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for  
**RESPONSIBLE TOURISM**

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### *Statement of Purpose*

The *International Journal of Responsible Tourism (IJRT)* is a publication that aims to offer, through scientific papers, a better understanding of the responsible tourism within the tourism promoter environments, to explain the consequences of applying these principles for the Romanian society and for the entire world and open a communication platform for successful international concepts and practices.

*IJRT* will include scientific papers submitted to the International Forum for Responsible Tourism program that have passed the peer-review stage and have been debated in the forum, considered to be important documents for understanding and developing responsible tourism.

*IJRT* intends to become a reference journal in the field, being the first initiative of this kind in Romania, and will be published exclusively online and quarterly by the Amphitheatre Foundation. The Journal will include applicable notes on the meaning of responsible tourism and methods of increasing the touristic potential by preserving cultural and social identity, the natural and anthropic environment, elements to be integrated in responsible tourism, along with an adequate education in the field.

# INTERNATIONAL JOURNAL *for* RESPONSIBLE TOURISM

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## ACCESSIBLE TOURISM AND DISABILITY SERVICE INFORMATION PROVIDED ON LEADING AIRLINE WEBSITES: A CONTENT ANALYSIS

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### **Abstract**

*The global population is aging, and older adults have more chronic conditions and disabilities relative to their younger counterparts. Aging and disabled populations have limitations associated with physical functioning, cognitive impairment, and loss of sense functioning. This group of people travelers represents an interesting segment in the tourism industry; however, the current market offers inadequate products and services to meet their needs and demands. The inability and unpreparedness of the touristic infrastructure to offer these necessary services compromises the quality of the tourism experience. The primary purpose of this study was to assess the content provided on official websites of major airline carriers as related to information, services, and resources to accommodate aging and disabled travelers. Airlines were selected for meeting one of the following criteria, ranked as: (1) one of the 10 best airlines; (2) one of the leading 10 airlines in terms of safety ratings; and (3) one of the leading 10 airlines in terms of lowest cost. The results show that many airlines did not provide adequate information. It is also important to notice that the safest/securest airlines were frequently those who reported most disability-related content on their websites.*

**Keywords:** touristic offer; accessible tourism; airline; website

### **1. Introduction<sup>4</sup>**

Until quite recently, disability was predominantly understood as a medical problem, directly caused by disease, accident, or a health condition. Presumed

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<sup>4</sup> In this conceptualization topic is close to a previous paper that was co-written by two of the authors: Umbelino, J.; Pinto, P.C.; Amorim, É. and Garcia, A. (2012) "Can we promote Accessible Tourism? Yes, we can. And we should". *Design for all – Institute of India*, Aug, 2012, Vol.7, nº 8, pp. 16-30

unable to meet the standards of *normal living*, people with disabilities were, therefore, institutionalized and hidden away from a society that saw no real imperative for change. During the 70s, however, disability activists began to challenge such views focusing instead on the *disabling society* which excludes people with disabilities through barriers and its inability to accommodate different forms of embodiment. This politics of disablement found intellectual expression in the so-called social model of disability (Oliver, 1983). The social model maintains that persons are disabled not by their impairments but by a society that is not organized in ways that address their needs. Hence, what must be fixed and changed is society itself, not the individual with the impairments.

In 2006, the adoption of the UN Convention on the Rights of Persons with Disabilities has brought increased political and economic attention to the plight of persons with disabilities. The new Convention applies the term *persons with disabilities* to all persons with “long-term physical, mental, intellectual or sensory impairments which, in interaction with various attitudinal and environmental barriers, hinder their full and effective participation in society on an equal basis with others” (UN, 2006). People with disabilities can thus expect the same right to participate fully in the community and to enjoy the same quality of life as people without disabilities.

What does this mean for the tourism sector? According to the Disability Convention, full participation explicitly includes the right to travel and participate in leisure activities. Indeed, Article 30 asserts the right to access all areas of cultural life including that of tourism. This puts tourism operators formally on notice to change their operations in order to guarantee access to tourism goods and services for people with disabilities (Barton, 1993; Bickenback, 2001; Buhalis and Darcy, 2011; Darcy and Taylor, 2009). In a sentence, Accessible Tourism (AT) is a set of facilities and practices in order to permit or improve the tourism experience for a large spectrum of people (Cole and Morgan, 2010).

Over their life span, most people will experience some form of disability, either temporarily or permanently (for example broken limbs, difficult pregnancies and, fortunately for a growing number, the impairments associated with old age). The demographics of people with disabilities confirms that this is an interesting and profitable market (Chan, 2010), but this fact is not known or is systematically ignored by the tourism industry. Darcy (2008) estimates that the AT market segment represents over 650 million people, which means 10% of the world population. A conservative estimate allows to think that the number of tourists in this segment was somewhere between 65 to 75 million. Considering that these tourists tend to travel accompanied, these figures may still increase significantly. The research developed by Legacies Now (2010) with the aim of understanding the market for accessible tourism, pointed that only 29% of disabled tourists travel alone. Thus, in a market with an estimated average of 70 million people, this slice can easily involve more than 120 million people.

Being more specific, we can highlight some characteristics of AT that are particularly interesting to raise awareness amongst the Tourism Offer regarding the economic potential of this market (FMET, 2004; Chan, 2010; DCMS, 2010):

- a. The number of people with some kind of impairment is already huge, nowadays, but it is still growing, namely in the *developed countries*, which are, at the same time, the most aged and the most important demand markets for international and national tourism.
- b. Whenever a family or a group of friends demanding a tourism experience includes someone with disabilities or impairments, that person most likely will be the centre of the group decisions, which means that the *economic* dimension of this market is much wider than the officially reported.<sup>5</sup>
- c. People with disabilities and/or impairments (including aged people) are frequently available and more likely to travel during low season.
- d. Sometimes, this kind of tourism can be supported by social funds or personal insurances, widening the economic dimension of the market.
- e. When they feel their needs are adequately addressed, these clients tend to be more loyal to their holiday destinations and service providers.

Although we intend to highlight the economic opportunities and benefits related to this issue, we contend that in mature and developed societies AT is (or must be) a social and human rights concern; if we consider democratic access to tourism an important civilization progress, we cannot accept in this process any kind of negative discrimination of any group of people, even less if there are disadvantaged citizens involved (WTO, 2010).

In the tourism world, the most common way of travel is by airplane, so airlines have good reasons to be ahead in this kind of thoughts. AT is not the future of tourism, but the future of tourism is less promising without AT. We believe that AT is a matter of intelligence, because it synthesizes a culture requirement with an economic opportunity that soon will become inevitable. At the moment, from a destination manager or a service provider (like airlines) point of view, the global market of AT is, at least, an interesting alternative niche.

Enabling environments and facilities should not just ensure access to all; they must also empower people with access requirements to make informed decisions about whether accessible experiences are appropriate for their needs. Contrary to what many believe, research has shown that people with disabilities (including aged) desire to travel, and many do it when their information and access needs are adequately addressed (Packer, MCKercher and Yau, 2007). That is why it is

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<sup>5</sup> DCMS (2010), in a study conducted for the London Paralympic Games 2012, states that disabled people tend not to travel alone and are often accompanied by careers, family or friends, with more than 50 per cent traveling with a partner, 20 per cent with a child, and 21-25 per cent with an assistant, which actually impacts on occupancy rates and spending.

important to analyze the service information provided on this subject by airline websites.

Thus, the primary purpose of this study was to assess the content provided on official websites of major airline carriers as related to information, services, and resources to accommodate aging and disabled travelers. Airlines were selected for meeting one of the following criteria: (1) ranked as one of the 10 best airlines; (2) ranked as one of the leading 10 airlines in terms of safety ratings; and (3) ranked as one of the leading 10 airlines in terms of lowest cost.

## **2. The Role of Airlines in the Touristic Offer and Rankings**

Tourism is an economic activity that requires a high-level of organization and global coordination. The demand for tourism appeared after the Second World War, and the increase is attributed, in part, to aircraft advancements during this time. Once the War ended, the use of airplanes was recognized as a viable technology in other contexts, and resulted in the emergence of modern commercial airlines that offer flights covering great distances within short periods of time. In 2011, there were over 980 million international tourist arrivals globally (UNWTO, 2013), with receipts surpassing \$1 trillion (UNWTO, 2012). With a steady increase in passenger volume projected in forthcoming years, the ability of the tourism industry to accommodate international travel demands is reliant on a consistent mass transportation system (Reisinger, 2009; Senguttuvan, 2006). It is estimated that around 15% of the international tourists use the air transportation, which is especially true for travel across continents. And, in certain markets, airline travel is more predominant. For example, in the European market, 86% of tourists use air transportation when traveling external to Europe (Cooper et al, 2008).

With the expansion of desirable travel destinations and advancements in aircraft technology, the competitive market for airlines has escalated. To date, there are an estimated 230 major airlines worldwide registered with the International Air Transport Association (IATA, 2013). Each year, airlines compete for patrons, revenue and status in the industry. For market ratings, criteria typically used to evaluate airlines include topics like the number of passengers carried, distance flown, fleet size, and number of destinations. However, these rankings do not include other aspects related to customer satisfaction, price, and other relevant consumer-centered aspects or qualities.

For the purpose of this study, airlines selected for assessment and comparison included those ranking in the top 10 in one of three categories: (1) being the best airline; (2) being the safest airline; and (3) being a leading low cost airline. These topics were purposively selected to meet the aims of this study, which examines airlines' offerings and capacity to serve tourists with AT needs. Basic definitions for each airline category used in this study are below:

- **Best Airline Rankings:** This ranking is based on passengers' reported satisfaction about airline performance indicators including check in, boarding, onboard seat comfort, cabin cleanliness, food, beverages, in-flight entertainment, and staff service (World Airlines Awards, 2013a).
- **Safe Airline Rankings:** This ranking is based on the lack of "hull loss accidents and serious incidents in the last 30 years of operations in relation to the revenue passenger kilometers" (JACDEC, 2013).
- **Low Cost Airline Rankings:** This ranking is based on the same indicators as those in the "Best Airline" category above; however, only airlines considered "low cost" can be considered for this ranking (World Airlines Awards, 2013b). Low cost airlines (also known as no-frills, discount, or budget carriers) are those that charge less money to patrons for travel, but offer fewer comforts or amenities. For example, while these airlines have inexpensive ticket prices, they often charge for other services like onboard food, seat assignments, and baggage.

### **3. Accessible Tourism in Airport Settings**

Airports are high-paced venues with large volumes of travelers and time-sensitive schedules and procedures. In addition to managing an abundance of daily travelers and ensuring flights depart as intended, airport staff is charged with screening all passengers for potential security threats and upholding protocol to ensure safety and efficiency. Beyond these operational obligations, airports and airlines offer services, equipment, and resources to assist aging and disabled travelers. AT issues are especially important in airport settings because travelers with special needs may encounter require additional time and assistance when navigating ticketing and security lines, traveling to their gate, boarding their flight, and traveling onboard the aircraft. These services and accommodations are then required again once the disabled traveler arrived at their destination and must again transport across the airport, navigate lines, and collect their baggage.

The types of AT accommodations provided at airports are typically the responsibility of the airport facility; however, many airlines provide AT services to their passengers anywhere within the airport. Airlines are especially responsible for the AT services provided onboard the aircraft, which can dramatically differ based on the priorities of each respective airline. Despite variations in the types of services provided, and the level of quality of such services, airlines are responsible for informing their potential patrons about the services they offer. The provision of AT-related information enables disabled travelers to make travel decisions based on airlines capable of meeting their needs and adequately prepare for their travel experience before, during, and after air travel (which can alleviate stress and travel complications when travelers know the amount of additional time required at

the airport and/or if any of their service or equipment needs are associated with additional costs).

#### **4. An Emphasis on Websites**

Websites serve as fundamental tools to promote and sell tourists products and services as well as provide useful information to future travelers (Smith and Amorim, 2013). The virtual space can reach millions of potential clients worldwide for a low maintenance costs and in an easily accessible format. Among the most important aspects of websites is their ability to provide content that is timely, relevant, and accurate. Considering the websites are sponsored by airline companies interested in selling products/services, the information contained should be adequate for the target public. However, from the consumer perspective, the Internet is a tool for the finding and accessing of information sources, and the visitors expect to have easy access to the information they require (Poel and Buckinx, 2005 cited by Law, *et al*, 2010). Tanrisevdi and Duran (2011) highlight that the tourism industry typically sells seemingly intangible products to consumers, which makes it virtually impossible for the consumer to evaluate the utility or quality of these products until the time of utilization (Litvin, Goldsmith, & Pan, 2008). The authors conclude that the amount of effort spent searing for needed information during the decision-making process is a key factor and can influence decisions about purchasing travel-related products and services.

