includes the active orientation of tourism towards the green economy, providing information and incentives for the tourist economy to develop green models of operation, incentives for destinations to establish models of sustainable development based on standard indicators, and raising awareness among tourists to adopt more sustainable lifestyles and environmentally-friendly behaviour of their own (Slovenian Tourist Board 2010).

The actual tourist demand for Slovenia – the prevailing traditional markets with more than 50 % of overnight stays (nights spent) by foreign visitors in Slovenia includes: Italy, Germany and Austria (Slovenian Tourist Board 2008, 7). To these traditional markets, the new fast-growing markets are to be added: Great Britain (UK), Scandinavian countries and France, in which the demand for environmentally-friendly (responsible) destinations is growing and focuses on the orderly, well-tended environment and friendly local people.

The core activity in Slovenian Istria is tourism, beyond doubt: it represents more than 24% in the structure of national turnover from tourism (SURS 2008, 429).

1.2. Description of the planned development/activities affecting the physical environment

The area of the impact on the environment is defined as the visibility range of the liquefied natural gas (LNG) terminals (the Slovenian coast from the border with the Republic of Italy up to the Cape Madona in Piran, and the area along the Glinščica Valley (Val Rosandra), which is exposed to a risk that winds would spread the gas along the valley in the event of an accident.

The proposed terminals for the gasification of LNG are two independent (not interrelated) projects by which the LNG will be conveyed from ships and filled into the gas distribution mains. The investors are:

- Gas terminal on the sea in the Gulf of Trieste (Investor: Terminal Alpi Adriatico S.r.l., owned by the Spanish company Endessa), and
- Gas terminal on the coast, at Žavljje /Port of Trieste (Investor: the Spanish Group Gas Natural SDG S.A.).

The environment-related elements of these activities on the physical environment are questionable in particular for the changed appearance of the landscape (visibility), restriction of movement for security and safety reasons (restricted navigation and – probably – flights), and for the feeling of being exposed to risk involved in the gas terminal.

According to the data of Terminal Alpi Adriatico S.r.l. (2006, 3), the size of the gas terminal in the Gulf of Trieste will be ca. 100 by 300 meters, and ships carrying the gas to the terminal for further filling and distribution to the gas distribution mains will be berthed on both sides of the terminal. It will be located in the middle of the Gulf of Trieste, directly along the sea border between the Republic of Italy and the Republic of Slovenia (hereafter: Slovenia) on the coordinates 45° 36' 52"N, 13° 34' 06"E. The terminal will be ca. 40 meters high and illuminated at night for safety and security reasons. The terminal would be 9–11 km away from the Slovenian coast, the closest point would be the Bay of Sv. Križ, less than 9 km.

The maximum capacity of the gas terminal will be 8 billion Sm³ of natural gas, or 13,040,000 cbm (m³) of liquefied natural gas. The gas will be transported by 110 ships, two deliveries per week on average. The thermal energy for evaporation of the liquefied natural gas will be obtained from the sea. Accordingly, the cooling effect on the sea water would be more than 150 MW.

For safety reasons, the navigation of ships shall be restricted: the prohibited zone for navigation in front of the gas-carrying vessel would be 1000 m. The terminal will be a relevant obstacle for navigation of sport and leisure boats, in particular. That restriction applies both to the terminal located at sea and the terminal on the coast at Žavljje/Zaule (Port of Trieste).

The documents available to us do not specify the range of flight restriction zone along the terminal, which will be for safety reasons and in the wake of terrorist attacks most probably established at the commencement of operation of the terminal. However, we assumed that the safety zone should comprise 500 m from the terminal.

According to the data of Group Gas Natural SDG S.A. (2006), the terminal at Žavljje will be located on the coast, at the site of the former oil refinery and the warehouse of petroleum products Esso Petroli. The terminal zone will cover some 8–9 hectares. The maximum capacity of the installation will be 8 billion Sm³ of natural gas, or 13,040,000 cbm (m³) of liquefied natural gas. Each year, 110 ships would bring the gas, or two ships per week on average. The thermal energy for evaporation of the liquefied natural gas will be obtained from the sea. Accordingly, the cooling effect on the sea water would be more than 150 MW.

