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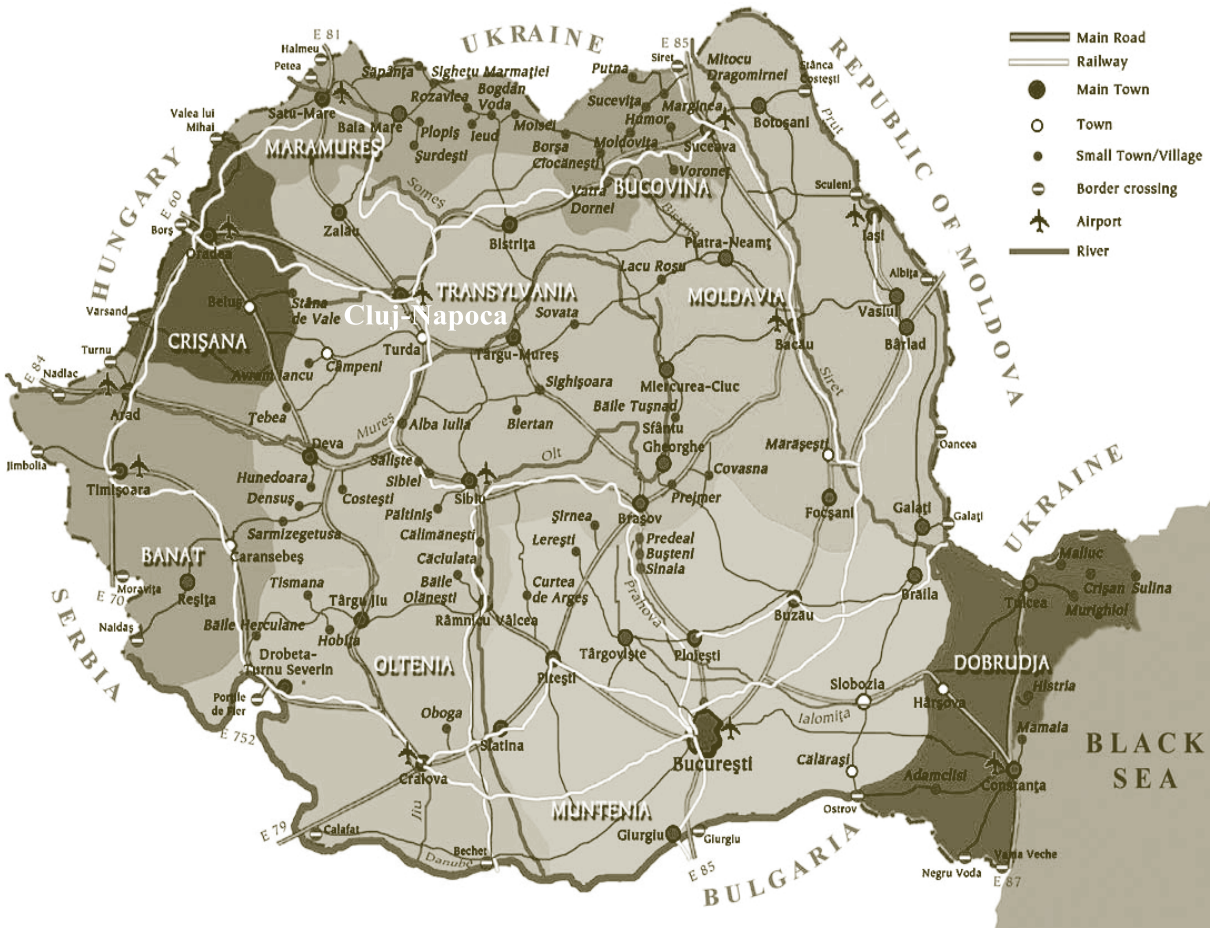

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TECHNICAL REPORT

STUDIA UBB GEOGRAPHIA, LXV, 1-2, 2020 (p. 5-8)
(RECOMMENDED CITATION)

I N M E M O R I A M

ŞEF. LUCR. DR. ANGELICA PUŞCAŞ (1965-2020)

De abia intrată în al doisprezecelea lustru de viaţă, s-a stins, după o lungă suferinţă pe care a dus-o discret, colega noastră, şef de lucrări dr. Angelica Puşcaş, membră a Departamentului de Geografie Umană şi Turism din cadrul Facultăţii de Geografie a Universităţii Babeş-Bolyai.

Fiica lui Teofil şi a Lidiei din Sânpetru Almaşului, ea s-a născut la 15 aprilie 1965 în centrul de comună Hida. A făcut cursurile primare şi gimnaziale în satul natal (1971-1979), după care a urmat cursurile la Liceul de Chimie Industrială din Zalău (1979-1983).