As discussed before, aging and disabled travelers have a unique set of AT-related needs for travel. Thus, these tourists prefer and often require assurances that that travel facilities and travel destinations are able to attend to their needs, especially within the current travel and tourism market that is unprepared to accommodate them. Stated another way, considering the public should have access to details about the products and services they will purchase, the need for easily accessible information is more evident as it applies to special needs travelers.

For travelers with AT-related needs, the travel information available to them can be the determining factor about whether or not the travel is possible/feasible impact the quality of the touristic experience (Umbelino et al, 2012; Cole and Morgan, 2010). In the context of airlines and air travel, the touristic experience begins in the purchasing process, which is preceded by potential travelers collecting and assessing available information about services and products. Therefore, websites are essential from the perspective of the touristic offer. And, from the demand perspective, it is a practical and cheaper source of providing useful and necessary content to the masses. The information available on official airline websites must be reliable and should aim to seduce (gain and loyalty) the client by offering informative basic and high-level descriptions and details about organizational characteristics, services and products offered, and hospitality characteristics, for example.

Typically, airline websites serve as distribution channels in the tourist chain, which allows the client to select travel arrangements and buy them directly from the service producer. Beyond the provided information on these websites, there is no other intervening to guide or influence, with exception of the possibility that the traveler contact the airline and request support (essentially forfeiting one of the most advantageous and practical elements of website-based purchasing) (Law *et al*, 2010).

## **5. Methodology**

As mentioned previously, the primary purpose of this study was to assess the content provided on official websites of major airline carriers as related to information, services, and resources to accommodate aging and disabled travelers. Airlines were selected for meeting one of the following criteria: (1) ranked as one of the 10 best airlines; (2) ranked as one of the leading 10 airlines in terms of safety ratings; and (3) ranked as one of the leading 10 airlines in terms of lowest cost. Given 3 airlines met two of the above categories, a total of 27 websites were independently evaluated utilizing a content rubric, which was developed by study investigators and guided by literature pertaining to relevant accessible tourism topics.

A total of 30 topics were identified and included in the rubric. The rubric captured information pertaining to the availability of disability services, reserving disability services, and requirements and restrictions associated with medications, electronic medical devices, and service animals. Topics were compared by airline category type. Using previously established review methods (Smith and Amorim, 2013), all portions of the airline websites were systematically reviewed for content regarding the above mentioned topics. Information obtained from each website was recorded in the content rubric. Rubric cells were marked with an “x” to indicate the website included content about the topic, or content pertaining to each topic was explicitly documented to capture details about the information provided. Frequencies were calculated for each airline category independently. Frequencies were then calculated for all airlines ( $n = 27$ ), omitting those classified in more than one category ( $n = 3$ ).

## **6. Findings**

Table 1 reports findings from the content analysis of airline websites regarding disability services and dietary restrictions. Findings indicate 89.9% of airlines offered mobility services, 70.5% vision services, 62.9% hearing services, 40.7% cognitive services, and 7.4% language services. For available disability services, between 11.1% and 92.6% of websites provided no information. Approximately 63% of airlines provided onboard staff assistance to disabled passengers. No websites provided information about safety training requirements for staff members. Approximately 19% of websites provided safety cards in braille, whereas 77.8% contained no

information on the subject. In terms of dietary provisions onboard, 63% of websites reported information about options based on observances (e.g., vegetarian, Kosher) and 59.3% reported information about options based on allergies (e.g., peanuts, gluten, shellfish). Approximately one-third of websites did not contain information about dietary options.

When comparing website content based on airline category, a larger proportion of leading airlines in terms of safety reported having mobility, vision, hearing, and cognitive services. A larger proportion of leading airlines in terms of safety reported having onboard assistance available. Further, a larger proportion of leading safety airlines reported dietary option availability.

*Table 1: Disability Service Availability and Dietary Restrictions*

	Total** (n = 27)	Best (n = 10)	Low Cost (n = 10)	Safe (n = 10)
<b>Onboard Staff Assistance</b>				
No	14.8%	20.0%	10.0%	10.0%
Yes	62.9%	50.0%	60.0%	90.0%
No information available	22.2%	30.0%	30.0%	0.0%
<b>Safety Training Requirements for Staff</b>				
No information available	100%	100%	100%	100%
<b>Available Services: Hearing</b>				
No	7.4%	10.0%	10.0%	0.0%
Yes	62.9%	50.0%	60.0%	90.0%
No information available	29.4%	40.0%	30.0%	10.0%
<b>Available Services: Vision</b>				
No	3.7%	10.0%	0.0%	0.0%
Yes	70.5%	50.0%	70.0%	100.0%
No information available	25.9%	40.0%	30.0%	0.0%
<b>Available Services: Mobility</b>				
No	0.0%	0.0%	0.0%	0.0%
Yes	89.9%	90.0%	80.0%	100.0%
No information available	11.1%	10.0%	20.0%	0.0%
<b>Available Services: Cognitive</b>				
No	11.1%	20.0%	10.0%	0.0%
Yes	40.7%	30.0%	40.0%	60.0%
No information available	48.1%	50.0%	50.0%	40.0%
<b>Available Services: Language</b>				
No	0.0%	0.0%	0.0%	0.0%
Yes	7.4%	10.0%	0.0%	10.0%
No information available	92.6%	90.0%	100.0%	90.0%
<b>Safety Cards Available in Braille (for Vision Impaired)</b>				
No	3.7%	10.0%	0.0%	10.0%
Yes	18.5%	30.0%	10.0%	30.0%
No information available	77.8%	60.0%	90.0%	60.0%

	Total** (n = 27)	Best (n = 10)	Low Cost (n = 10)	Safe (n = 10)
<b>Dietary Options: Observance (e.g., vegetarian, Kosher meals)</b>				
No	3.7%	0.0%	10.0%	0.0%
Yes	63.0%	80.0%	20.0%	90.0%
No information available	33.3%	20.0%	70.0%	10.0%
<b>Dietary Options: Allergies (e.g., peanuts, gluten, shellfish)</b>				
No	3.7%	0.0%	10.0%	0.0%
Yes	59.3%	70.0%	20.0%	90.0%
No information available	37.0%	30.0%	70.0%	10.0%
** Three airlines were amotted from the total count because they were represented in more than one category				

Table 2 reports findings from the content analysis of airline websites regarding the disability service reservation process. Findings indicate disability-related information was available on 74.1% of websites, while 3.7% had limited information on their website, 7.4% did not have information available on their website, and 14.8% need to call a representative via telephone to obtain disability-related information. All websites provided disability-related information in more than one language. In terms of reserving disability services, websites indicated services could be reserved by telephone (40.7%), website (25.9%), or other mechanisms (3.7%). Almost 30% provided no information about reserving services. While 92.6% of websites indicated disability assistance can be reserved before the ticket is purchased, the majority of airlines required services be reserved a minimum of 24 hours in advance (70.4%). Almost 30% of websites indicated there were no additional charges for disability services, whereas 3.7% of websites indicated additional charges applied and 66.7% provided no information about additional costs for services. The majority of websites (88.9%) provided no information about the needs for additional security screening requirements for disabled passengers. Most websites indicate wheelchairs were available to disabled travelers (92.6%), and 11.1% indicated crutches were available.

When comparing website content based on airline category, a larger proportion of leading airlines in terms of safety had disability-related information available on their websites, reported the ability to reserve disability assistance via their websites, and charged no additional cost for disability services. A larger proportion of the best airlines provided no information on their websites regarding advance time needed to reserve disability services, how disability services are reserved or purchased, and additional charges for disability services.

Table 2: Disability Service Reservation Processes

	Total** (n = 27)	Best (n = 10)	Low Cost (n = 10)	Safe (n = 10)
<b>Disability-Related Information Availability</b>				
Available on website	74.1%	70.0%	70.0%	90.0%
Limited information on website	3.7%	10.0%	00.0%	0.0%
Not available on website	7.4%	0.0%	20.0%	0.0%
Need to call a representative	14.8%	20.0%	10.0%	10.0%
<b>Disability-Related Information Available in Multiple Languages</b>				
No	0.0%	0%	0%	0%
Yes	100.0%	100%	100%	100%
<b>When Assistance is Reserved</b>				
Before ticket is purchased	92.6%	100.0%	90.0%	90.0%
In airport before check-in	3.7%	0.0%	0.0%	10.0%
No information available	3.7%	0.0%	10.0%	0.0%
<b>Advance Time Needed to Reserve Services</b>				
No advanced notice necessary	3.7%	0.0%	10.0%	0.0%
1 or 2 hours before departure	7.4%	0.0%	20.0%	0.0%
24 hours before departure	11.1%	0.0%	20.0%	10.0%
48 + hours	59.3%	70.0%	50.0%	70.0%
No information available	18.5%	30.0%	0.0%	20.0%
<b>How Assistance Is Reserved / Purchased</b>				
By telephone	40.7%	20.0%	70.0%	30.0%
On website	25.9%	20.0%	20.0%	50.0%
Other	3.7%	0.0%	0.0%	10.0%
No information available	29.6%	60.0%	10.0%	10.0%
<b>Additional Charges for Disability Services Apply</b>				
No	29.6%	0.0%	10.0%	70.0%
Yes	3.7%	0.0%	10.0%	0.0%
No information available	66.7%	100.0%	80.0%	30.0%
<b>Additional Security Screening Requirments</b>				
No	3.7%	0.0%	0.0%	10.0%
Yes (documentation of physician prescription)	7.4%	20.0%	0.0%	0.0%
No information available	88.9%	80.0%	100.0%	90.0%
<b>Assistive Device Availability</b>				
Wheelchair	92.6%	80.0%	80.0%	100.0%
Crutch	11.1%	20.0%	10.0%	0.0%
Other	0.0%	0.0%	0.0%	0.0%
No information available	3.7%	0.0%	10.0%	0.0%
<i>** Three airlines were amotted from the total count because they were represented in more than one category</i>				

Table 3 reports findings from the content analysis of airline websites regarding requirements and restrictions about medications, electronic medical devices, and service animal restrictions. Findings indicate 66.7% of websites provide medication transport suggestions, 40.7% reported no restrictions on medication type, and 44.4% reported no restrictions on medication amount. Over 40% of websites provided no information about medication restrictions. In terms of

electronic medical device restrictions, 29.6% reported restrictions for respirators, 29.6% for ventilators, 29.6% for continuous positive airway pressure devices, 63.0% for portable oxygen concentrators, and 63.0% for electronic wheelchairs. For electronic medical device restrictions, between 33.3% and 70.4% of websites provided no information. In terms of service animal accompaniment, 74.1% websites reported service animals were allowed to accompany disabled travelers, 70.4% reported there was no additional charge to travel with service animals, and 74.1% reported service animals were allowed to travel in the passenger cabin. Approximately one-quarter of websites provided no information about service animal accompaniment.

When comparing website content based on airline category, a larger proportion of leading airlines in terms of safety reported medication-related restrictions and more allowances pertaining to service animal accompaniment.