2. METHOD

The analysis of impact of the development/activities affecting the physical environment is based on the analysis of the present condition of tourism and the evaluation of the expected impacts in the light of the characteristics of such development/activities. In this segment, the evaluation method is not dependent on limit values prescribed by law, because there are not any legal acts regulating this area. Therefore, the extent of changes in tourism-related activities that could arise from the execution of the planned development was taken as our key criterion. In particular it concerns the changes in the volume and structure of visitors as a result of landscape features deterioration.

The basic data on the envisioned projects /activities are summed up from the existing environmental impact studies:

- Terminal Alpi Adriatico S.r.l., the regasification terminal for liquefied natural gas on the sea – the Gulf of Trieste: connecting gas pipeline for national gas distribution mains: non-technical summary of environmental impact assessment, D'Appolonia, no. 04-582-H6, January 2006;
- Group Gas Natural SDG S.A., Receiving and regasification terminal for liquefied natural gas (LNG), Žavljje/Zaule (TS): Environmental impact study – a non-technical summary.

The following was undertaken for the evaluation of environmental impacts on tourism:

- Analysis of questionnaires completed by visitors coming from abroad to Slovenia (the survey was conducted by the Slovenian Statistical Office – SURS – in the summer seasons of the years 2000 and 2003 (Škafar Božič et al. 2001; Arnež et al. 2004) on their primary motives for visiting Slovenia, as well as on the satisfaction of foreign visitors, and we compared their responses with the results of a survey involving foreign visitors to the Municipality of Piran – the top tourist municipality in Slovenia (Tkalčič et al. 2006.);
- A survey among the representatives of tourist trade on their perception of gas terminals and expected impacts on visitors;

- A systemic definition of impacts based on a logical framework analysis: present condition, environmental goals, estimated impacts, environmental impact indicators.

Table 1: Impact assessment scale of gas terminals on tourism and other industries

Preglednica 1: Lestvica ocen vplivov posega na turizem in druge gospodarske panoge

Grade	Descriptive assessment	Interpretation
A	No impact/positive impact	Visitors /customers are not aware of the particular development or activity, it will not change the structure of guests or number of tourists, and it will not affect any other activity in the zone
B	Impact is negligible	Visitors/customers are aware of the particular development or activity, but it does not have a bearing on the structure of guests, volume of tourists or any other activity in the zone
C	Impact is perceivable, but not very important	The particular development or activity is changing the perception of the zone among visitors/customers, however, they do not abstain from using the tourist and other services offered in the zone
D	Important impact on environment	The particular development or activity is changing the perception of the zone among visitors/customers and affects their choice to visit the zone and consume the services offered there; the structure of guests and number of visitors, or the volume of other activities in the zone are changing as a result of that development / activity; the income from tourist trade is affected by no more than 10%
E	Destructive impact on environment	The particular development or activity is entirely changing the perception of the zone, the number of tourists falls sharply, the structure of visitors is affected, the income from tourism and other services decline by more than 10%.
X	Impact cannot be identified	/

3. RESEARCH RESULTS

3.1. The motives for visiting Slovenia and satisfaction of international visitors in the Slovenia

When choosing holiday destinations, most Europeans named the actual environment of the location (e.g. its overall attractiveness) as being the major consideration (31%). Cultural heritage (24%) and entertainment possibilities (15%) were the second and third most widespread criterion for choosing a destination (The Gallup Organization 2009). The share of overnight stays of foreign tourists in Slovenia in 2008 was 58% (more than 40% came from the EU countries); (Slovenian Tourist Board 2009).

Key information on visitors' primary motives for coming and on their satisfaction were obtained by the analysis of questionnaires filled out by foreign visitors/guests in Slovenia, conducted by the Slovenian Statistical Office (SURS) in the summer seasons of 2000 and 2003 (Škafar Božič et al. 2001; Arnež et al. 2004). The highest grades were awarded to the

following elements on the supply side of tourist trade: well-kept or tended natural sights, excursions offered and recreation facilities available, suitability for family holiday, peace and quiet, the quality of environment and catering services, hospitality of home population, and communication in foreign languages, personal safety and the level of cleanliness.

