

## THOUGHTS CONCERNING URBAN HAZARDS, ELEMENTS OF PERTURBATION FOR TOURISM (II)

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**ABSTRACT.- Thoughts Concerning Urban Hazards, Elements of Perturbation for Tourism.** After discussing in the first part of the study the natural hazards which influence tourism, in the second part of it we will approach risks (hazards) induced by the urban population and by its societal environment (both social and political), technological risks and of other nature, we will create a classification of the intensity of these risks and the way they influence the elements of the tourism phenomenon. Finally, we present the experience of some states, the measures taken in managing risks, natural, societal, technological and of other nature (alimentary risk, the sanitary-epidemiological risk).

**Key-words:** the weakening of the societal framework (social and political), insalubrious place (site), urban violence, unfriendly environment, delinquent neighbourhoods, technological catastrophes, alimentary risk, protection, prevention.

### 1. General considerations

With the multiplication of touristic trips and with the development of “geographical holiday basins” (Cazes, Georges, 1989, *op. cit.*), essentially touristic areas, the incidence of societal, technological and of other nature effects on tourism has multiplied as well. The weakening of the states’ economies and of their societal framework (social and political) represent risks for tourism. For example, lower incomes lead to the decrease of the volume of touristic flows and/or to the diminution of the purchase of touristic goods and services (reducing the length of stay), as well as to the reorientation of touristic flows. A tense atmosphere in society creates an “unfriendly” environment, with a high degree of insecurity, therefore representing a risk for tourism, which leads to the decrease of touristic flows even to the point of abandoning that destination, in case of major conflicts, such as in Iraq, Afghanistan, Iran, Algeria, the Caucasian countries, Georgia, Armenia and others.

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In the biunivocal relationship between the urban societal, technological and of other nature risks, on one hand, and the tourism, on the other hand, the elements of tourism on which we concentrate are the volume of international tourist arrivals (ITA), the income they generate (ITI) and the tourists as well.

In the light of the two macro-indicators (ITA and ITI), the international tourism has developed in an unprecedented way in the contemporary period; in 2009, according to the information given by WTO, there were almost 950 million of ITA, which generated incomes of 919 billion USD.

This “smokeless industry” is vulnerable to any kind of hazards, related to the tourists on one hand, and on the other hand, related to a series of general factors, which are not less important.

Tourists today are:

- very cautious regarding safe travelling, which has a growing impact on international tourism and demands a permanent technological renewal of the means of transport;
- sensitive to the traditional and cultural values, they have customised preferences, they do not like mass production, being grouped as a “herd” or the overcrowded areas;
- attentive to the elements of the societal and natural environment; any perturbation by pollution of the nature’s quality parameters, urban environmental degradation of any kind – architectural, of the heritage, of the urban hygiene, of the societal environment, harms tourism.

Environmental pollution by any means, whether it is the forest fires in Portugal, Greece, Russia, Brazil, Indonesia or the air pollution etc., has led to reorientations of the touristic flows because tourists have become more sensitive to the “*clean environment*” factor and recently, to the political one, concerning individual freedoms’ compliance. In this respect, the WTO gives the example of Myanmar and Bali as touristic destinations that are avoided by tour operators precisely because of the human rights’ violations (Păcurar, Alexandru, 2009, *op. cit.*, p. 293).

Tourists have, to begin with, a series of favourite destinations according to the “*favourable or unfavourable image*” those destinations have in the public consciousness, which are mental representations based on the entire information from various fields about an area or the other. A safe geographical area, with a friendly population, a good “*image*”, with favourable media, even though it does not have a very high touristic potential, will always be preferred against another, which has a hostile and unfriendly press, even if it is more equipped in terms of elements for tourism. For example, Moscow, despite its huge touristic potential, is not very attractive to tourists having “*bad publicity*”, as an unfriendly, intolerant, unsafe city because of some cases, more or less isolated, of unusual behaviour: “it is striking how rude and unpleasant can Russians be when you see them in any type of official or public event, yet how wonderfully warm and generous they are in personal

relationships (Hutchins, Jane, *op. cit.*, pp. 65-66). Another case is that of Naples, a city so beautifully placed, with a vast cultural heritage, but with “*an unsafe street*”, with chronic ecological and waste management problems.