**Table 3: Medication, Electronic Medical Devices, and Animal Requirements and Restrictions**

	Total** (n = 27)	Best (n = 10)	Low Cost (n = 10)	Safe (n = 10)
<b>Medication: Transport Suggestions</b>				
No	7.4%	10.0%	0.0%	10.0%
Yes	66.7%	60.0%	70.0%	70.0%
No information available	25.9%	30.0%	30.0%	20.0%
<b>Medication: Type Restrictions</b>				
No	40.7%	30.0%	60.0%	20.0%
Yes	18.5%	20.0%	0.0%	40.0%
No information available	40.7%	50.0%	40.0%	40.0%
<b>Medication: Amount Restrictions</b>				
No	44.4%	40.0%	60.0%	20.0%
Yes	14.8%	10.0%	0.0%	40.0%
No information available	40.7%	50.0%	40.0%	40.0%
<b>Electronic Medical Devices Restrictions: Respirator</b>				
No	0.0%	10.0%	0.0%	10.0%
Yes	29.6%	30.0%	10.0%	30.0%
No information available	70.4%	60.0%	90.0%	60.0%
<b>Electronic Medical Devices Restrictions: Ventilator</b>				
No	0.0%	0.0%	0.0%	0.0%
Yes	29.6%	50.0%	0.0%	50.0%
No information available	70.4%	50.0%	100.0%	50.0%
<b>Electronic Medical Devices Restrictions: Continuous Positive Airway Pressure</b>				
No	0.0%	0.0%	0.0%	0.0%
Yes	29.6%	50.0%	0.0%	50.0%
No information available	70.4%	50.0%	100.0%	50.0%
<b>Electronic Medical Devices Restrictions: Portable Oxygen Concentrators</b>				
No	0.0%	0.0%	0.0%	0.0%
Yes	63.0%	70.0%	50.0%	80.0%
No information available	37.0%	30.0%	50.0%	20.0%

	Total** (n = 27)	Best (n = 10)	Low Cost (n = 10)	Safe (n = 10)
<b>Electronic Medical Devices Restrictions: Wheelchair</b>				
No	3.7%	0.0%	0.0%	10.0%
Yes	63.0%	40.0%	80.0%	60.0%
No information available	33.3%	60.0%	20.0%	30.0%
<b>Service Animal Accompaniment: Allowed</b>				
No	0.0%	0.0%	0.0%	0.0%
Yes	74.1%	70.0%	60.0%	100.0%
No information available	25.9%	30.0%	40.0%	0.0%
<b>Service Animal Accompaniment: Additional Charge to Travel</b>				
No	70.4%	70.0%	50.0%	100.0%
Yes	0.0%	0.0%	0.0%	0.0%
No information available	29.6%	30.0%	50.0%	0.0%
<b>Service Animal Accompaniment: Travel in Passenger Cabin</b>				
No	0.0%	0.0%	0.0%	0.0%
Yes	74.1%	70.0%	60.0%	100.0%
No information available	25.9%	30.0%	40.0%	0.0%
<b>Service Animal Accompaniment: Travel in Cargo Compartment</b>				
No	0.0%	0.0%	0.0%	0.0%
Yes	3.7%	10.0%	0.0%	0.0%
No information available	96.3%	90.0%	100.0%	100.0%
<i>** Three airlines were omitted from the total count because they were represented in more than one category</i>				

## 7. Discussion

The global population is aging. Alongside advancing in years, older adults have more chronic conditions and disabilities relative to their younger counterparts. Aging and disabled populations have increased needs for special assistance, services, and equipment to accommodate limitations associated with physical functioning, cognitive impairment, and loss of sense functioning (e.g., vision, hearing). This group of aging and disabled travelers represents an interesting segment in the tourism industry; however, the current market offers inadequate products and services to meet the needs/demands of this special population. The inability and unpreparedness of the touristic infrastructure to offer these necessary services compromises the quality of the tourism experience, which can create discomfort among this population and make them feel marginalized and disempowered. Thus, it is especially important for the tourism industry to embrace basic concepts of Accessible Tourism (AT) by providing adapted structures/services to ensure these individuals are not deterred from travel and find their experiences pleasurable.

This study assessed websites of leading airlines in three categories from the prospective of consumers. Findings from this content analysis revealed that AT-related content provided on airline websites differed by airline category. Generally, leading safety airline websites provided more content about available AT services.

These leading safety airlines allowed AT services to be reserved online and were less likely to charge patrons for AT services. These safety airlines also reported more information on their websites about medication restrictions and more allowances related to service animals.

Websites serve as important communication tools, which should provide reliable information to attract and facilitate the purchasing process in a way that enhances the touristic experience. While most of the airlines assessed in this study contained a section on their website for “special needs,” the information provided within these website sections differed dramatically. Often, information about only a few topics was provided. And, even when topics were listed, only limited information about these topics was provided. The absence of detailed information on websites often forces customers to contact the airline via telephone or face-to-face. This can increase the likelihood of frustration, stress, or dissatisfaction if services are not provided or there are associated costs, which may result in travel complications, delays and/or cancellations. While there are instances that require telephone or face-to-face interaction, we recommend the addition of AT-related content on websites to maximize their potential benefit for the user and avoid inefficiencies for the airline. Such inefficiencies increases overhead for the airline in terms of personnel, time, and may result in a reduction in customer satisfaction and sales.

Despite being capitalistic in a competitive market, we recommend AT-related services be uniformly provided across airline categories and AT-related topics and information be accurately and uniformly reported on airline websites. While some airlines will elect not to offer these AT services, at least explicitly stating they do not offer such services enables the customer an opportunity to make an informed decision about pursuing travel plans with said provider. It eliminates uncertainty, which is important for aging and disabled travelers with special needs. Further, if airlines do not provide AT-related services, we recommend they consider the costs and resources needed to offer such services (i.e., in airports and onboard). Given the large and growing number of aging and disabled travelers, who are often accompanied by other individuals when they travel, the financial return on investment of catering to this subsection of travelers is vastly promising.

Airlines have the responsibility to provide information on their websites to inform potential travelers of the services they provide. It is essential that websites provide this content to ensure travelers have adequate time and information to make travel arrangements with airlines that best meet their needs. In addition to influencing the selection of airlines, this information should be provided on websites to allow travelers to prepare for their trip well prior to purchasing and departure. Travelers with AT needs may appreciate knowing the additional time required for reserving services and equipment, additional time needed to arrive at the airport, and/or whether the airline offers services or has restrictions. Further, information

about additional costs for AT services and equipment should be known in advance to avoid frustration and complications during travel. This information is also useful for the parties accompanying the traveler (e.g., family, friends, colleagues, caregivers). Possessing adequate information to plan for travel has potential to increase satisfaction among aging and disabled travelers and ensure their travel plans are not compromised upon arrival to the airport, which may lead to repeat patronage and increased loyalty.

Generally, findings indicate that most of the assessed airlines provide mobility (89.9%) and vision (70.5%) services for disabled passengers. Fewer airlines provided services related to hearing (62.9%) or cognitive (40.7%) impairments. While it can be argued that mobility impairments are the most prevalent form of disability, cognitive impairments are seemingly more common than those associated with vision or hearing (Norman and Grandgenett II, 1997). One interpretation of this finding is that the personnel training and resources needed to accommodate disabled travelers with cognitive impairments are greater relative to hearing and/or vision impairments, thus airlines are less inclined to or capable of providing cognitive services. Additional research is needed to determine the specific needs of cognitively impaired travelers and the training and resource demands on the workforce to adequately accommodate the volume of these disabled tourists.

Interesting findings also emerged about the provisions of braille safety cards and food options for travelers with dietary preferences or restrictions. Many airlines did not provide whether or not they offer braille safety cards onboard on their websites, and others stated that such cards are not available. Safety cards in braille are an inexpensive and important resource for the travelers with vision impairments. Information in braille fosters autonomy to these travelers when learning about safety procedures and equipment on the aircraft. Without this autonomy, these individuals may not feel they can protect themselves in a time of emergency. While airline staff and crew could read safety information to vision impaired travelers, this option goes against the promotion of quality AT experiences because it keeps the tourist dependent upon special treatment instead of being able to act on their own. In terms of dietary options onboard, a higher number of leading safety airlines and the best airlines offer foodstuffs that cater to those with food-related allergies and observances (90% and 70%, respectively). It is of no surprise that low cost airlines are less likely to offer food alternatives because they aim to save travelers from spending money by offering limited amenities. However, low cost airline websites should be updated to provide information about limited food provisions so travelers can adequately prepare for their flight.

Findings also indicate that leading safety airline websites provided more content about available AT services, relative to those in the other airline categories. This finding is somewhat intuitive because airlines providing a more comprehensive set of

AT-related services may increase the likelihood that they are ranked highly in terms of safety. Regardless, findings from this study suggest that leading safety airlines better serve tourists requiring AT-related services in many aspects. As such, the industry should consider modeling AT-related trainings and protocols from the practices of leading safety airlines. This has potential to increase the number of airlines providing AT-related services to disabled travelers and foster uniformity in service provisions industry-wide.

While none of the airlines included in this study reported safety training requirements for their staff, reporting this information is less important because of industry regulations that mandate basic first aid, cardiopulmonary resuscitation, and evacuation training requirements (ICAO, 2011). However, these trainings may or may not take into consideration the needs of aging and disabled travelers. Therefore, we recommend the creation and delivery of uniform AT and sensitivity training to enhance the workforce's capacity to accommodate aging and disabled travelers in the event of an emergency situation. In addition to protecting airlines against potential legal liability in the instance of adverse incidents, such training also has implications to foster customer satisfaction, comfort, and loyalty.

## **8. Limitations**

There were limitations to this study that must be acknowledged. First, the format and organization of airline websites differed based on their category and the country in which they were based. Therefore, despite systematic website reviews, some rubric content may have been provided on the website, but unintentionally overlooked by the content assessor. Second, only one content assessor was used to assess all 27 websites in this study. While this is seen as a limitation because there it limited the ability to measure inter-rater reliability, having the same content assessor ensured consistency in review processes and content documentation. Third, the rubric created for this study was not all encompassing and may have omitted important topics related to AT. Therefore, future studies should utilize this rubric, assess its relevance, and add additional categories, as needed. Finally, many of the airline websites did not provide AT-related content for many rubric categories. Although the information was not contained within the website, this does not guarantee that the airline did not provide this service. Additional efforts are needed to determine if airlines are actually providing AT services, despite that information not being present on their websites.

## **9. Conclusion**

This study highlights the importance of airline websites to inform aging and disabled travelers about AT-related services and equipment as well as associated costs. Airlines have the responsibility to provide information on their websites to inform

potential travelers of the services they do and don't provide. Official airline websites serve a vital role to facilitate the tourist's planning process to minimize frustration and stress while increasing the likelihood of a positive and satisfying experience. Airlines are encouraged to revisit the content provided on their websites to ensure accuracy and consider expanding the offerings of AT-related services and equipment to meet the needs of this growing tourism market.

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## IS ROMANIAN INFRASTRUCTURE DEVELOPMENT READY TO FACE TRANSPORT NEEDS FOR A TOURIST?

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### Abstract

*The recent years recorded changes in the Romanian economic sectors. Tourism and transports are very much related. Following a research on each mode of transport development for the last two decades and more, with progress and shortcomings, one discover why and if was possible to support a modern and comfortable background for tourists traveling in our country. Interconnections between communities and regional development with transport infrastructure offer elements for a better understanding of the present conditions to benefit of a responsible tourism in close connection with transport levers. The development of different transport modes was made unequal in recent decades, influencing the opportunities both for foreigners to fully enjoy a trip or a longer stay in Romania and for local inhabitants when visiting as tourists different areas of their country. Results of the analysis help us point where to start for future policies in the connected fields.*

**Keywords:** transport infrastructure, responsible tourism, modal comparisons

Within 24 years of free market economy, a lot of changes have happened in Romania. Many of these had positive effects on communities, but many are still determining a bad impact on people leaving here and on guests visiting our country.

We, as Romanians, will always attract foreigners with our born-hospitality, cheerful character and cultural legacy, with incredible landscapes and tasty rural products. But, when it comes to day-to-day living standard, modern technical facilities, constructions and public utilities spread all over the country, efficiency in transportation, things look a bit different.

Let us look over the whole development within the past two decades until nowadays. What are the grounds for a possible successful platform in making tourists feel comfortable while travelling in Romania and use local transport?

The analysis of the evolution of the main indicators for the transport activity and infrastructure in Romania after 1990 and so far (Fistung F. D, Miroiu R., Tătaru D., Iștoc M., Popescu T., 2013) reveals several issues that have affected the levels of competitiveness and efficiency, which tourists visiting Romania experienced indirectly as impact, as well:

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- A growth in a relatively slow pace of the public road network length by about 9%;
- maintaining a low share of upgraded roads in the total roads, of 24.2% in 1995, 26.3% in 2005 and only 32% in 2012;
- The length of the railway network decreased by about 3%, while the electrified network grew by only 2.6%;
- The existence of only 550 km of highway, at the end of 2012, Romania being placed last in the EU in this respect;
- The striking increase of the share of road transport, both for freight and for passenger, at the same time with the sharp decline in transport by rail, sea or air;
- Unbalanced distribution, in case of passenger transport, between road and rail;
- Over 70% decrease in the number of passengers transported by rail, together with a significant reduction of the weight of this mode of transport, from 35% to 12%;
- Romanian naval transports experienced, during 1990 – 2012, two distinct stages of evolution. In the first phase, between 1990 and 2000, it has been shown the strong tendency of national maritime fleet liquidation and of transfer to the private sector of the river vessels. The second period, between the years 2001 and 2012, was conducted under the influence of actions linking the national legal system with the European requirements and later, after 2007, river transport experienced a period of accelerated recovery;
- The existence of air traffic far below the real market for about 15 years because of the lack of a coherent strategy for developing national airline transport, the reduced flexibility of the national air transport company (TAROM), reduced investment in airport infrastructure. An outburst in air traffic, particularly after 2005, was largely due to the entry of low-cost operators which, through the pricing policy adopted, managed to attract a large number of people to this mode of transport. Also, after Romania joined EU and a lot of business, investment and travel activities began to grow.