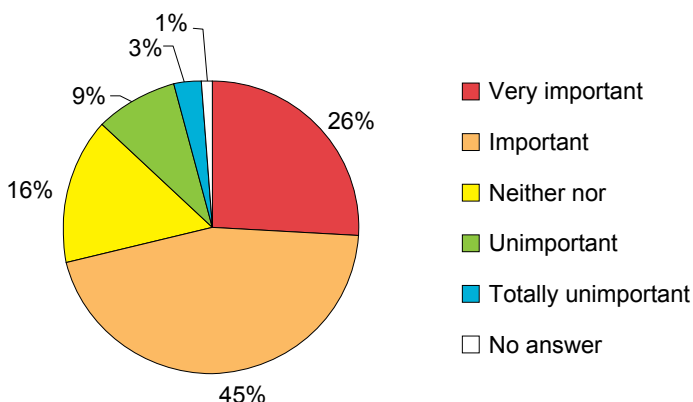
Relevant for our assessment are in particular the high grades awarded to the environment (availability of recreation facilities, peace and quiet, the quality of environment, personal safety, cleanliness), and the increasing numbers of visitors from the countries in which the environmental standards and awareness are very high.

According to the data of Slovenian Tourist Board (2006, 8) the importance of factors to foreign tourists visiting tourist attractions during their visit to Slovenia is on the scale from 1 to 5 (where the value 1 means totally unimportant and 5 very important) – here we considered only factors with highest grades than 4:

- Untouched nature and protected natural areas (4.3);
- Hospitality of local inhabitants (4.2);
- Personal safety during the stay (4.2);
- Old towns, castles, churches (4.1);
- Climatic conditions and favourable weather (4.1).

Figure 1: Importance of the factor 'safety' among foreign tourists in choosing Slovenia as their tourist destination

Slika 1: Pomembnost dejavnika 'varnost' med tujimi turisti pri izbiri Slovenije kot turistične destinacije



Source/Vir: Slovenian Tourist Board, 2006

With high grades awarded to the environment we have to expose the factor 'personal safety during the stay' which will play very important role on demand of foreign tourists.

In the assessment of potential threats of gas terminals we cannot neglect the safety issue. According to Tkalčič et al. (2006), Figure 1 shows that the feeling of safety is very important

for our visitors and tourism (26%) and also a relevant factor (45%) in the choice of destination: 71% of tourists have designated this factor as important or very important.

3.2. Attractiveness of Piran as indicator of sustainable tourism

Certainly, the Slovenian Istria is the top tourist region in Slovenia and tourism has been, and remains to be the economic activity vital for the development of this region for long decades in the future (SURs 2008). In a balanced economic and social development compliant with sustainable environment, Slovenian Istria aims to achieve a higher contribution from the tourist trade to the economic and social welfare of citizens, as well as to the satisfaction (well-being) of tourists. The responsibility of tourist trade policy of the Slovenian Istria is to assure the three key requirements for sustainable development in tourism:

- Protection of natural environment and sustainable use of sources (not only good quality drinking water and clean air, but also of sea water and landscape on adequate quality level);
- Observing the local society and its cultural values (identity) and averting any negative impact of mass tourism on the society;
- The success of tourist trade (products and companies) not merely in a short-term perspective, but primarily in the medium and long-term ones.

With all these facts in mind, and supported by the findings of an empiric survey presented below, the envisioned construction of the gas terminals is a serious threat to the tourism in Slovenian Istria.

We have summed up only the data relevant for our assessment from the empiric survey conducted in April and May 2006 among the visitors to Piran (Tkalčič et al. 2006, 37).