## 2. Societal urban hazards

Societal urban hazards are typical urban hazards, with a wide epistemological and factual coverage, in the osmosis of the urban geographical space, the social and political framework. Certainly, hazards can be differentiated by their nature, gravity and the extent of the impact and of the effects they produce on a smaller or larger scale, being minor or major.

The urban social hazard has been present early on, being a constant in the urban history of humanity, emerging at the same time with urban settlements, which were associated with the idea of insecurity, delinquency, violence, “at different scales and intensities”, as Frank Chignier Riboulon shows (2003, *op. cit.*, p. 467).

Nowadays, when politics is ubiquitous in social life, influencing it poignantly, *societal hazards* can be discussed.

If the presence of societal urban hazards in the countries with a poor socioeconomic framework, but great touristic countries such as Egypt, Tunisia (how precarious the societal environment was can be seen from the crisis that broke forth in these countries), Nepal, the Philippines and others, is not surprising; it is striking that the societal urban hazard is becoming increasingly felt in developed countries such as USA, France, Netherlands, Greece, Turkey, negatively influencing their tourism. For example, delinquency has increased eight times in France in 1950-2002, from 500.000 to 4.000.000 cases and in the USA, where it reached its peak in 1974, it tends to decrease, but still remains high, given that, in general, only 33% of those assaulted file a complaint or 82% in case of a road accident!

In a gradual sequence, Frank Chignier Riboulon (2003, *op. cit.*, pp. 468-475) identifies the following scale of societal urban hazards:

- *acts of rudeness*, which, according to Sébastien Roche (1996, *op. cit.*, p. 13 and 1998, *op. cit.*, p. 40) represent “a new dimension of the urban social hazard, with victims, who generally do not file a complaint, which consists of obscene gestures, indecent proposals, insults, insignificant damages – of the mailboxes, the hygiene of the elevators, the stairs and hallways of the buildings, which disturb public order”. This leads to an unfriendly atmosphere, where tourists hesitate to venture, even though the tourist attractions are of the highest rank.

The daily repetition of these acts and gestures, as Frank Chignier Riboulon indicates (*ibidem*, p. 471) “leads to a feeling of abandonment, helplessness and even depression of the inhabitants because of the civic environment’s suffering, which degrades public space”. Cities with such an atmosphere are avoided by tourists, such as Moscow, Naples, Philadelphia, Bucharest:

- on a higher level of societal urban hazards is *urban violence*, which evolves sinusoidally in time, with peak moments, followed by moments of relative calm. They are violent, spectacular, short protest movements, on average 1-3 days, but they can degenerate into long-term confrontations (in Paris, in 2006, they lasted for six weeks, in Bangkok in 2009 for 5 weeks). They also can be permanent, as in Belfast, Jerusalem and other places or recurring, appearing from time to time, which is a true phenomenon for large cities and metropolises, whose touristic function can be negatively influenced, as in Washington, Paris, Tokyo, Berlin, even villeggiatura resorts being influenced, such as Seyne-sur-mer, Thonon-les-Bains or Montbéliard (*ibidem*, p. 472).

- on the highest level of societal hazards are *terrorist attacks*. They have the largest impact on the tourist phenomenon, the consequences are important, linked in a chain reaction, being unpredictable. Terrorist attacks directed at tourists took place in Cairo, Sharm-el-Sheik, München, Bali, Lokerbie, and others indirectly harmed tourism, such as the terrorist attacks in New York, London, Madrid and other places. They have discouraged the construction of huge hotels, contributing inclusively to the revising of the urban planning principles concerning the designing and edification of the resorts in relation to the implementation of the “*risk management*” concept.