In Romania it is recognized that the situation of transport infrastructure has not a very enviable position and that this state is one of the major reasons for the stagnation of economic development. Tourism is a sector that continuously confronted with this.

An analysis conducted on nearly 90% of the 3,181 urban and rural localities indicate that the most developed settlements in Romania are the big cities, located in the proximity of major communication routes, with a strong attraction for

commuters to work, located mainly in Banat, Transylvania and Dobrogea (Dumitru Sandu, 2013). The countryside areas, remote villages with preserved traditions and secluded nature are deprived by good transport connections.

The current infrastructure network designed, built and modernized over many centuries is, from the spatial point of view, quite well balanced developed, covering the entire national territory. Almost every locality is equipped with at least one transport route for the connection to other areas. Unfortunately, however, in nowadays Romania, access to modern infrastructure is strongly differentiated from one region to another, from one locality to another. Social development tends to be higher in communes close to the city than in the distant ones or in settlements placed on an “European road” compared to those which have access only to commune, county or national roads.

Incidentally, one of the main causes of inter and intra-regional development disparities is given by the different access regions have to the county, national and international transport infrastructure and by its poor quality, as well (Romanian Government, 2006). This affects comfortable and efficient mobility tourists should have, especially when visiting the regions based on their own resources and information.

Although, in case of highways the situation is not good if we compare it to the density of total roads (motorways, national roads, secondary and regional roads), the situation in Romania at the level of 2011 it was not just so bad (Table 1).

Otherwise, among the countries compared, Romania occupies an honorable third place in terms of total road density, relative to population (ahead of countries like Germany, UK, Belgium, etc.) and in terms of road density, relative to the country's area, the comparisons made show that only Germany and Belgium are better ranked. Also, comparing the length of motorways, the degree of motorization, we are better placed than the Czech Republic or Bulgaria, and if we look at the density of roads, to the same degree of motorization, only Germany and France are ahead of us. All these elements only mean that the primary road network of Romania (excluding urban networks) is quite well developed, even better than in some countries with tradition. Last policy in infrastructure was seeking the development with priority of some road links among all localities of the country, which was achieved at the expense of highway construction. Therefore, in view of the development and modernization of the road network, it should be also taken into account that there are some routes with current correspondent (European, national and county roads) which do not warrant a “doubling” through the construction of highways. Highways (Fistung, F. D., Istoc, M., Miroiu, R., Popescu, T., Tataru, D., 2013), should only be made where these constructions are justified, both from economic and environmental perspectives, for a traffic evolution forecasted on long term, over 30 years. Last but not least, the development of infrastructure network must be made in accordance

with EU requirements, as evidenced, mainly, by the adoption of the Trans-European network (TEN-T corridors). Coming for entertainment, sports, culture, health or business, a foreigner would experience the traffic in a country, in the first place.

**Table 1: Comparisons among relevant indicators for road infrastructure in several E.U. countries**

Country	Degree of motorization (veh/100 inhabitants)	Length of highways/ total road length	Length of highways/100 km <sup>2</sup> surface	Length of highways/ 1 million inhabitants	Total road length / 100 km <sup>2</sup> surface	Total road length / 1 million inhabitants	Length of highways/ Degree of motorization	Total road length / Degree of motorization
EU 27	455	0.0127	0.6228	126.19	491.16	9952.2	139.3	10989
Romania	203	0.0042	0.1468	16.36	35.11	3911.4	1.72	412.33
Belgium	487	0.1123	5.775	160.27	51.43	1427.3	3.62	32.24
Bulgaria	368	0.0618	0.4126	61.89	6.68	1001.4	1.24	20.14
Czech Republic	436	0.0132	0.9307	69.9	7.05	5295.2	1.68	127.52
Germany	525	0.0555	3.5968	157.03	64.77	2827.6	24.47	440.57
France	480	0.0276	2.0687	175.57	74.9	6356.9	23.78	860.83
Hungary	301	0.0411	1.3684	127.3	33.32	3100	4.23	102.99
Poland	470	0.0282	0.3422	27.79	12.12	984.4	2.28	80.64
Great Britain	450	0.0211	1.6035	58.96	76.09	2798.4	8.19	388.67

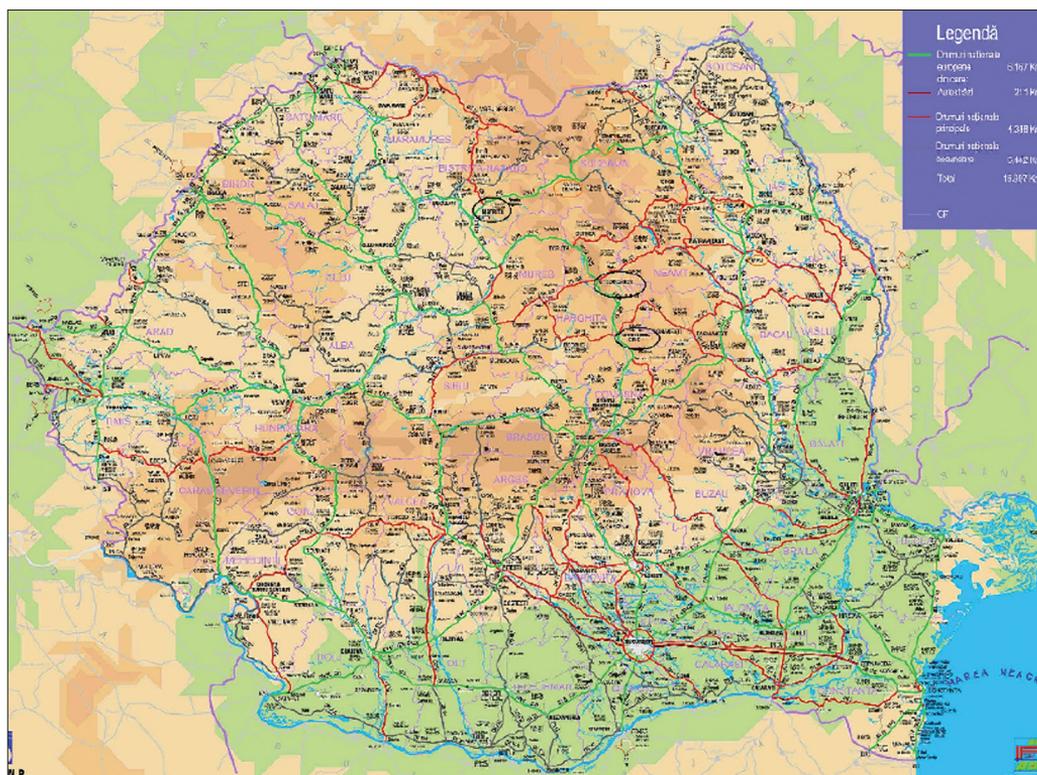
**Source: EUROSTAT, 2013**

The current infrastructure has fared in the development and modernization, similar to the Romanian economy as a whole, some of the main obstacles being the limited funding and the inefficient use of allocated funds.

Currently, the length of the public road network including highways, European national roads and primary and secondary national roads measures 16499.935 km. In the period 2005-2012, there was a slight increase in the length of routes with profile of highway and European road (Figure 1).

One drawback of the road sector is the fact that the national roads that access to town centers and cities are inadequate and most localities situated along the national and European roads don't have bypasses. Many national and European roads have insufficient capacity leading, many times, to congestion and, therefore, to longer travel time, increased vehicle operating costs, more accidents and environmental damage.

Another aspect is that our national roads are vulnerable to flooding and landslides. Given the low density of the road network, such natural phenomena could have a national impact given the fact that the limited number of routes considerably reduces mobility. The Moldova region, for example, was partially isolated during the floods in the summer of 2005, while the route crossing the Carpathian Mountains along the Olt Valley (located on the TEN-T 7 priority axis) was blocked several times in recent years. In such a case, trips in the area were in jeopardy or cancelled. The TEN-T network is that one to ensure with priority connectivity between Romania and the rest of the EU.



**Figure 1 – Map with main road networks in Romania**  
 (Sursa: [http://www.cnadnr.ro/docs/proceduri\\_derulare/78p-Anexa1\(harta\).pdf](http://www.cnadnr.ro/docs/proceduri_derulare/78p-Anexa1(harta).pdf))

The motorway network in Romania (Figure 2) was born in 1973, when it was inaugurated the 96-km segment from motorway A1 Bucharest-Pitesti. It took another 14 years until the next inauguration - 1987: 17.2 km between Fetești and Cernavoda - and then, never done anything in this area. For 17 years, Romania has stayed with the same number of kilometers and only in 2004 were put into operation the first kilometers of highway made after the 1990: 97.7 km from the A2 motorway between Bucharest and Drobeta. Thus, in early 2005, the motorway network length was 228 km, with the following sections: A1 Bucharest – Pitesti, 113 km West of Bucharest; A2 Fetești – Cernavoda, 17.5 km over Danube, between Bucharest and Constanta; A2 Bucharest – Drobeta, 97.5 km East of Bucharest.

In the 40 years of existence of our country's motorway network, of the years in which there were openings, the worst was in 2007 when they opened only 13.6 km (Pitesti ring to continue A1 Bucharest-Pitesti). The most prolific year was 2012, with over 140 inaugurated km, when the A2 Bucharest-Constanta highway was fully completed, 25 years after the inauguration of the first section. On 30 May 2013, they opened another 17.5 km of highway between Simeria and Orăștie. The new

section link to the 15 km of motorway opened in December 2012 between Deva and Simeria, making 32.5 km in total.



*Figure 2 - Motorway network in Romania, at the level of 2013  
(Sursa: <http://130km.ro/harta.html>)*

In terms of highways density, calculated by reference to both territory and population, Romania is the last in the EU countries mentioned. Leading positions are held by countries such as Belgium, Germany and France. Countries such as Bulgaria and Poland are closer to Romania's situation.

Compared with data from the EU, it shows a much lower density of the motorway network in Romania, both in terms of density calculated by reference to the surface and population (Table 2).

Since 1990, we have witnessed an evolution in Romanian air transport which helped tourism in all these years. Once Romania joined the European Union and NATO, international political and economic exchanges have amplified and brought with them developments in both classic and business tourism. The airlines expanded in number, diversified destinations and there have been periodic efforts in changing the quality of transport services under increased security and environmental protection.

*Table 2: Road density in several EU, in the years 2002 and 2009*

Country	Km motorway/1000 km <sup>2</sup> area		Km motorway/ 106 inhabitants	
	2002	2009	2002	2009
Romania	0,5	1,3	5,2	15,0
Austria	19,6	20,2	202,8	201,9
Belgium	56,6	57,7	160,1	163,2
Bulgaria	3,0	3,8	41,5	55,0
Czech Republic	6,6	9,2	51,8	69,4
France	18,5	20,2	171,9	178,3
Germany	33,7	35,9	145,9	156,3
Poland	1,2	2,7	10,5	22,8
Slovakia	6,2	8,0	56,1	72,4
Spain	19,2	26,7	237,7	288,0

*Source: Calculated based on data from Eurostat and Statistical Yearbook of Romania for 2003 and 2010*

In case of air transport of passengers which included tourists, it has been a downward trend until 1998, ie from a total of 3,369 thousand passengers in 1989 to 1,008 thousand passengers in 1998, but then it was followed by an increasing trend, thus to a total of 10 783 thousand passengers in 2011 (10.7 times higher than the level achieved in 1998 and 3.2 times higher than in 1989) (Fistung, F.D., Istoc, M., Miroiu, R., Popescu, T., Tataru, D., 2013). In 2012, the Romanian air transport market was divided by Wizz Air (2.7 million passengers), TAROM (2.2 million passengers), Blue Air (1.5 million passengers), Lufthansa (1.3 million passengers), KLM and AirFrance (0.25 million passengers) each ([www.incont.ro](http://www.incont.ro)). Majoritatea acestor companii asigură legături internaționale de pe aeroporturile București Otopeni, Cluj-Napoca, Târgu-Mureș, Sibiu și Timișoara. Din anul 2004, KLM a intrat în componența holding-ului Air France-KLM, care face parte din alianța aeriană Sky Team, alianță din care face parte și TAROM (2010).