Table 2: Motive for visiting the site in an off-season term

Preglednica 2: Motiv za prihod izven glavne turistične sezone

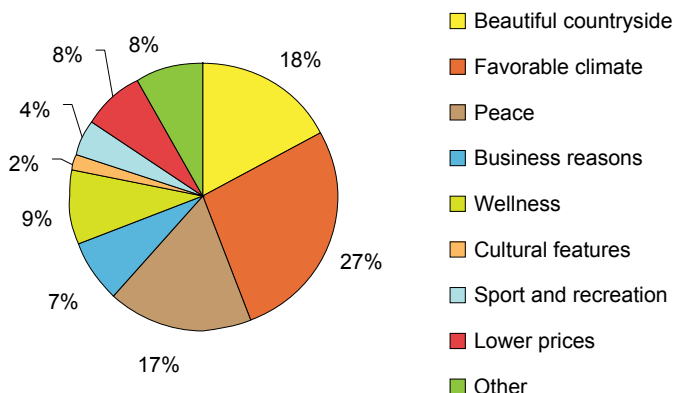
	Frequency	Valid Percent	Rank
Beautiful countryside, scenery	87	18	2
Favourable climatic conditions	133	27	1
Peace	85	17	3
Business reasons	37	7	7
Health benefits (wellness)	46	9	4
Cultural features	9	2	9
Sport and recreation	22	4	8
Lower prices	38	8	6
Other	40	8	5
Total	497	100	

Source/Vir: Tkalčič et al. 2006

Table 2 and Figure 2 clearly indicate that the main reasons for visiting Piran are favorable climatic conditions, the beauty of the site and peace.

Figure 2: Why did you decide to visit the site in an off-season term?

Slika 2: Kaj vas privabi za prihod izven glavne turistične sezone?



Source/Vir: Tkalčič et al. 2006

Table 3 reveals the elements on the supply side enjoying the highest satisfaction among tourists (the beauty of the site/countryside, healthy climatic conditions, and well preserved environment). It is these elements in our offer for tourists that would be worst affected by the gas terminals in the Gulf of Trieste and at Žavljje/Zaule; that would definitely have a strong negative impact on the development of tourist trade in the Slovenian Istria.

Table 3: Assessment of tourist satisfaction with the quality, orderly and well-tended environment in Piran

Preglednica 3: Ocena zadovoljstva turistov s kakovostjo in urejenostjo okolja v Piranu

Elements on the supply side of tourism ('tourist offer')	N	Arit. mean	Stand. dev.	Rank
Beautiful countryside, scenery	499	4.29	0.725	1
Well-preserved environment	496	3.94	0.816	3
Healthy climate	495	4.21	0.750	2
Accessibility of destinations (traffic)	483	3.55	0.953	11
Organization of local traffic	434	3.35	0.992	14
Parking facilities	470	2.78	1.087	15
Cleanliness of destination	500	3.63	0.883	9
Availability and condition of walking paths	487	3.67	0.854	6
Well-tended parks	447	3.58	0.900	10

Natural parks and reserves	382	3.50	0.966	12
Well-preserved and accessible, orderly cultural heritage	462	3.74	0.807	5
Functional public lighting	471	3.80	0.840	4
Well-kept frontage/façade of houses	475	3.65	0.876	8
Urban planning compliance and orderly condition	460	3.66	0.810	7
Total number of visitors (crowd)	492	3.38	0.944	13

Source/Vir: Tkalčič et al. 2006

3.3. Environmental and developmental goals

Table 4 shows the list of environmental and developmental goals for the zone potentially affected by the terminals. These goals were set in accordance with their relevance for tourism and other activities dependent on the experience in this space.

Table 4: Environmental and developmental goals for tourism and other activities
Preglednica 4: Okoljevarstveni in razvojni cilji za turizem in druge dejavnosti

Objectives	Indicators	Situation
Preserving the attractiveness of tourist zones as naturally preserved areas	Satisfaction of visitors with the orderly condition of, and well-preserved environment	Population and visitors to this area value highly the natural, preserved condition of the area
Maintaining the area recognizable for safety	Satisfaction of visitors with safety	The factor 'safety' is important for foreign tourists in choosing Slovenia as their tourist destination
Development of nautical tourism – assuring unhindered passage and traffic of watercrafts in a well-preserved maritime environment	The extent of Slovenian territorial waters with a specific navigational regime	Nautical tourism is a fast-growing segment that requires a well preserved environment and unhindered navigation, in addition to quality-level services. Except in the Port of Koper area, there is no restriction to navigation in Slovenian territorial waters
Development of tourism by aircraft – assuring unhindered air traffic	The extent of the air space above the Slovenian territorial waters with a specific flight regime	No restriction to air traffic in Slovenian Istria, except in the area of international airport Portorož and in protected natural parks/ areas

3.4. Assessment by the tourist organizations

We have prepared a questionnaire for the organizations operating in tourist trade to get data for the assessment of expected impact. The questionnaire was sent out to 30 organizations, and 18 responses (60% of respondents) were received, completed by the majority of relevant tourist organizations in Slovenian Istria.