După absolvire, a lucrat ca laborantă la Oficiul pentru Studii Pedologice şi Agrochimice din Zalău (1984-1991), timp în care şi-a însuşit abilităţi practice pentru analiza şi studiul solurilor. În acea perioadă, şi-a întemeiat o familie prin căsătoria cu învăţătorul Sabin Covaciu, o persoană delicată, cultivată, respectuoasă, un familist convins, care i-a înţeles dorinţa ardentă de împlinire profesională.

Cuplul a fost binecuvântat de Dumnezeu cu un fiu, Silviu, născut la 14 mai 1987, în prezent un experimentat inginer constructor. Din păcate, soţii s-au separat în 2010, iar în 2012 a survenit divorţul lor amiabil.

Atrasă de vocaţia ei nativă pentru diseminarea cunoştinţelor, a lucrat apoi ca învăţătoare şi profesoară de geografie şi chimie la şcoala gimnazială din Cizer (Sălaj, 1991-1993) de unde, descoperindu-şi această vocaţie formativă, se înscrie, reuşeşte admiterea şi urmează cu succes cursurile universitare în specialitatea Geografie, la Universitatea Babeş-Bolyai din Cluj (1993-1997), pe care le-a absolvit ca şef de promoţie! A urmat apoi studii aprofundate de masterat (1997-1998) în specialitatea Geomorfologie Dinamică Experimentală şi Aplicată, absolvite în iunie 1998. Datorită rezultatelor foarte bune obţinute pe parcursul studiilor universitare, în noiembrie 1997 a fost admisă ca asistent-cercetător în colectivul de Geografie al filialei Cluj a Academiei Române, unde a activat aproape doi ani. De la 1 octombrie 1999, prin concurs, a fost admisă în Departamentul de Geografie Umană a Facultăţii de Geografie ca preparator (1999-2000), ulterior avansând în ierarhia didactică asistent (2000-2002) şi şef de lucrări (2002-2020).

Înscrisă la doctorat în anul 2000, având ca subiect de cercetare una din *„ţările"* cele mai reprezentative ale fostelor *„romanii populare"* cum le-a numit Nicolae Iorga, cristalizate politico-administrativ în *„ţări"* până la disoluţia lor treptată în principatele româneşti, a reuşit ca într-un timp relativ scurt, dar extrem de intens în cercetări pe teren şi în studiul literaturii de specialitate, să-şi finalizeze teza *„Ţara Chioarului. Studiu de Geografie Regională"*. În urma susţinerii ei în şedinţă publică la 25 martie 2006, Angelica Puşcaş a primit titlul ştiinţific de doctor în Geografie cu calificativul „Magna cum Laude".

Prima teză din seria *„ţărilor"*, ea este un exemplu fericit de abordare geografică regională, cu accente pe caracteristicile cadrului fizic, care au favorizat constituirea ei ca atare, şi a parcursului său istoric, bine surprinse de autoare. De altfel, lucrarea a constituit un model care a fost urmat de toţi aceia care au continuat seria *„ţărilor"*, înlesnind enorm munca coordonatorului seriei. Teza a fost publicată în 2007 în editura Presa Universitară Clujeană, într-un masiv volum de 617 pagini.

Activitatea de cercetare, materializată în studii şi publicaţii este meritorie, Angelica Puşcaş fiind autoarea a opt cărţi – a noua era în lucru – din care două în colaborare, precum şi a unui număr de 45 articole, studii şi rapoarte ştiinţifice. Studiile sale denotă un cercetător avizat şi profund, textul este foarte elaborat, cu numeroase trimiteri şi referinţe interdisciplinare, ce acoperă o paletă largă din sfera Geografiei Regionale.

Se remarcă în mod deosebit contribuţia sa în domeniile Etnografiei, Folclorului, valorificarea lor prin turism, precum şi din aceea a Geografiei culturale, cărora li s-a dedicat cu pasiune, publicând cărţi originale. Din păcate,

această activitate meritorie nu a contat defel în avansarea ei în ierarhia didactică, la care ar fi fost pe deplin îndreptăţită, datorită preponderenţei intereselor obscure care au favorizat în mod făţiş pe cei mai vocali, dar fără operă! Desele schimbări ale criteriilor de avansare, abil operate de unii dintre cei care ar fi trebuit să vegheze la păstrarea legatului lui George Vâlsan, cel care a pus bazele învăţământului geografic universitar la Cluj, nu i-au fost favorabile.