Evolution of the national passenger flows, increased almost four times during 2000-2012 and the planned maintenance on an upward trend of this indicator in the medium and long term has determined an increased number of airports with international status in Romania. If in 2000 this status was held only by airports in Bucharest, Constanta, Timisoara and Sibiu, at this time, in 2013, the airports in Cluj, Satu Mare, Baia Mare, Oradea, Arad, Craiova, Suceava, Iasi, Bacau and Tulcea belong to this category being certified by the Romanian Civil Aviation Authority ([www.airportaar.ro](http://www.airportaar.ro), 2013). This opens new travel facilities and opportunities to and from Romania. Bucharest has the highest air traffic, over 7.1 million people in the year 2012, followed by Timisoara airport with 1.2 million and the one in Cluj, with just over one million people.

Bucharest “Henri Coanda” International Airport supports most flights to connect Romania with the rest of the world, received extensions and improvements to the arrivals and departures terminals (from 9 to 27 gates), connections with the city, but all of these developments have improvements to come in future.

But if we look at the pace of development of railways in Romania in the last twenty years, we can say that the situation is disastrous. The market share and the traffic dropped considerably and still have this tendency, while the road transport continues to be well above the rail transport. Unfortunately, the Romanian railway is currently in the same starting point the road transport was two decades ago. Disinterest of authorities and decision-makers who have succeeded in directing the activities of the sector can be highlighted by simply comparing the costs incurred, per kilometer of rail track, for example in 2006, in Romania and other EU member states (Table 3). Thus, Romania with only 147 Euros allocated for maintenance and upgrading one kilometer of railway had only 2% of the amount allocated in Poland or Bulgaria and 0.03% of the allocation made by Belgium (Fistung, F. D., Istoc, M., Miroiu, R., Popescu, T., Tataru, D., 2013).

**Table 3: Indicators specific to railway transport activity, for Romania and several EU member countries, in the year 2006**

Country	Deployed length of network (km)	Traffic units <sup>1</sup> (billions)	Traffic variation between years 2006 and 2005 (%)	Total budgetary expenditure <sup>2</sup> (million Euros)	Maintenance expenses (Euro/km rail)
Romania	20.384	23,9	-3	3	147
Belgium	6.067	18,2	5	3.226	531.729
France	52.820	119,7	2	10.100	191.215
Italy	23.193	70,6	2	5.126	221.016
Germany	64.219	186,0	8	8.001	124.589
Hungary	7.942	19,8	5	560	70.511
Austria	9.847	30,3	8	637	64.513
Bulgaria	7.216	7,8	4	61	8.453
Poland	37.504	71,7	6	310	8.266

**Legend:** <sup>1</sup> Traffic units are cumulative value of passenger traffic and freight traffic

<sup>2</sup> Expenses incurred for maintenance, repair and modernization of railway

**Source:** Udriște O., S.O.S. – *Calea Ferată Română! (III)*, AGIR Publishing House, Bucharest, 2013 and authors' calculation

Because of underfunding the maintenance of the railway infrastructure, this has deteriorated continuously, which resulted in reduced velocity. The train average speed reached nearly 50 km / h on the whole rail network. In 1990, a fast train covered the distance from Bucharest to Iasi in five hours and 40 minutes. Nowadays, the same train travels the distance of 406 kilometers in seven hours and 16 minutes. This bad situation applied to more routes. And the European standard speed is of 160 km /h. So, it is not at all attractive for our foreign visitors.

So far, the global approach to all railway activities - infrastructure management, passenger and freight operations - led to inadequate allocation of funds between road and rail infrastructure (every year it was 1 leu for railway infrastructure compared to 6 lei for to road infrastructure, while the European Union requires that this report be 1-1).

Romanian maritime transport of passengers has been and remains insignificant for many years. For passenger transport, from the available statistical data (National Institute of Statistics: Romanian Statistical Yearbook editions in 1995, 2001, 2007, 2008, 2009, 2011), it appears that between 1989-2006, there was no activity. The first official figures on this type of activity are those of the year 2007 (12.000 passengers carried), following a rapid growth for the next year and again a decrease to a value close to that of 2007. Since 2010 though, the maritime transport of passengers came, however, in an uptrend. We should not forget that Romania still has great potential for development of water transport. Danube is navigable throughout the entire Romanian sector of 1075 km. The Black Sea coastal area (193.5 km) has the port infrastructure for heavy ships in Constanta, Mangalia, Sulina and the channel Danube - Black Sea. So, it becomes a priority to pursue the competitive advantage the Danube and Black Sea have on cruise tourism development.

Some key elements to summarize facts and reasons for the shortcomings we still carry as a burden:

- across the whole network of transport routes, the share of those modernized, brought to the requirements of the current and future society, is small, which creates discomfort and a decrease in attractiveness as economic and touristic prospects. For example, of all public roads in 2012, only 32% were upgraded and of the total simple length of railways in operation under 38% were electrified;
- maintenance and upgrading of existing transport infrastructure (especially railways) has been deficient in the allocation of funds, in preference to the construction of highways, some of which are not economically justified. It is almost certain that, for example, the Bucharest-Constanta highway will be profitable only if the activity of potentially navigable areas of the Black Sea and the Danube, would increase significantly, this final aspect, yet, requiring, firstly, modernization of naval infrastructure, which is not regarded a priority at this time;
- the “gain” obtained by the construction of a large national rail network as a prerequisite for a potential sustainable development of transport in Romania is lost permanently. In recent years, maintenance and modernization of the railway were permanently underfunded;
- in the infrastructure construction projects those which prevailed were mostly political reasons, the economic requirements and justifications were, generally, secondary or unimportant. The best example is the construction of the Danube-Black Sea navigable channel, built with huge material and human efforts, which is almost unused. Areas of Romania are naturally endowed with naval transport infrastructure (areas in South and, especially, in South-East), but this advantage has been and is utilized to a small extent.

## **Conclusions**

- We need to reduce regional disparities through balanced development of all types of transport infrastructure. In this way, we offer opportunities for tourists to reach the different destinations in Romania they are interested in. This responsible way of approaching tourism goes hand in hand with setting the stage for a balanced economic development of all regions of Romania, knowing that, at present, some of these are disadvantaged and not attractive due to inadequate quality or lack of transport infrastructure.
- Although we urgently need and long for useful highways to cover Romania, better reorient budgetary financial allocations from highway construction to modernization and increase of the capacity for European, national and county roads. Taking into account a minimum of two million Euros for the construction of a km of motorway and 300,000 Euros for modernization / rehabilitation of one km of national / European road (Fistung F.D., Miroiu R., Popescu T., Șerbulescu R., 2008), a full recovery of the current network of national roads, under European increased requirements and parameters, would cost, on average, as the construction of 2,000 km of highways and would generate more jobs, thanks to the extent and geographical distribution of the works, fostering the progress of local communities and people living there.
- Referring to the reorientation process of traffic from polluting to the most efficient modes, from the ecological, economic and touristic perspective, the river transport along the Danube might become of great importance, in the future. Danube transits countries and regions of large economic diversity, with different levels of development in terms of growth and the traffic might dramatically increase in perspective, leading to significant growth in riparian areas and beyond. Danube could also become an opportunity for logistic cohesion for the communities along, enhancing the burst of a responsible tourism in the area. By absorbing a significant share of the goods transported so far by road, the environmental effects from transport would be overall reduced and the transport costs per ton of cargo would be decreased. Therefore, travel services specific to river and to intermodal technologies and local production of the necessary equipment might be stimulated with new jobs created.
- Another direction should be the development of high capacity transport networks with low negative impacts on the environment, in areas where this is possible. In this context, an important place is aimed at modernizing and developing rail infrastructure and multimodal terminals, as in developed countries.
- Tourism needs constant encouraging for those transport subsystems that support sustainable development processes and make traffic in Romania more fluid.

Reviewing the transport activity after 1990 until now, seen as a tool to support a sustainable and responsible tourism activity for Romania and also considering the trends and requirements of European and national markets, it is necessary, first and foremost, to work towards achieving a sustainable transport system, with development of transport alternatives against polluting modes and for the internalization of all external costs (Fistung, F.D., Istoc, M., Miroiu, R., Popescu, T., Tataru, D., 2013).

We could say that only partially our infrastructure faces the travel needs for tourists in Romania. Yes, they can arrive in the country in most of the major cities and reach the most known tourist areas.

To arrive in Romania – the most efficient transport mode is by air. Quite used mode is by road, less by rail and very little by sea. To travel within the country – the most used mode is by car, buses. Then we speak about trains or planes.

But if we speak about the possibility of reaching different locations to cover the whole country, to discover interesting villages, to circulate with proper speed, in fluent traffic, by constant and short station intervals, on modern extended routes, with diversified possibilities of changing transport modes according to situation necessities, in an unpolluted environment with ecological oriented vehicles, then the issues are not solved yet at the required European and international standards and there is a lot of work to do ahead.

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and 2011

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## GROWTH, DEVELOPMENT AND SUSTAINABILITY

Ph.D. Prof. Irina-Virginia Dragulanescu<sup>1</sup>Ph.D. Natalia Dragulanescu<sup>2</sup>**Abstract**

*Describing the relationship of interdependence through the materials balance, will be argued how the economy is a subset of the environment and the environment the natural limit to any economic initiative, or the limits imposed by the laws of thermodynamics. The theoretical debate moves, then, from the concept of growth to that of development, understood this in its three dimensions: economic, social, environmental. Bring the different environmental positions in four versions of sustainability, with the gained awareness that it's "a spectrum of overlapping sustainability positions from very weak to very strong".*

**Keywords:** growth, development, approaches to Sustainable Development, capital, stock

**1. Introduction**

"The Limits of Growth" represents the moment when the theoretical elaboration moves the focus from the concept of "economic growth" to that of "economic development" (Masetti, E., 2006). There is talk of economic growth when there is an increase in value of goods and services produced by an economy. It is conventionally measured by the annual percentage change of a positive specific indicator: the gross domestic product.

Traditionally, this index was taken as a measure not only of the economic well-being, "Welfare" of a country but also, in more general terms, of its "Well-Being". In fact, often has been referred to the concept of economic growth as synonymous with development, but between these two terms, there are significant differences. In the current debate, economic growth must be seen as only one aspect of the development of an area. The term development means the set of "changes in the economic, social, institutional and policy that are necessary to make the transition from an agricultural economy to a capitalist pre-industrial capitalist" (Bresso M., 1993, p. 75).

A society that crosses a phase of economic development relates a series of improvements to a variety of indicators (and not only necessarily of a measure referring solely to the amount of wealth produced by a country), such as literacy rates, life expectancy and poverty rates, population health, environmental quality,

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etc. Development means improvement, progress; indicates a change towards a situation preferable than the present one, changes that are also qualitative and not just quantitative. The development is a set of desirable goals for a society that cannot understand the sole objective of the growth of per capita income (Pearce D.W., Markandya A., Barbier E., 1991).