Table 5: Impact of gas terminals on specific tourist products or programs
 Preglednica 5: Vpliv terminalov na specifične turistične produkte oz. programe

Tourist products	Arit. mean
Summer holidays	4.76
Eco-tourism	4.76
Nautical tourism	4.33
Weekend visitors	4.12
Wellness	3.65
Programs for seniors	3.59
Sports	3.12
Congress tourism	3.00
Gaming/Casinos	2.65
Business tourism	2.59

Respondents estimate that the envisioned gas terminals will affect the image of the region and the number of visitors. Worst hit will be the tourist segments 'summer holidays' and 'eco-tourism, tourism in the nature', very important impact will be also on 'nautical tourism' and 'weekend visitors', whereas all other forms of tourism except gambling and business tourism will experience a high impact on tourism. The impact assessment on tourist trade by products is shown in Table 5 and on Figure 3, where the value 1 means a negligible impact and 5 the highest impact.

Figure 3: Impact of gas terminals on specific tourist products or programs
 Slika 3: Vpliv terminalov na specifične turistične produkte/programe

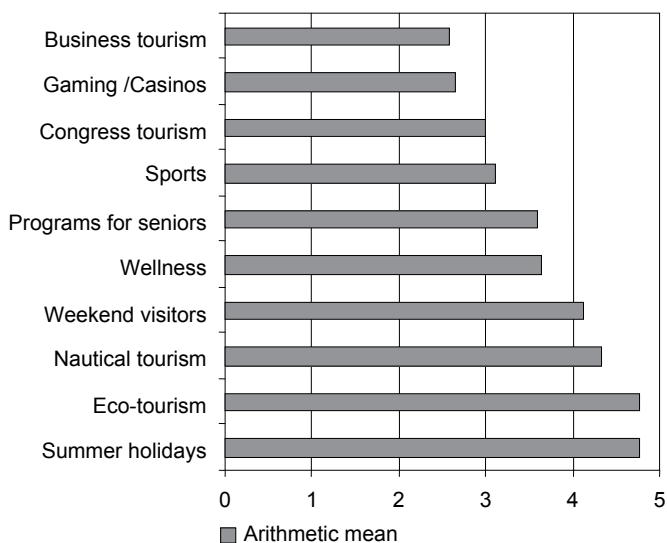


Figure 4: Assessment of the fall in prices according to individual products
 Slika 4: Ocena znižanja cen posameznih turističnih produktov

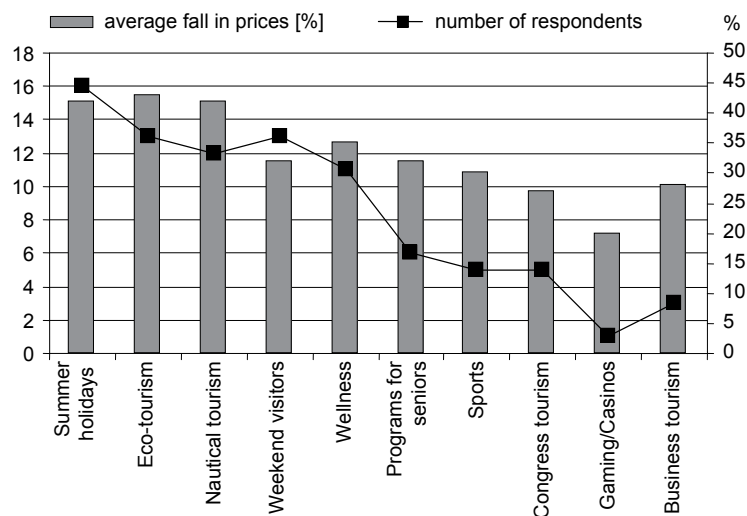


Figure 5: Assessment of the fall in prices according to tourist sites
 Slika 5: Ocena vplivov na turistične kraje