Franck Chignier Riboulon (2003, *op. cit.*, pp. 473-475) highlights several features of the urban social hazards, such as:

- their great mobility, both spatial and zonal: the delinquent neighbourhoods change in a way related to the dynamics of the phenomenon and to the degree of social integration of the group members, which evolves in time;

- the urban and peri-urban residential neighbourhoods are increasingly exposed to the degradation of the quality of life, the phenomenon being favoured by the well-developed transport network. Touristically, the amusement and theme parks, the exhibition and sports tourism are being negatively influenced. Antisocial actions degenerate into acts of unprecedented violence and the specific infrastructure of these types of tourism, being located on the outskirts of cities, has much to suffer. Unfortunate accidents took place in Brussels, Paris and other places. Among the risky neighbourhoods are Cul-de-four and Alma-gare from the Lille-Roubaix conurbation, neighbourhoods Bos, Lommer and Genzenveld/Slotermeer from Amsterdam, Tensta from Stockholm.

Seasonal mobility “relocates” the increasing of social tensions in the littoral and mountain resorts. As preventive measures, some countries have established a body of police for tourists, such as in Turkey, Greece, while others increase police manpower in crowded touristic areas; - the “sensitive” neighbourhoods, with a high societal hazard, are characterised by high percentages of immigrant population and/or of some minorities, emphasising integration issues (social and economic inclusion) and segregation issues: the neighbourhoods of the black people in the U.S.A and Great Britain, of the Maghrebians in France, of the Turkish people in Germany, of the Albanians and Gypsies in Italy and France, with repercussions on the street environment and public space, which bother tourists.

Under these conditions, reducing delinquency is difficult, even impossible because “these neighbourhoods are spaces that generate deviant behaviours”, “the inequalities of opportunity of a group or another in the society where it was received, its frequent rearrangement by aggregation or segregation contributes to social deviations”.

The average crime rate/ 1000 inhabitants,  
in 1990 in France, in the urban environment

**Chart 2**

City Size class of cities	The average crime rate
Paris	139,95
> 250.000 inhabitants	100,3
100.000-250.000 inhabitants	73
50.000-100.000 inhabitants	69,6
25.000-50.000 inhabitants	67,5
< 25.000 inhabitants	53,3

Source: Chaline, Claude, Dubois-Maury, Jocelyne, 1994, *op. cit.*, p. 137.

On the same note, Claude Chaline and Jocelyne Dubois-Maury (2004, *op. cit.*, pp. 130-137 and Bonnet, Jacques, 2003, *op. cit.*, pp. 431-433) give us a typology with a gradual scale of the urban violence forms: *minor and endemical violence* (insignificant acts of vandalism, rudeness); *directed characteristic violence* (assaulting police or fire station vehicles, arsons); *violent protest movements episodes*; “the map” of the urban hazards being a revealing element of the

fractures in the social bodies of the big cities, which harm tourism in cities such as New York, London, Paris, Moscow. The above-quoted authors have concluded that “the intensification of social hazards nowadays constitutes the most important perverse effect of the increase of urban population”, establishing “the correlation between the degree of urban insecurity and the size of the cities in France” (see Chart 2). The mortality rate related to crime (Bonnet, Jacques, 2003, *op. cit.*, p. 432) for different countries and cities, some of them even important touristic destinations, allows us to get an idea of the extent of the phenomenon: Johannesburg 58/100.000 inhabitants, U.S.A 37,5/100.000 inhabitants, where Oklahoma City 45,5/100.000, Los Angeles 55/100.000 and Allengheny 2245/100.000, France 5/100.000, Canada 4,3/100.000, Australia and New Zealand 2,7/100.000, Saudi Arabia 0,35/100.000.

Societal urban hazards have effects that, on a taxonomic scale, cover a large geographical area; their effects can have an impact:

- internationally or globally, such as the attacks on the World Trade Center and Pentagon, which “change” the configuration of the international touristic flows;
- nationally, when large-scale protest movements such as the ones in Tunisia (January-February 2011) or Egypt (February 2011) or attacks such as the one in a discothèque in Bali (1996), greatly reduce the volume of international tourist arrivals in unsafe countries and reorient the flows to similar, close destinations;
- regionally, when conjunctural societal crises impact a region in which structural changes occur in economy (the reconversion of industrial branches and activities) which produce a series of conjunctural commotions, such as the ones in Wallonia (Belgium), Galicia (Spain), Ruhr (Germany);
- locally, impacting punctually some local collectivities.