## 2. From growth to development: the “Triple Bottom Line” approach

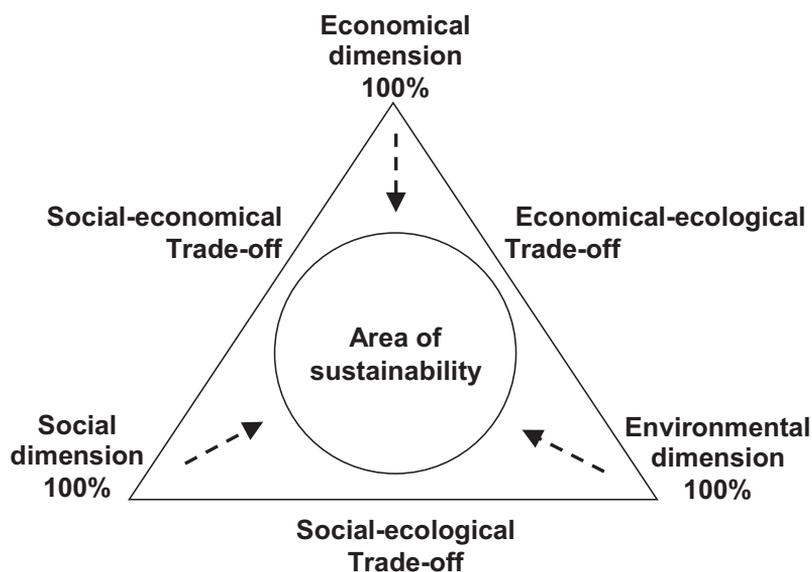
Following the controversy arose in the 70s the focus is then shifted from the objective of growth, the increase in the economic well-being, to the broader concept of quality of life by focusing on several variables, rather than of only one. We start to consider the new definition of well-being more specifically defined by the “Well-Being”. The use of a multi-dimensional concept, much more extensive than just the economic dimension, the result of a balanced management of the relationship among the economic, social system and environmental refers to the belief that, while economic growth generates Welfare, the Well-Being can be increased by the development. Depending on the achievement of such a goal, it begins to rise, in those years, the desire to adopt a model of development that cannot be reduced simply to an increase in the purchasing power of the possibilities of consumption over time, but takes into account also of all aspects of social and environmental, that contribute to determining the level of welfare of individuals.

It is the model of “Sustainable Development”. This expression begins to circulate in the literature until around 1979-80, and acquires as a proposal at an international level thanks to the report published in 1987 by the World Commission on Environment and Development, “Our Common Future”, also known as the “Brundtland Report”.

In this document is institutionalized the concept of Sustainable Development. However, while “sustainable development requires meeting the basic needs of all people at the same time, and extend to everyone the opportunity to implement their aspirations for a better life” on the other in the proposal persists an optimistic confidence in the technology which will lead to a “new era of economic growth”: *“The concept of sustainable development implies limits, but not absolute, but rather imposed by the current state of technology and social organization, economic resources and the capacity of the biosphere to absorb the effects of human activities. The technical and social organization may, however, be managed and improved in order to open a new era of economic growth”*.

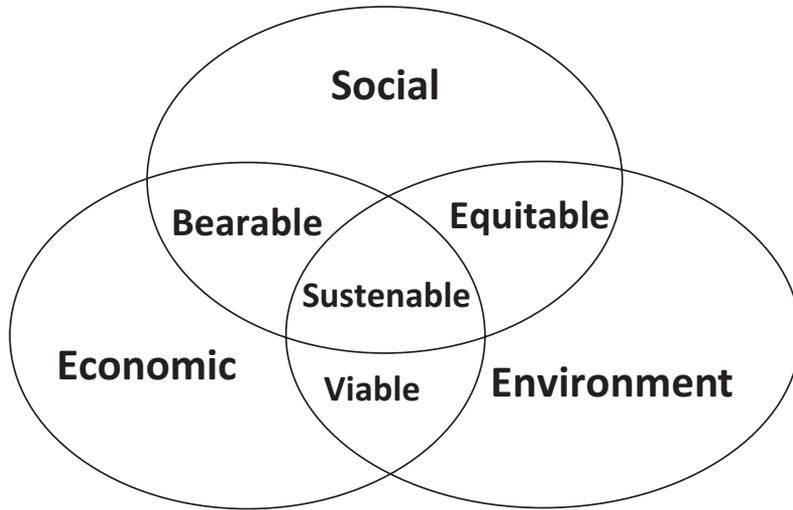
According to the report that it is a very broad concept, multi-dimensional, including the triangle of sustainability (Silvestri F., 2003): the economic dimension, the environmental dimension, the social dimension. Therefore, if the sustainability of growth can be understood as a non-decreasing path of consumption or GDP, or other indicators of economic well-being, in the case of sustainable development, to

build over time a non-decreasing path of well-being (David P., 1991), it requires not only an economic but also environmental sustainability and social thereof. Thus, the pursuit of sustainable development depends on the ability of governance to ensure economic growth (if and as applicable) compatible with social equity and ecosystems through an appropriate trade-off between the economy, society and environment. The triangle of sustainability (Fig. 1) shows that sustainable development does not pursue the maximization of a single goal function, but is realized through the deployment of a dynamic compromise between the three dimensions according to what is described as the “Triple Bottom Line”.



*Figure 1: The triangle of sustainability*

According to this three-pillar approach, there is not only one object of sustainability, but all systems (economic, social and environmental) must be sustainable at the same time because the same are considered interdependent and interconnected (fig. 2). The sustainability assumes a systemic approach to problems: each action, is not to be assessed individually, but in relation to the effects that may result in the global system in which it takes place. Is therefore necessary always keep in mind the interrelationships and consequences arising from the interplay between the economic system social and the environmental one, which together contribute to forming the “global system”. Any programming intervention must take into account these interrelations, because there is always the risk of damage within a system in attempt to correct problems in another. Therefore, the decisions must be integrated in such a way that they considered the effects in all three systems before intervening (Reho M., 2000, p. 43).



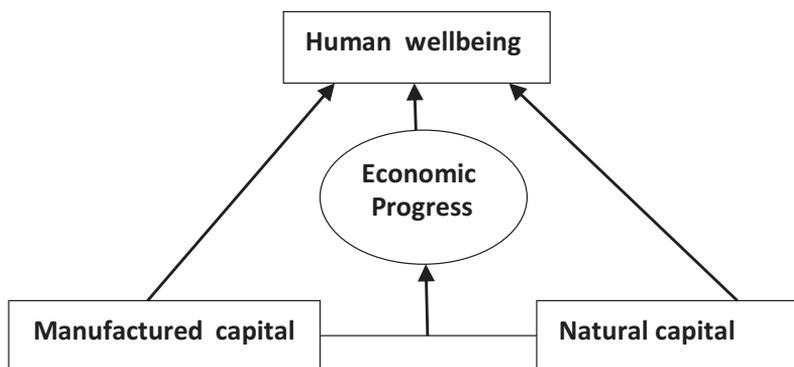
*Figure 2: Interconnections between the dimensions of sustainable development*

Sustainable development has become a major goal of “European Community programme of policy and action in relation to the environment and sustainable development” (Maglia S., 2008, p. 20).

### 3. Versions of sustainability

In order to follow a development path that is sustainable, we have seen how the “Triple Bottom Line” approach requires that the principle of economic efficiency, that is the soul and dominates the traditional economy, should be “revived” by social and environmental considerations. That is, economic growth (if and as applicable) must be accompanied not only by the pursuit of environmental quality objectives but also of distributive equity, being equally important to the correct distribution of benefits and costs that a given allocation can result. The correct distribution of resources among nations and generations requires each state to define and implement their development policies, to take into account not only the relationship between the needs of its people and those of other countries (intra-generational equity), but also the relationship between the needs of the present generation and the future (Intergenerational Equity) in order to look for: “...to ensure that future generations are at least as well off, on a welfare basis, as current generations, it is therefore in economic terms a matter of intergenerational equity and not just efficiency...” (Turner R.K., p. 6); “...Economic definitions have tended to focus on sustainable development as non-declining per capita human well-being over time. Non-declining well-being is an intertemporal equity principle rather than an efficiency principle...” (Pearce D.W., Markandya A., and Barbier E.B., 1989; 1990). There is no doubt the key role that the “capital” plays in the development process. In fact, capital is both the natural *Kn*

and the man-made total, represents a chance to reach a certain well-being (Turner R.K., Pearce D.W., Bateman I., p. 62) through the direct provision or through the production process of goods and services from which humankind depends. The  $K_m$  contributes (Fig. 3) directly to human well-being in the form of artistic and cultural heritage, but also indirectly as the capital invested in the production process.



**Figure 3. Forms of capital contribution to human wellbeing**

The  $K_n$ , in turn, contributes to it by the natural landscapes, the richness of flora and fauna, and as a source of resources necessary for the economic production and storage of its residues (Pearce D.W., Markandya A., and Barbier E.B., 1991, p. 54). Given that both are indispensable elements for development as is “right” that should be managed the capital by the economic system to ensure a well-being path that does not diminish over time. What are the resources that can be consumed at present and which should, however, be preserved to ensure the sustainability of development, and not only in its economic dimension. The answer goes through the “legacy of capital” (Turner R. K., p. 1). To ensure that future generations enjoy a non-decreasing level of well-being requires that the current one leaves an inheritance of capital not less than what they have, so as to allow those who will follow to achieve at least an equal level of well-being.

This solution can be summed up as the “*Constant Capital Rule*” (Pearce D.W. & Atkinson G., “*Are National Economies Sustainable? Measuring Development*”, p. 8) becomes, then, the rule of sustainable development, a development which demands the respect of equity in capital transfer between people and over time (Turner, Pearce, Bateman, p. 43). Ethical basis of this rule is the right that future generations have to expect that legacy (in the form of a bequest by manufactured capital: physical, human and natural capital). A moral obligation towards the future generation by virtue of a kind of intergenerational social contract (Turner R.K., p. 6) that guarantees in the future at least the same opportunities that were available in the past.

The different definition of the legacy due to future generations is closely related to different assumption of a degree of substitutability between the various forms of capital that can be used in the production function and the more or less incisive influence of environmental and ethical considerations that accompany and justify (Turner R.K., 1993, p. 3-36).

These different versions animate the different environmental ideological positions. It goes from techno-centric, neoclassical array arriving to try to reconcile the objective of economic growth with the perceived social and environmental needs, and the Malthusian eco-centric, typically hostile to any future increase in the scale of economy, if not in favour of a significant reduction.

#### 4. Very Weak Sustainability

The first version, “Very Weak Sustainability” (VWS) is the traditional neoclassical economics. Within this theoretical framework, in which indispensable point of reference is the work of Solow “*Solow Sustainability*” (Solow R.M., 1956; Solow R.M., 1986 Vol. 88, pp. 141-148; Common M., Perrings C., 1992, vol. 6: 7-34.). The path of economic development is identified with a non-decreasing consumption level over time, while its sustainability, i.e., the ability to maintain economic growth, takes the form of constraint on the use of resources according to the “Hartwick-Solow Rule” (Hartwick J., 1977). Sustainability of the development understanding then, only as sustainable growth, as non-decreasing consumption level.

The VWS is defined with respect to mere economic capital in four different definitions of capital stock: economic capital, ecological capital, natural capital, total capital. In other words this stock is integrated by:

$$\text{manufactured capital (Km)} + \text{natural capital (Kn)} + \text{human capital (Kh)} + \\ + \text{ethical capital (Ke)} + \text{cultural capital (Kc)}$$

On the basis of the definition of capital and replacement constraints considered in production function can be define four different meanings of sustainability (Gütes M.C., 1996; Hediger W., 2000). In fact, to ensure a level of per capita consumption at least constant (“*the lower bound of sustainability*” (Pearce D.W. & Atkinson G., p. 2) it is required that “the overall production capacity of an economic system” will not be reduced. There are two main criticisms of the Hartwick-Sollow model. The first concerns the assumption of substitutability between the different forms of capital, which is deleted or changed largely from literature developed on the issue of sustainable development, especially within the so-called ecological stream. The second objection concerns the emphasis exclusively on economic growth, ignoring issues of equity and environmental quality. In other words, growth is not a phenomenon of a purely economic nature. Indeed, growth and development can be conflicting goals.

The fact that the level of income or consumption per capita remains unchanged or grow over time does not mean that the quality of life or standard of living remain the same or grow in parallel.

The VWS animates that environmentalist position defined as “Techno-centrism of Abundance” and is linked to a model of “Anti-Green Economy”. The only goal is to pursue freely an unlimited growth, the maximization of GDP growth with resource exploitation, on the assumption that free markets and technical progress are able to provide infinite replacement capacity, so as to mitigate all constraints arising from “scarcity”. There is no ethical concern if not addressed to the interests of contemporary humans and recognizes only an instrumental value to nature.