Aplicaţiile practice pe teren au fost un alt atu al activităţii sale didactice, alături de susţinerea celor 14 cursuri şi seminarii pe care le-a prestat de-a lungul carierei sale, până s-a axat pe domeniile mai sus menţionate. Ea a fost iniţiatoarea aplicaţiilor pe scară largă cu studenţii în Defileul Dunării şi în Bucovina, deosebit de complexe sub raportul varietăţii cadrului fizico-geografic şi a celui geografico-uman, respectiv a diversităţii structurilor de populaţie, a aşezărilor, activităţilor, al elementelor identitare. Pe teren se manifesta plenar, în sensul transmiterii cunoştinţelor vaste pe care le avea, era neobosită, până când evoluţia îndelungatei suferinţe fizice i-a redus treptat şi apoi, i-a curmat această vocaţie.

În numeroasele aplicaţii practice pe care le-am făcut împreună, de cele mai multe ori în condiţii dificile în sensul neacoperirii cu cadre didactice a efectivelor numeroase de studenţi, fiindcă activitatea nu era normată (eram două, rareori trei cadre didactice la 120-160 studenţi, iar normele metodologice prevăd 20 studenţi/cadru didactic!), am admirat fervoarea şi pasiunea cu care explica studenţilor caracteristicile regionale ale locuirii la Muzeul Satului din Dumbrava Sibiului, a culelor şi mănăstirilor oltenești, a turbăriei de la Poiana Stampei, a mănăstirilor bucovinene şi a celor nemţene, a elementelor bisericilor de lemn transilvănene, a palatului Cuza de la Ruginoasa şi a casei memoriale Ciprian Porumbescu de la Stupca sau izvoarele Barcăului, spectaculoase în răsfirarea dantelară a firului de apă, de la Tusa.

În domeniul instituţional, Angelica Puşcaş a avut o contribuţie determinantă cel puţin într-un domeniu şi anume acela al dezvoltării extensiei universitare de la Zalău. La începuturile dificile ale acestui colegiu, când doar câţiva aveam ore acolo, acoperind întreaga arie curriculară, fiindcă era imperios nevoie să existe cărţi/cursuri tipărite ale cadrelor didactice, care trebuiau să aibă şi doctoratul pentru ca instituţia să fie acreditată, colega noastră a susţinut multe cursuri, seminarii şi lucrări practice din dorinţa de a promova extensia locală pe eşichierul învăţământului superior, izvorâtă dintr-o dragoste filetică pentru plaiurile natale. Recunoaşterea acestui fapt, nemaivorbind de vreo recunoştinţă, nu a venit însă niciodată, din contră! Lucrarea *„Sălaj-oameni şi opere”* (Zalău, 2017), pe care autorii o califică drept *„ediţia a II-a, adăugită şi revizuită”* (sic!), „au uitat” din superficialitate, menţionarea ei printre aceia care au contribuit la propăşirea acestui frumos colţ de ţară, prin opera şi activitatea lor.

Ca afiliaţie instituţională, a fost membră a Societăţii Române de Geografie şi a Clubului Orientaliştilor, un spaţiu cultural de care se simţea tot mai atrasă în vremea din urmă.

Fire empatică, Angelica Puşcaş s-a bucurat de aprecierea studenţilor, deţinând ani de-a rândul recordul absolut al coordonării/îndrumării lucrărilor de licenţă şi de dizertaţie, un indicator elocvent al pasiunii şi vocaţiei sale didactice.

Ca membră a departamentului, a comunităţii academice în general, a manifestat respect faţă de profesorii săi, deschidere şi înţelegere pentru colegii mai tineri, adeseori prea grăbiţi în ascensiunea profesională, beneficiari ai unor „înalte" protecţii.

Stingerea ei prematură, survenită în miezul zilei de luni, 21 iunie 2020, la Cluj-Napoca, în săptămâna Sânzienelor, când natura este în deplinătatea expansiunii ei florale şi cerul se deschide, a vitregit Departamentul de Geografie Umană şi Turism de un membru valoros, determinat şi pasionat de munca sa; va trece un timp, până ce o altă persoană de acelaşi calibru va duce mai departe realizările ei.

Angelica Puşcaş şi-a ales să se odihnească în satul natal, într-o livadă bătrână, la câţiva zeci de metri de casa părintească, situată pe versantul opus de la poalele dealului pe care se înalţă Mănăstirea Strâmba, care îi veghează somnul de veci. Dacă ar fi să înţelegem alegerea ei pentru acel loc, s-ar potrivi sintagma: *„La Strâmba mergem să ne îndreptăm, că drepţi nu suntem!"*, ce aparţine lui Sorin Grecu, dintr-un articol din revista „Patria", unde regretata noastră colegă a publicat un ciclu de articole.