### 3. Technological hazards

Technological hazards are defined by the possibility of catastrophic accidents taking place due to errors in the implementation of manufacturing processes, by the possibility of transport and nuclear power plant accidents or environmental pollution.

These types of risks are present all over the world, even in countries with advanced economies, the implementation of the latest and the most advanced technologies in construction, transport, communications generates new forms of vulnerability, whose effects, in the third world countries are aggravated by the inertia of society and by the precariousness of their financial resources.

From the long series of technological disasters, we selected from the specialty literature (Jacques Bonnet, 2003, *op. cit.*, pp. 424-425) a series of accidents that had a greater impact on tourism in general and on the public opinion because they were highly publicised. Among those caused by industrial technological processes are noted: the catastrophes from the refinery in Feyzin (Lyon) in 1966 and 1987, from Seveso (Italy) on the outskirts of Milan in 1976, from Bhopal, the capital of the Indian state Madhya Pradesh in 1984, from Chernobyl, 130 km south of Kiev, in 1986 and from Toulouse (France) in 2001.

A nuclear accident, but of small proportions, occurred in 1992 at Sosnovi-Bor, 80 km from Sankt Petersburg, the most important touristic area of the Russian Federation.

These accidents have negatively influenced local communities and their activities, including tourism; it was noted that pollution of industrial origin and technological catastrophes have triggered and promoted the deindustrialisation of populated areas, as a result of the activity of environmentalist activists such as Greenpeace (*idem*, p. 422) and, in time, industrial activities “have been removed” from touristic areas.

It must be emphasised that industrial polluters have been the origin of the famous “smog” in London, with a morbid flare in 1952 or of the one in Los Angeles (U.S.A.). In France, industrial pollution combines with fog, damaging weekend tourism in departments Nord-Pas-de-Calais and Basse-Seine, increasing the incidence of neurovegetative infections, of the ocular ones, of the cardiovascular and pulmonary disorders. The most affected touristic city in this respect is Mexico City, where this hazard is intensified by the position of Mexic’s capital, which is located in a large basin, at an altitude of about 2240 m, favouring temperature inversions.

Literature also mentions the industrial pollution in port Gabès (Tunisia), with altered air quality.

The transport of dangerous goods on roads, railways and handling them in ports both represent technological hazards, including possible damage to the areas of

transition. Jocelyne Dubois-Maury and Claude Chaline (2004, *op. cit.*, p. 99) mention the case of a motor tank truck explosion, which was loaded with propylene on a road near a campsite, causing the death of 216 people in Los Alfaquès, Spain. Also, the ports of Antwerp, Rotterdam and Le Havre-Rouen are the most exposed, in the past, accidents of this nature affecting the littoral areas of Bretagne, Poitou-Charentes and Galicia.

*Urban pollution* is part of the technological hazards. Car pollution increases the level of nitrogen dioxide (NO<sub>2</sub>) and ozone (O<sub>3</sub>) in the air, enhancing the incidence of asthma by 30% above average, the respiratory disorders by 6-12%, eye disorders by 11%, in arid and semi-arid climates the negative effects being more intensified. It can be concluded that air pollution is becoming a risk for residents and tourists alike.

Actions to prevent this hazard have been taken from the years 1960-1970, when the concept of “*pedestrian arteries*” was implemented starting with München, Oslo, Rouen, Amsterdam, Roma, currently being a generalised concept. Then, with the rethinking of vehicle transportation, the diversion of the transit traffic took place, as well as the development and promotion of public transport and creating areas with limited speed to 20 or 30 km/h (Hamburg, Bremen, Zürich, Geneva, Paris), these cities becoming more “humane”. Also, cycle paths were introduced and extended – Osaka with 70 km of tracks or Paris, the costs rising between 150.000 – 300.000 euro/km (*ibidem*, p. 133).