## 5. Weak Sustainability

The second version, the “Weak Sustainability” (WS), arises from the review of hard core neoclassical model highlighting its critical points, such as: the blind trust towards the market, the logic of equilibrium prices, the potential of technological progress, the system’s ability to ensure maximum growth, the same assumption of perfect substitutability between the forms of capital. In a nutshell, were accepted the main criticism of the neoclassical theory pure to save its own orthodoxy. A critical process “inside”, implemented by neoclassical economists, to create the current economy of the environment as a new branch of economics. Firstly, WS is defined relative to the total capital. In fact, it requires that the potential social welfare resulting from total capital base does not decrease. This well-being is not restricted to that indicate to the maintenance of constant consumption level, but also includes the one connected to the values of life, heritage and recreational of environment. The change to “Solow’s Sustainability” has been characterized also by the introduction of an upper limit on the capacity of assimilation and a “...lower bound on the level of  $K_n$  stocks that can support sustainable development...” (Turner R.K., p. 11). That is, the *VS* continues to permit the substitution of one form of capital with another in order to allow at least maintaining the overall value of the total capital, but this substitutability is not the most perfect, recognizing that it is actually possible only within certain limits. It recognizes, in fact, the existence of minimum levels for some environmental resources known as “critical natural capital” (Turner K.R., pag.1). Therefore, the requirement of the conservation of the capital stock value was forced, by introducing limitations on sustainability aimed at preservation of at least part of  $K_n$ , to maintain respectful resource exploitation of ecosystem stability and resilience.

According to some scholars, those advancing a more rigorous version of the sustainability, such limitations should be seen as an expression of “precautionary principle” and similar to the notion of “*Safe Minimum Standards*”. This concept is a way to give a possible solution to the social contract between generations, to find a compromise between the use of current resources to achieve economic benefits and

the preservation of those for the future. That is, through an adequate Cost-Benefit Analysis fastens the natural capital threshold below which it is not convenient to get off. The critical natural capital would be getting as that natural capital level, below which operating costs that will be incurred are too high compared to the benefits, but this calls into question the ability to economically evaluate the benefits and costs associated with our relationship with the environment without “*missing elements in economic calculus*” (Turner R.K., p. 13). It should not be so allowed the replacement of critical natural capital, but otherwise (assuming that the benefits to which we should give up are too high) then “*manufactured capital of equal value can take the place of natural capital*”.

The VS animate that environmentalist position defined as “Techno-Centrism Accommodating” due to a model of “Green Economy”. The need for a “greening” of the objective of economic efficiency is abandoning of unlimited growth path towards a growth adapted to take account of the burden on the environment and on society in patterns of production and consumption. We propose a rational management of resources.

## 6. Strong Sustainability

The third version is that of “Strong Sustainability” (SS) derivative as part of studies of Ecology Economy of Malthusian matrix showing how weak sustainability versions allow a decrease in the level of environmental quality and resource availability, unless other forms of capital replace the  $Kn$ . The focus is on the “*missing elements in economic calculus that underlies the weak sustainability*”. Many of the functions and services of ecosystems can be properly evaluated in economic terms, but others are beyond a monetary valuation. The reference is to a concept of “maintenance of environmental quality”, represented as a function of stocks of biological resources, ecosystem space, availability of nutrients, and other environmental assets necessary for the integrity of the ecosystem, which provides the society values of use and non-use. According to supporters of this third hypotheses, the preservation of capital is not sufficient if understood in terms of total capital, precisely because of the high risk of irreversibility of the destructive process of natural resources; for the presence of uncertainty (Pearce D. W. & Atkinson G., p. 2) on the functioning of ecosystems and the total value of their services and the critical (not substitutes), uniqueness of some components of  $Kn$ ; the loss aversion, felt by many individuals when environmental degradation processes become visible; for what Daly has called “scale effect”: for example, the impact of the level and rate of population change on the global carrying capacity (Turner R. K., p. 14).

Therefore, they propose that the next generation must “*inherit a stock of natural assets not less than the stock inherited from the previous generation*” (Pearce D., Markandya A., Barbier E., 1991, p. 54). In this way, with an emphasis on preservation

of natural wealth, and not of the total wealth, can be assured effective protection of natural resources threatened by economic progress. This approach attaches primary importance to the maintenance of the structure and functions of the ecosystem, its integrity, responds to a precautionary principle (Atkinsons G., Dietz S., Neumayer E., p. 66; Pearce, D. W. & Atkinson, G., p. 2) but, unlike SMS (*Safe Minimum Standard*), natural capital for the SS must be maintained at least constant even if the expected benefits to which you give up are high, since a loss of natural capital is unacceptable (Turner K., Pearce W., Bateman I., 2003, p.66).

The SS refuses the ample replacements (Daly H.E., vol. 2, no. 1, 1990, pp. 1-6) between  $Kn$  and  $Km$ , and argues that these forms of capital must be maintained separately in time, without exchanges between one and the other being mostly complementary and not substitutive, while admitting internal exchanges in any form. To build an operating principle of SS some authors have translated the rule of  $Kn$  constant in a set of ecological criteria (SMSS, *Safe Minimum Sustainability Standard*) which are defined by the rate of regeneration of renewable resources and the assimilation capacity of the environment (Costanza R., Daly H.E., Bartholomew J.A., 1991, pp. 1-20; Daly, H.E. 1991; pp. 32-46), ie, the “carrying capacity of the planet”.

In SS the optimism about technological progress and its effects on the substitutability of capital, on changes in the rules of consumer/citizen conduct towards a more sustainable lifestyle is out of place, thus becoming the same invitation to stable state conditions for development, and ecological criteria to be followed as an invitation to “Steady State” based on thermodynamic limits and limitations they impose on the overall scale of the economy. The SS, in essence, invites to block any future increase in the scale of the economy: a null population growth and a null economic growth. The SS animate that environmentalist position defined as “*Community Eco-centrism*” and is traceable to a model of “Profoundly green Economy” oriented towards resource protection. There is a further extension of ethical reasoning. This is not only characterized by the recognition of a *secondary value* of nature for the functions and environmental services offered considered individually, but also from the attribution to ecosystems, to non-human nature - conscious and not -, a *primary value* because it can be useful in itself (European Commission, 2006, p. 6; Turner K., Pearce W., Bateman I., p.41; p. 49). The extension of ethics requires that the non-human component is granted “vested interests”. This means that when people undertake actions that affect the nature, the impact of environmental effects should be taken into consideration at least.

## 7. Very Strict Sustainability

The hypothesis of “Very Strict Sustainability” (VSS), in addition to maintaining a constant stock of natural capital, requires that each component or subsystem of the natural environment, each species and each physical stocks should be preserved

(Atkinsons G., Dietz S., Neumayer E., p. 65; Ayres R.U., Van Den Bergh C., Gowdy J.M, pag.4; Hediger W., 2004, p. 25). Sustainability of the ecological system is a priority, even if that means prejudice for human life. This very strict sustainability animate those environmental positions defined as “Extreme Ecological”. A “Deep Ecology”, a bio-centric vision argues a particular non-substitutability between  $Kn$  and  $Km$  based on ethical refusal (Turner R.K., p. 2). The VSS, in fact, is based on a more rigorous environmental ethic which says that non-human component (conscious or not) of ecosystems have properly “rights”. Some have even gone beyond extending moral reference class to the ecosystem itself, to “Gaia” (not just a simple metaphorical but literal interpretation of Gaia’s myth (Turner K., Pearce W., Bateman I., pag.48.) how custom entity in respect of which they have moral obligations.

The VSS has at a minimum a “*Steady State*”. When it appears that the global economic growth and extension of economic activities has already passed the critical points, and that is  $Kn$  already depleted /degraded, a reduced growth strategy may become necessary. The VSS is for a “Strictly Green Economy” oriented to extreme preservation and that, therefore, wants to reduce the economic scale. The economic systems must be translate soon in systems of minimum withdrawal of resources (with minimal impact on the sources and landfills). This transformation can only be achieved through a reduction in economic production and population levels (Turner K., Pearce W., Bateman I., p.42).

### Final Remarks

Assuming sustainability triangle at the base of the sustainable development requires the maximization of biological objectives, ecological and social and offer environmental economic and social basic services to all members of a community, without threatening the viability of natural systems, manufactured and social on which depends the provision of such services. The vision of sustainable development is clearly updated and enriched by the integration of its three pillars: economic, social and environmental. There is no longer a priority and separate proposal for economic growth, but a proposal for sustainable development founded on three equally important pillars and closely linked. It is not claimed, therefore, more priority of economic growth, but economic development, social and natural resource protection, seats on the same plane and connected to each other. An effective representation of the concept of sustainable development, which clearly highlights its three dimensions and underlines the importance of “legacy” can be summarized in four different definitions of capital stock available in an economic system depending on its use in the production function:

1. *economic capital*, defined as the generic capacity of an economy, which consists only of that part of the manufactured capital (physical and human)

- and natural resources (renewable or not), exploited for use in processes of economic transformation;
2. *ecological capital*, defined as the total stock of renewable resources (used and not within the production process), land in the natural and semi-natural state, ecological factors such as nutrient cycle and climatic conditions, which is the part of the natural capital that determines the overall quality of the ecosystem;
  3. *natural capital*, defined as the basic natural resource of a geographical area, which consists of ecological capital and stocks of non-renewable resources;
  4. *total capital*, the aggregate of physical capital, non-renewable resources, ecological capital and human capital.

On the basis of the definition of capital and the substitution constraints considered in production function can be define four different meanings of sustainability. On this basis it is clear that the concept of well-being refers to the assessment of the situation of person's life or of a group, as widely as possible. The concept of wellbeing is intuitive and there is no single definition but many related terms. Referring to this concept for indicate inclusively many aspects of life, including: quality of life, the tenor of life, happiness and life satisfaction, utility. The concept of well-being is therefore multidimensional, much wider than the economic dimension alone. It includes important non-economic aspects such as the social relationship, the state of health, life expectancy, level of education, etc., the welfare (or, the economic dimension of well-being) expresses the contribution of the economy to achieve a given level of well-being by all citizens.

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## HARNESSING THE TOURISM POTENTIAL OF URICANI, CÂMPUL LUI NEAG, VALEA CU BRAZI AREA THROUGH THE DEVELOPMENT OF THE HEALTH TOURISM

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### Abstract

*Uricani town is the main entry gate to Retezat Nature Preserve. After having lost their calling of mining region, a tourism identity thereof has been sought to be created for Uricani and its component villages, Câmpul lui Neag and Valea cu Brazi. Thus, multifarious projects have been achieved having as main purpose the development and promotion of tourism in Uricani. Câmpul lui Neag and Valea cu Brazi localities offer a highly picturesque natural landscape, an unpolluted climate beneficial for people seeking relaxation and recharging of their physical and mental potential. At present these localities have an accommodation infrastructure that offers services to the tourists seeking mountaineering opportunities in the mountain massifs. Recharging programs can be achieved in this area for the benefit of people affected by stress, based on alternative techniques: Qigong, yoga, color therapy, melotherapy, in association with body care components.*

**Keywords:** tourism, health, alternative therapies

### General presentation of the region

Uricani town is located in Valea Jiului valley microregion of Hunedoara county, and stretches over about 60 km between Câmpa – Râscoala to the east and Câmpul lui Neag to the west. The microregion's width decreases from 9 km in front of Petrila and Livezeni towns to 1.5 km in front of Câmpul lui Neag village of Uricani.

Valea Jiului valley is an intramountain depression and microregion of Hunedoara county, located on the Jiu river. The altitude of this depression increases from 600 m to over 2,000 m. The depression is crossed by the Eastern Jiu and the Western Jiu forming the Jiu river that streams over the entire Oltenia region and discharges into the Danube. The area is surrounded by Retezat-Godeanu Mountains part of the Southern Carpathians Massif. Valea Jiului valley comprises 3 municipalities: Petroșani, Lupeni, Vulcan, and 3 towns: Petrila, Uricani, Aninoasa, having a total population of 149,582 inhabitants [3, p. 11].

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### **Natural tourism potential of Uricani town and Câmpul lui Neag and Valea cu Brazi component villages**

Uricani town lies at the foot of Retezat Mountain and Vâlcan Massif, southwest of Petroșani Depression, at an altitude of 650-725 m above Black Sea level, stretching over a large territory of 25,141 ha [5, p. 25]. From the viewpoint of its geographical coordinates, Uricani town lies on the 23°25' meridian, east longitude, and 45°45' parallel, north latitude from Greenwich meridian.