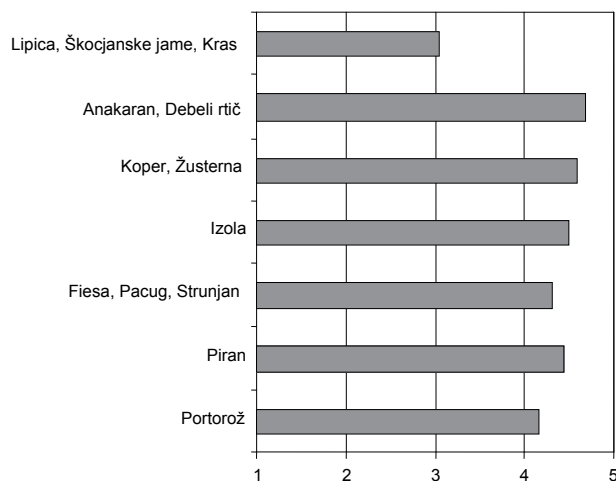


Figure 4 presents the assessed fall in prices according to tourist products. Respondents were requested to choose six (6) products most likely to be affected by lower prices, and to estimate the expected fall in the prices. Figure 4 shows the estimated average fall in prices, and the number of respondents (N=18) who have chosen the respective product as one of the most sensitive products to the impact of gas terminals. Respondents estimate that the

gas terminals will exert a highly negative impact on level of prices (more than 40%) in eco-tourism, nautical tourism and summer holidays. Other products will be affected by lower prices too (20–35%).

Figure 5 shows the impact assessment for individual tourist sites. Impact assessment 1 means a negligible impact, while 5 stands for the highest impact.

Respondents estimate that the gas terminals will exert a highly negative impact on investors' decisions for investing in tourist trade in Slovenian Istria; the impact on investments in tourist trade in Kras (Karst) will be less affected, however, it still raises concern.

Respondents estimate that the total income from tourist trade would fall by 27.3% due to envisioned gas terminals. Of the two gas terminals, it is estimated that the impact by the gas terminal located at sea is twice as high as the terminal on the coast at Žavlje/Zaule (Port of Trieste). They also agree that the gas terminals will have an adverse impact on tourism in the entire Northern Adriatic.

3.5. Assessment of conformity with environmental and developmental goals

The assessment of conformity of impacts on tourism and other activities with environmental and developmental goals is shown in Table 6.

Table 6: The assessment of conformity of impacts on tourism and other activities with environmental and developmental goals

Preglednica 6: Ocena skladnosti vplivov na turizem in druge dejavnosti z okoljskimi in razvojnimi cilji

Goal	Impact	Explanation of impact
Preserving the attractiveness of tourist zones as naturally preserved areas	Visitors perceive the gas terminal as a facility with relevant impacts on the environment, in particular affecting the quality of the sea	60% of motives in visitors to this region point to the well preserved nature, peace, quiet, climatic conditions. Visitors to this area and local population associate the gas terminal with potentially dangerous activities and ample impacts on the environment.
Maintaining the area recognizable for safety	Visitors perceive the gas terminal as a facility which can cause serious consequences in the event of accident	After 11 Sept. 2001, the safety and security issues are very important for visitors in their decisions for travel; their perception of the area is changing (the presentation of these projects in the media as dangerous and damaging to the environment). The terminals will have a subjective bearing on safety on the coast and in the Glinščica Valley, in the mouth of which river is the site of the gas terminal at Žavlje/Zaule.

Goal	Impact	Explanation of impact
Development of nautical tourism – assuring unhindered passage and traffic of watercrafts in a well-preserved maritime environment	Restricted navigation near the gas terminal on the sea	Nautical tourism is the fastest growing segment, but the gas terminal on the sea hinders the sailors/boats on the part of the sea which is used for their daily recreation.
Development of tourism by aircraft – assuring unhindered air traffic	Restricted flights in the area	Prohibition of flights is most likely in the immediate vicinity of the gas terminal.
	Risk of incidents on the border	Owing to security measures at the gas terminals for protection against terrorist attacks, an incident could be caused by a single flight of sport aircraft.