*Noise pollution* is a disturbing factor for humans and harms tourism. It comes from the act of collective housing itself, from human activities and transport. If initially noise was measured by the sound intensity, expressed in decibels dB (over 70 dB, noise becomes harmful and over 90 dB it becomes dangerous), at the moment it is agreed that noise should be measured by Leq (Level equivalent) associating sound level with an interval of time (*ibidem*, pp. 134-135).

Over the allowed limit mentioned above, noise pollution generates behaviour disorders, attention and concentration decrease, it affects the nervous system generating stress, it disturbs sleep, metabolism and the functioning of the cardiovascular system. For tourists, cities are becoming tiresome and are avoided, being considered “aggressive cities” in terms of noise.

Making isophonic curves as a result of measuring noise and highlighting the most exposed areas, as well as the control measures, aimed at the implementation of protective screens on major roads, of vegetation belts, of the optimisation of engine technology, which became quieter and the implementation of measures for reducing the airport noise pollution, especially in France for the airports Roissy, Orly, Satolas, Nice, Marignane-Blagnac, Mulhouse, Mérignac and Strasbourg (*ibidem*, p. 141).

As a response to the tightening of environmental protection, in the academic and scientific world, with the support of the business world, a new transdisciplinary scientific current has emerged – *cyndinics* (from Greek “*kindunos*” – “*danger*”, *cyndinics* is the science that studies natural, technological and cosmic hazards and their

prevention, s.n.), materialised by creating in 1991 the European Institute of Cyndinics with its headquarters in Paris, which in time has included a social side to it also, and after the attacks of 11 September 2001 has extended its scope of hazard research by including *geopolitical cyndinics* in its policy of crisis prevention and management (Bonnet, Jacques, 2003, *op. cit.*, p. 430).

#### 4. Other types of urban hazards

In the category of other types of urban hazards having influence on tourism, we refer to the *alimentary hazards* and the *sanitary-epidemiological hazards*, which are rapidly spreading in crowded environments, which are the urban agglomerations.

*The alimentary hazard* refers to the quality of some nutriments, such as water, one of the most important elements of life, whose quality has not been able to be standardised and thus consuming impure water, with dangerous pathogenic germs, causes, according to WHO, mortality in 19% of the cases in the third world countries. It has an impact on tourism also because in unsafe areas tourists have to take extra precautions by drinking only bottled water. This is a general situation in Africa, Asia, Latin America. Not to mention bovine encephalitis, which led to the rejection of bovine meat from human alimentation or, more recently, the E. coli bacterium from sprouting germs, which affects the entire Europe.

Regarding the *sanitary-epidemiological hazards*, it is known that epidemics spread rapidly in the geographic space through cities. If the plague had decimated in the past one quarter up to one third of the population of Europe, starting and affecting mainly the ports which were ravaged, such as Marseilles and Naples, where half of the population died in three to four months (*ibidem*, p. 422), examples are not lacking now either.

Acute respiratory syndrome or avian flu, which destabilised Hong Kong in 2002, emptying it of tourists, the high-publicised swine flu which hit U.S.A. and then spread to Europe through travellers and tourists or the terrible AIDS disease which, at least in the tourism field has negative consequences for some destinations such as South Africa or Namibia, where 20% of the black population is contaminated.

The most recent case was that of the “*chikungunya*” virus, whose impact on tourism was emphasised by François Taglioni (2010, *op. cit.*, pp. 249-266) which showed that “36% of the French are ready to give up a destination whose health status is considered risky”, the disease induced by this virus being “the third infectious risk producing anxiety in touristic trips”. In a few months, between 2004-2006, the epidemic spread from Eastern Africa to the south-west of the Indian Ocean, then in the entire ocean basin and from there to the entire Southern Hemisphere and in several areas in Europe where contaminated tourists arrived.