The town was first mention in a document dated 1835, however other existing evidence of the Dacian and Roman civilizations might indicate that this part of Valea Jiului valley has been inhabited ever since antiquity.

In 1964 Uricani was declared a town, and at that time had over 4,000 inhabitants. At the same time, Valea de Brazi and Câmpul lui Neag villages became part of the town [5, p. 24]. While Uricani locality has been renowned for its lignite mining industry, other information exists about its component localities. Thus, a legend says that Câmpul lui Neag village would have been settled by a renowned highwayman called Neagu, who hid from Ottomans in the mountains. He would have marked the hearth of the future village, by planting a 2 m stone (monolith) having embedded 2 white quartz veins forming a cross. Hitherto, this stone marks out the entry to the village.

Uricani locality underwent a profound change pursuant to the opening of the lignite mines. People from all over the country, Maramures, Moldavia, Oltenia, Ardeal, Banat, Dobrogea, came here to work next to the locals, thus forming a heterogeneous population. The newcomers brought along the cultural elements of their native regions, were assimilated and absorbed the cultural features and traditions of the locals.

Uricani is accessed via DN 66A national road, DJ 660A and DJ 672C county roads. Uricani town is linked via railway 202 to Filiași and Simeria, making the connection with Bucharest – Craiova – Timișoara and Brașov – Arad – Curtici highways. The aerial access can be achieved via Craiova (154 km), Sibiu (225 km), Timișoara (262 km) and Arad (257 km) airports [5, p. 29]. Hunedoara Local Council intends, on the basis of a public-private partnership, to build up an international airport with a capacity of one million passengers per year in Săulești locality neighboring Deva (125km from Uricani), which will facilitate furthermore the access to this area.

The main relief components are mountains and piedmont hills. Uricani is bordered to the north by Retezat Massif, and to the south by Vâlcan Mountains, with terraces descending towards Jiu in plain steps, almost horizontal here and there. In between these two mountain massifs is the western point of Petroșani Depression (Valea Jiului valley) that includes Uricani town and its component villages, Valea de Brazi and Câmpul lui Neag, stretching over 1-3 km in width and 11-12 km in length.

The town is bordered to the east by Valea Vacii and Valea Tusului valleys, to the west by the large Retezat National Park, respectively the alignment formed up by Custura (2457 m), Piule (2081 m) and Coadă Oslei (1899 m) peaks; to the north it is delineated by the water parting having as reference points the alignment of Custura, Lazărul (2282 m), Tulișa (1782 m) and Dealul Mare (1509 m) peaks of Retezat mountain group; to the south, again on the water parting along the alignment of Coarnele (1789 m), Șiglăul Mare (1682 m), Arcanul (1760 m) and Coadă peaks of Vâlcan Mountains. The piedmont hills are the second relief component, making the transition from the mountain area to the low depression area as a continuous strip bordering the crystalline massifs [2, p.129].

Due to its location in a high intramountain depression the *climate* of Uricani is rather cold, similar to a low altitude mountain climate, with long winters, short and cool summers, frequent fog and rain showers, cold and humid falls, persistent drizzles enhanced by the industrial activity, late and cool spring seasons.

The annual average temperature does not exceed 7°C, and during the summer time the recorded temperatures fall between 15.6°C (June) and 20°C (July). The daily maximum average temperatures are 14°C (annually) and 25.1°C (August) during the summer time. However, the daily minimum average temperatures are 3°C (yearly) and only 10.9°C (July) in the summer time.

The precipitations are rather heavy, between 900 and 1,000 mm/year. The snowfall represents a large share of such precipitations, the first snow falling in mid November, and the last one in mid April; 46 snowfall days and 61 snow cover days are recorded yearly [6, p. 9]. The dominant winds are those coming from the south and northwest, the air masses travelling along the main access corridors of the depression. The air currents are irregular, coming mainly from the southeast and northeast with a force of 4 – 5 degrees.

The vegetation is not a conspicuous part of the landscape, is highly diverse and is consistent with the vertical zoning of the other natural elements.

The forest tier goes up to the altitudes of 1600 – 1750 m, being composed of composite forests (up to 800 – 900 m), beech forests (1250 – 1400 m) and coniferous forests (1300 – 1500 m) comprising mainly spruce trees. Spruce-fir clusters climb up to 1850 m on the shaded slopes, while alpine meadows with short ericaceous herbs stretch over large areas of Vâlcan and over narrower areas of Retezat (due to the uneven surface and detritus). These are followed by coniferous bushes and Swiss pine trees that prevail at over 2000 m. The semi-mediterranean vegetation of lilac, Turkish hazel and other herbaceous species adorn the arid, rocky, limestone landscape of Vâlcan and Piule – Iorgovanul Mountains (Retezat Mountains) along Sohodol (east of Lupeni) and Balomir (east of Uricani) valleys [6, p. 10].

The flora of Retezat Mountains, famous for its diversity, hosts almost 1,190 species of superior plants out of the over 3,450 plants known in Romania, protected

endemic species such as hieracium, draba dorneri, liliuim janke, pinus cembra (glacial relict), larix deciduacte, orchid species, mountain avens (dryas octopetala), edelweiss and others.

The mountains contain a rich and diverse hunting fund, the more representative species being the chamois, bear, deer, boar, buck, marmot, marten and otter. The most significant birds are the golden eagle, blackcock and hazel grouse.

Due to its location, Uricani locality is considered the entry „gate” to the largest national park, Retezat National Park, with an area of 544 sq km, a nature’s jewelry, with a wild relief offering indelible views, lacy crests and numerous glacial ponds. This area is famous for its exceptional cave fund, represented by Peștera cu Corali Natural Cave Preserve on Scorotei Valley in the calcareous Retezat (with an area of 0.5 ha), Zeicu Cave [1, p. 45] nature preserve on Jiul de Vest river comprising a large variety of stalagmite formations and a rich paleontological material, Peștera de Gheață cave located at the exit from Câmpu lui Neag, about 3 kilometers away from Valea de Pești lake, a perfect tourist attraction [8].

Other tourist attractions of the area are represented by **Defileul Jiului National Park** formed in 2005 with an area of 11,127 ha, **Valea de Pești Lake**, a reservoir with an area of 310 ha located near Câmpu lui Neag. Another lake was created on the former site of the pit coal mine in Câmpu lui Neag [6, p. 15].

In 2013, according to the classification of the Ministry of Regional Development and Tourism, Uricani town has 3 tourist accommodation facilities with 32 rooms for 72 guests.

*Table no. 1: 2013 classified tourist accommodation facilities of Uricani town*

Nr. crt.	Name	No. of spaces	No. of guests	Category	Facility type
1.	Maia	9	18	3 stars	guesthouse
2.	Bârlogul ursului	8	22	2 stars	tourist cabin
3.	Retezat	15	32	4 flowers	guesthouse
<b>TOTAL</b>		32	72		

*Source: City Hall of Uricani Town, City Development Strategy [4]*

The guesthouses hold a significant share of the tourist accommodation facilities (47%), while the tourist cabins account for 25% of the classified facilities.

Other non-classified accommodation facilities are also available on the territory of the town (some of these being in process of classification). The table below shows some of these facilities.

*Table no. 2: Non-classified accommodation facilities in Uricani*

Facility name	Facility type	Number of guests	Tourist amenities and services
<b>Complex Cheile Buții</b>	Tourist compound	71	Football field, table tennis, disco bar
<b>Valea de Pești</b>	Motel	110	Restaurant, day bar, terrace, sport field, disco bar, parking
<b>Câmpu lui Neag</b>	Tourist cabin	6	Restaurant, parking, grill
<b>Buta</b>	Tourist cabin	26	Restaurant, grill
<b>La Cristian</b>	Guesthouse	12	Restaurant, grill
<b>Vânătorilor Câmpușel 2</b>	Guesthouse	10	Restaurant
<b>TOTAL</b>	6	235	

Source: City Hall of Uricani Town, City Development Strategy [4]

In total there are 9 tourist accommodation facilities for 307 guests.

Valea de Pești Motel is located near Valea de Pești reservoir, in a highly picturesque area. Backpacking trips can be made from here, in particular to Peșterea de Gheață cave of a remarkable beauty. The motel can accommodate 110 guests, has a restaurant, a day bar and a terrace, in total 100 seats; sports field, disco bar, parking, 30 seats.

Valea de Pești Motel is located 8 km away from Uricani town, 3 km away from DN 66A, at 920 m altitude, on the reservoir shore.

Câmpu lui Neag cabin is located 300 m away from DN 66A on the northern slope of Vâlcăni mountains. Tourist guides are available here for: mountain climbing, climbing, mountain-bike, rafting, canyoning, cave exploring, horse riding, skiing, mountain rescue, trekking. Winter sports (mountain skiing, motor-scooter and ATV rides) and summer sports (mountain-bike, climbing, backpacking, mountain climbing, sports map orientation, canyoning, paraglide) can be practiced there.

*Table no. 3: Evolution of the main indicators of tourism traffic in Uricani*

Year	Tourist number	Number of night stays	Trip length
2009	526	1,039	1.98
2010	545	1,096	2.01

Source: City Hall of Uricani Town, City Development Strategy [4]

### **Development of health tourism in Uricani, Câmpul lui Neag, Valea cu Brazi area**

Uricani, Câmpul lui Neag, Valea cu Brazi area offers picturesque landscapes, high ozone mountain air, diverse and valuable natural resources. The reduced tourist flows has led us to the conclusion that it is an ideal destination for people affected by stress, seeking to recharge and invigorate physically and mentally. Stress is a major

risk factor for the health condition of the population. Spending time outdoor, in a nature setting like this area, is highly beneficial. The mountain bike riding sport can be practiced here using certain forestry roads: Câmpul lui Neag - Cheile Buții cabin – beneath Buta cabin; Câmpul lui Neag - Valea Mării valley - Valea Mării waterfall; Valea Pilugu valley; Valea de Brazi valley (Retezat Mountains); Câmpul lui Neag - Valea de Pești Motel - across Dâlma Căzută - Valea Sohodol valley - Runcu - Gorj (Vâlcan Mountains); Vulcan – Merișoru Hill – Vâlcan Cabin - Vâlcan Pass - Schela - Sâmbotin - Gorj (Vâlcan Mountains). At the same time, the highly rich and valuable game and fish fund of this area allows the practicing of hunting and fishing. The hunting tourism is practiced at present in Câmpușel area (2 hunting cabins). Tourists can also practice mountaineering using over 44 tracks, the majority of these marked, leading towards highly picturesque attractions or connecting the localities and cabins of the area to other mountain facilities or tourist attractions (20 mountain routes in Vâlcan Mountains, 11 routes in Parâng Mountains, 13 routes in Șureanu Mountains, 10 routes in Retezat Mountains) [7, p. 39].

The Romanian Institute for Human Potential Development, Qitaky Foundation, established in March 1990, organizes Qigong camps during winter time at Valea de Pești Motel [4].

The health tourism is mostly associated with traditional natural curative factors (thermal waters, sapropelic mud, etc.), hotels fitted with treatment facilities and medical personnel that offer allopathic medicine treatments. Most of the time, these treatments are requested by people for chronic disorders. The health tourism proposed to be developed in Uricani, Câmpul lui Neag, Valea cu Brazi area targets people aware of the prophylaxis role, interested in alternative methods of sickness prevention. The area has available tourist accommodation facilities of superior category, offering alternative medicine services through specialized personnel, with a minimum investment. Thus, the color therapy, massage and relaxation spa bathing, gymnastics, Qigong exercises and other alternative methods can be practiced here

### **Conclusions**

Uricani, Câmpul lui Neag, Valea cu Brazi have remained in the collective memory as localities with mining calling. Pursuant to the closing of the mines the area has benefitted from multifarious projects aimed at the tourism development. These have pursued in a first stage the professional development, more specifically the professional reconversion to tourism jobs. Various studies, development projects have been achieved in the second phase.

Tourism constitutes a priority for the development of the area, the local authorities being actively involved in promoting this industry. Works of development of the communication ways, tourism and amusement infrastructure have been foreseen. The developed projects have identified several forms of tourism with

development potential in the area, amongst which the relaxation one as well. We believe that the proposed health tourism can be developed together with the rest and relaxation tourism in Uricani, Câmpul lui Neag, Valea cu Brazi area. The holders of tourist facilities will have to be made aware of the advantages entailed by adapting the tourism offer to the health tourism.

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