On the basis of these findings, we estimate that the erection of gas terminals on the sea will be contrary to the environmental and developmental goals of Slovenia. The gas terminal at Žavlje/Zaule does not have an ample impact on national development goals.

3.6. Expert assessment

In the media, the envisioned gas terminal projects are presented very negatively, opposed by the non-governmental organizations from Italy, Slovenia and Croatia. If the envisioned projects are realized, the tourists from regions in which the information on gas terminals has been spread in the media will perceive this region as a zone with dangerous facilities.

The gas terminal on the sea would also affect the maritime and air traffic. In particular daily sports watercrafts are navigating in the middle of the Gulf of Trieste, in which the gas terminal is to be located, and it will be a major obstacle to the traffic. Another important aspect will be the restriction of flying in the immediate vicinity of the terminals, which can hinder the sport flights that are presently practiced in the airport of Portorož. In the event of heightened security measures at the gas terminals for protection against terrorist attacks, an incident could be caused by a single flight of sport aircraft.

Given that the visitors view the gas terminals as a dangerous installation with a relevant impact on the environment, these gas terminal projects could have an adverse influence on tourists in their decision for the tourist destination Slovenian Istria. As the erection of this installation could actually affect the structure of visitors and the volume of tourist trade, we assess the impact of the gas terminal on the sea on tourism and other activities in the area as **D – important impact on the particular environmental element** (Table 1).

The gas terminal at Žavlje/Zaule is less visible, thanks to its location on the coast – near the Port of Trieste, and does not have such an impact on the subjective perception of the area on the Slovenian side of the border. Another probable impact will be felt in the Glinščica Valley (Val Rosandra), which is important more as a reserve of natural landscape and an

area dedicated to recreation rather than for tourist trade as such. Accordingly, we assess the impact of the erection of the gas terminal at Žavljje on tourism and other activities as **C – Impact is perceivable, but not very important** (Table 1).

4. DISCUSSION

The construction of gas terminals will change the landscape image, perception and experience of the Slovenian Istria region; the Glinščica Valley (Val Rosandra) will be less affected. For that reason, there will be changes in the structure of visitors and probably in their number, too: the different experience perceived in our region will exert an influence on visitors in their decision-making whether to visit this tourist destination. Similar changes will occur in investors, on their deciding for buying the real estate in this region or not, which will bring a fall in prices of property against the current price trends before the gas terminals are built. In our opinion, these impacts will not be very big, but will be perceivable.

The positioning of gas terminals in this region is contrary to the environmental and developmental goals, which follow the guidelines of environment conservation and allow for activities using the natural environment and benefiting from the safety of the region. These gas terminals, which have drawn great attention of the media and were presented as installations exerting a big impact on the environment quality and safety of local people and visitors near them, represent quite a contradiction to environmental conservation trends and assurance of safety.

Given that the gas terminal on the sea will be visible all the time, at night appearing even more striking, and that tourists and local people perceive the gas terminal as a dangerous installation, contrary to the general image and experience of this area as a naturally preserved, orderly and safe environment, we have assessed the socio-economic impact of the terminal on the sea with D – important impact on the particular environmental element. The impact of the gas terminal at Žavljje/Zaule (Port of Trieste) is assessed with C – Impact is perceivable, but not very important: the construction work will take place on the site of the former refinery which had greatly affected the landscape and degraded the area, so that the gas terminal will not essentially change the landscape image here. This zone under the impact has a minor influence on tourism (Glinščica Valley, Bržanija, the hills above Ankaran), and the influence will not be particularly felt.

In general, the envisioned gas terminals will have a negative impact on the landscape image and tourism in Slovenian Istria. In particular the gas terminal on the sea would be more acceptable if the investor had positioned it at least 20 km from the Slovenian coast: at that distance, the installation would be no longer visible from the coast.

We recommend regular surveys and questionnaires on the attractiveness of the area for tourists during construction work and operation after commissioning, including the questions on their perception of the gas terminal. The result will be an indicator of the actual consequences of the gas terminal. During the erection and operation of the installation, we need to check the structure and number of tourists visiting this area in those tourist trade entities/providers of services who depend on the quality of sea water in particular (e.g. thalassotherapy, health resorts, spas, etc.).