Here is how urban areas are linked to the high incidence of alimentary and ecological hazards, to the high incidence of diseases related to air and water pollution,

of sanitary-epidemiological hazards, of the societal ones related to delinquency etc. These realities have led Jacques Bonnet (2003, *op. cit.*, p. 421) to assert that “natural and technological catastrophes, related to the institutional weakness of regulating social relationships, leads to chronic insecurity, with exacerbated effects in the major urban agglomerations because the city in itself represents a hazard, considering that 50% of the earth population centralises on 0,5% of its surface”. This led Jean Delumeau (1978, *op. cit.*) to declare: “yesterday the city was safer than the village, today it is the other way around”. Jocelyne Dubois-Maury and Claude Chaline (2004, *op. cit.*, p. 28) succinctly summarise the risks and their spatial differentiation in urban space, to:

- *the urban center*, characterised by the maximum use of space, with large buildings vulnerable to fire, with a high-traffic that creates discomfort, massively noise-polluting and air-polluting by releasing harmful gases. The high density of inhabitants, the multitude of people present in public spaces encourages small acts of delinquency, which are annoying and troublesome for tourists: begging, little thefts, abusive language etc. As a remedy, large free spaces for pedestrians have been created, public squares for socialising with appropriate street furniture – jumping fountains, statues, green areas, as in Nice – Place Masséna, Braşov – Council Square, Dublin – Temple Bar, an entire neighbourhood with pedestrian streets etc.

- *old neighbourhoods and the historic center* with a high density of old buildings, of ancient heritage, which are more frequently exposed to the fire risk, as it happened to the Theatre La Fenice from Venice, to the flood risks in settlements located along water courses, as in Dresden (1996), Florence (1996) with the destruction of the built and art heritage and, therefore, with negative consequences for tourism.

There is also the risk of the buildings being occupied – in an uncertain legal framework, which does not protect property – by disadvantaged persons, as it happened in Bucharest or Bistriţa. In response, “sanitation” measures are taken in the insalubrious neighbourhoods by declaring and protecting them as heritage monuments and by banning heavy traffic etc.

- *the residential and outlying areas* where productive activities are concentrated, also, storage activities, trade in large commercial facilities, traffic routes and highway infrastructure, large parking lots, airports, marshalling yards, nodal points of interconnection, metropolitan transport, which, all together, determine the increase of direct technological hazards, of the noise and air pollution, of the high insecurity in the suburbs because of juvenile delinquency, phenomena which are emphasised in third world countries. All these harm tourism, especially since here are located the great exhibition spaces for business tourism, the sports infrastructure for sports tourism, the functional ludic infrastructure – theme and amusement parks for cultural and weekend tourism etc. In response, efforts for space surveillance were doubled by the staff of the competent institutions.

## 5. The answer of society

All types of hazards, natural, technological and societal, have determined in real life a series of answers, a set of measures as a result of the feed-back, which counteract the hazards. Generally, these response measures are:

- *technical*, through introducing new materials which eliminate a series of hazards, such as the fire and earthquake hazard; introducing new construction techniques, surveillance equipment for the quality parameters of the geospheres' components and of the technological ones etc., mainly used in hotels, theatres, museums, stadiums, airports, housing complexes, in means of communication;

- *new concepts of urban planning*, including the littoral and mountain resorts, rigorous mapping and determination of the potential hazards, surrendering oversizing in favour of medium and small size ("*small is beautiful*") in the construction of hotels, resorts, the organic integration of the new buildings with the natural environment;

- *institutional*, by involving public fire services, civil protection, public education etc.

To the totality of natural, technological and societal hazards, the answer of the society, of the policy makers is *protection* and *prevention*.

*Protection* is by means of civil engineering works, adapted to each type of hazard and to each element of hazard, but they cannot fully prevent the hazard.

We pause on a few protective measures which were taken against natural hazards and which are recorded by the specialty literature (Dubois-Maury, Jocelyne, Chaline, Claude, 2004, *op. cit.*, pp. 55-61):

- against avalanches of snow, in France, following the Plan of Intervention Trigger Avalanche (PIDA), it is common to artificially and preventively trigger them, especially for protecting ski slopes and constructions.