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ČEZMEJNI SOCIOEKONOMSKI VPLIVI PROJEKTOV PLINSKIH TERMINALOV V TRŽAŠKEM ZALIVU IN V ŽAVLJAH NA SLOVENSKI TURIZEM

Povzetek

Republika Italija načrtuje gradnjo dveh plinskih terminalov v neposredni bližini slovensko-italijanske državne meje v Tržaškem zalivu in v Žavljah. Glede na to, da je najpomembnejša dejavnost na območju Slovenske Istre turizem, ki predstavlja nekaj več kot 26 % slovenskega turizma, smo v pričujočem prispevku preučili pričakovane čezmejne vplive nameravane izgradnje plinskih terminalov na turistične in s turizmom povezane dejavnosti v Slovenski Istri. Krajinska slika in doživetje območja Slovenske Istre se bo zaradi nameravane investicije spremenila (poslabšala), kar bo pripeljalo do sprememb v strukturi in v številu obiskovalcev, saj bo drugačno doživetje območja (nižja ekološka kakovost okolja in slabši občutek varnosti) negativno vplivalo na zanimanje turistov za to destinacijo.

Na podlagi analize rezultatov izvedene raziskave med tujimi gosti v občini Piran (Tkalčič in sod. 2006) ugotavljamo visoke ocene pri okoljskih elementih turistične ponudbe (možnost rekreativnih aktivnosti, mir in tišina, kakovost okolja, osebna varnost in raven čistote) ter trend povečevanja obiska iz držav, kjer je okoljska osveščenost potencialnih turistov na zelo visoki ravni. Prav ti elementi turistične ponudbe bi bili v primeru izgradnje plinskih terminalov v Tržaškem zalivu in v Žavljah najbolj prizadeti, kar bi negativno vplivalo na nadaljnji razvoj turizma v Slovenski Istri. Pri ocenjevanju možnih groženj ob izgradnji omenjenih plinskih terminalov ne smemo mimo varnostnih vprašanj. Tako ugotavljamo (slika 1), da je pri odločanju o obisku destinacije za naše goste zelo pomemben dejavnik občutek varnosti, saj ga skupaj izpostavlja kot pomembnega ali zelo pomembnega kar 71 % turistov.

Respondenti iz turističnega gospodarstva ocenjujejo, da bo načrtovana izgradnja terminalov vplivala na podobo območja in na turistični obisk. Najbolj se bodo znižale cene turističnih produktov, občutljivih na okoljsko problematiko (ekoturizem, poletne počitnice in navični turizem), medtem ko bo izgradnja terminalov imela najšibkejši vpliv na cene v igralništvu in poslovnem turizmu. Po oceni respondentov se bodo skupni prihodki v turizmu zaradi izgradnje terminalov zmanjšali za približno četrtrtino. Pri tem ocenjujejo, da bo terminal na morju imel še enkrat večji vpliv na turizem kot terminal v Žavljah. Negativni vplivi terminalov se bodo poznali tudi pri odločanju investitorjev za investicije v turistično dejavnost v Slovenski Istri. Strinjajo se tudi s tem, da bodo terminali negativno vplivali na turizem na celotnem območju severnega Jadrana.

Za večji prispevek turističnega sektorja k ekonomski in socialni dobrobiti občanov ter za večje zadovoljstvo (dobro počutje) turistov bo morala turistična politika občin Slovenske Istre

doseči uravnotežen ekonomski, družbeni in okoljski razvoj z uveljavljanjem treh ključnih zahtev trajnostnega razvoja na področju turizma:

- Varovanje naravnega okolja in trajnostna raba razpoložljivih virov (poleg kvalitetne pitne vode in čistega zraka še kvalitetno morsko vodo in izgled krajine);
- Upoštevanje družbe in spoštovanje njenih kulturnih vrednot (identitete) ter onemogočanje negativnih učinkov masovnega turizma na njo;
- Uspešnost turističnega proizvoda (in podjetij) ne samo na kratki rok, temveč predvsem na srednji in dolgi rok.