In Switzerland it is common to reshape the slopes and use concrete works for fixing and/or diversion of snow leaks, which was conducted in Davos, the same type of work being done in France, in villages Houches and Chamonix;

- for volcanic eruptions, interventions are more hazardous, however, with high investment costs, dams can be build in the path of lava flows, as Japan did in Hokkaido Island, around the active volcano Tokachi;

- for seismicity, building are more elaborate, with a high anti-seismic degree; Japan and Chile have good results in this field;

- against strong winds, storms and hurricanes, the most common measures are those of burying the power lines of high and medium voltage, which are buried in proportion of 60% in Germany and Great Britain, compared to only 29% in France. Thus, the transmission of electrical energy is protected, which is vital for survival. A possible shorting, as it happened in Canada in 1999, has dramatic consequences for a longer period of freezing;

- against forest fires, access tracks (forest roads) are built, water tanks, protection areas by strips without tree vegetation, difficult to achieve in mountain

massifs with a high degree of fragmentation, as in the Alps, the Dolomites, Sierra da Estrella or in Greece;

- against floods, the palette of measures is broader and more complex, so the following units are being built:

- dry retention basins coming into use only for absorbing the excess water from the hydrographic basin, having recreational value also; the method is popular in the Tokyo urban area, in France (Vitrolles, Belfort-Montbéliard, Longweil);

- deviated collateral exhaust channels, which absorb excess water from the main stream channel, as in Winnipeg (Canada);

- local dams on small rivers, which were included among the first works of protection, as in Perpignan, in the 18<sup>th</sup> century, by barring the river Têt and ornamental tree planting on the dam crest or in Lyon;

- high retention dams – with the risk (that was known!) that large artificial lakes induce a higher degree of seismicity where they are built! and/or the complex arrangement of the hydrographic basins. These spectacular works due to their largeness and constructive-technical engineering, in addition to their protective role, acquired in time a touristic function also due to the elements of technicality, momentousness, uniqueness that they carry. Among the achievements of this type, we mention the TVA complex on the Tennessee River with Grand Coolee, the largest dam and hydroelectric power plant, Hoover on Colorado River (USA), Itaipú on Parana River, the hydropower system of the three defiles on the Chang Jiang River (China), the complex arrangement of the Tigris and Euphrates rivers in Turkey, with hydroelectric power plants such as Atatürk 8900 MW, Karakaya 7354 MW, with huge barrier lakes, The Iron Gates I and II on the Danube etc. Romania has notable achievements, among which we mention those of the interior rivers from Bicaz with the Brook of the Mountain Lake, at Vidraru with Vidra Lake, on Someșul Cald with Gilău, Tarnița, Fântânele lakes, on Olt with Dăești, Râmnicu Vâlcea, Govora lakes etc. The construction of dams and then of the artificial lakes as part of the complex hydrotechnical arrangements have represented the starting points in the emergence and development of mountain resorts.

*Prevention* includes an entire series of measures regulating constructions, urban planning in the context of functional zoning rigorously followed, monitoring high-risk elements and predictions of natural hazards made by specialised bodies – meteorological, hydrological, environmental, seismological laboratories etc.

## **Conclusions**

Knowing the natural, societal, technological and of other nature risks (hazards), as well as their areas of more frequent incidence is absolutely necessary to tourism developers and last, but not least, to tourists. The way they are released, their intensity taxonomic scale, the ways of avoiding their consequences, can all prevent

their disastrous effects, which are not few in this period when international tourism is experiencing an unprecedented development. How many lives could have been saved, if the disastrous effects of the tsunami waves which swept the beaches of Southeast Asia had been known?

Less discussed, inventorying all kinds of tourism hazards can bring awareness of imminent dangers which can transform a “*holiday pool*” in a pool of “*drama*”. In order to avoid it, I undertook this “*warning*” sequence as part of a “*tourism pedagogy*” which is necessary to be known by all participants involved in the development of the tourism phenomenon.

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