Alegând să-şi doarmă somnul de veci în plaiul natal al Ţării Silvaniei – sinteză a trinităţii peisagistice pădure-fâneţe-teren arabil, ce a dat Ţării Româneşti pe marii corifei ai românismului Simion Bărnuţiu, Alexandru Papiu-Ilarian, Iuliu Maniu, Corneliu Coposu, Angelica Puşcaş s-a întors la rădăcini, la solul natal, unde a văzut lumina zilei, şi-a tras seva cu care a pornit în lume şi, cu „amprenta locului", latinii spun „genius loci", a purtat în lume cu determinare spiritualitatea sălăjană. Requiescat in pace!

Dr. Alexandru A. Păcurar
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DRUGS, FLIGHT, AND MIGRATION. A COMPARISON OF NORTH AND WEST AFRICA, NEAR EAST AND EUROPE

ERHARD SCHULZ[1], HUSSEIN ALMOHAMAD[2], SANI IBRAHIM[3]

ABSTRACT. ***Drugs, Flight, and Migration. A Comparison of North and West Africa, Near East and Europe*.** Even foreseeable, the migration wave of 2015 did confuse Europe profoundly. For long time one argued on "push and pull" or on implantation in the demographic transition as the backgrounds of immigration. Moreover, an enforced and constant immigration was claimed for the Central European countries in order to assure the life standard. On the other side, it was impossible to develop standards for migration and flight- beyond the Geneva Convention. In parallel to that, the weight of the "informal" part of production and trade was widely neglected on the official as on the academic level. Thus, a – time wise – tight connected economic system of drug trade/traffic and the transport of migrants or refugees developed since the 1990s. By now, it is interwoven with the various terror-groups, militias or officials too. Both parts of that well-organised system see Europe as their main destination, but Africa is systematically developed as a future market for drugs too. It is clear, that the civil population is suffering most in all the regions. Maps for five time slices – the 1960s, the 1970s, the 1990s, 2015, and 2018 will present the different interconnections of drug traffic and migration/flight. They show the traditional system of migration and flight up to the 1990s, when the international drug traffic interconnected with the various terror groups and shaped a new economic system. The initiatives of the European Union to stop or channelize migration and future chances for the region will have to cope with them.

Keywords: *Drug trafficking, flight, migration, North and West Africa, Near East, Europe*

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1. INTRODUCTION

Migration was a constantly disputed item during the last years. It had an academic approach until the 1990s when the EU was faced to the reality of a continuous so called "illegal" immigration from northern Africa and the Balkans. The Central European countries were comfortable with the "Dublin treaty" (EU 1997) up to the massive immigration via the "Balkan road" in summer and fall 2015. Since that time the term "migration" was seen as a threat for European economy and society, and the political reactions and activities were mainly driven by desperation, actionism and election campaigns. However, on the level of the UN it was not possible to achieve a general definition and action plan to react to the phenomena of migration and flight (UN 2018, UNHCR 2018, see also Rekacevicz 2009, Sunjic 2000).

This article tries to analyse the terms "migration" and "flight" and to put them into a regional scheme globing Europe, western and northern Africa, as well as the Near East. It also will explain the different trade and economic schemes which act as parallel drivers with a perfect organisation, but which are for the most ignored in the economic and geographic literature. The commercial webs of drug traffic and organised migration as well generated an enormous amount of money, which might counteract some ideas of development aid (Abou Chabake 2000, Julien 2011). Moreover, the EU did establish a system of externalisation of its southern borders far to the Sahelian countries (Boyer 2019, Brachet et al. 2011).

With help of a series of maps we will try to explain these complex developments. They describe the decisive years of migration: 1960s, 1970s, 1990s and 2015 and the winter 2018. They show the migration routes, the development of drug commerce and mutual interactions of them.

2. WHAT ARE WE TALKING ABOUT?

The terms "migration" and "flight" got a negative character in the last years, and also the attempts of the UN – see above- were not successful at all because out of political reasons they were obstructed. Thus, only the Geneva Convention of 1951 (ICRC 2014, UN 1951) works to define refugees for their position and rights. "Displaced people" are considered to be protected but with lesser civil rights.

In the academic discussion migration was long time considered as a phenomenon reacting on "push and pull" (cf. De Haas 2006, 2011, Galtung 2000, Lucas 2005, Massey 1998, MPI-Team 2013, Parnreiter 2000, White and Woode

1986). However Zelinsky (1971) tried to explain it on the background of the demographic transition (cf. Kiziak 2019). As Figure 1 might explain, it needs a certain time before poor people may accumulate the necessary finances for the travel in order to seek their fortune abroad. Ideas for migration rise high but the capabilities develop slowly (stage one, high birth and death rate, low level of population growth). They grow from stage two on (decreasing death rate, slight rise of population growth) and at stage four (decreasing birth rate and population growth) they reach their highest level, when the ideas to migrate already decrease from stage three (decreasing birth and death rate and rising population growth) on.

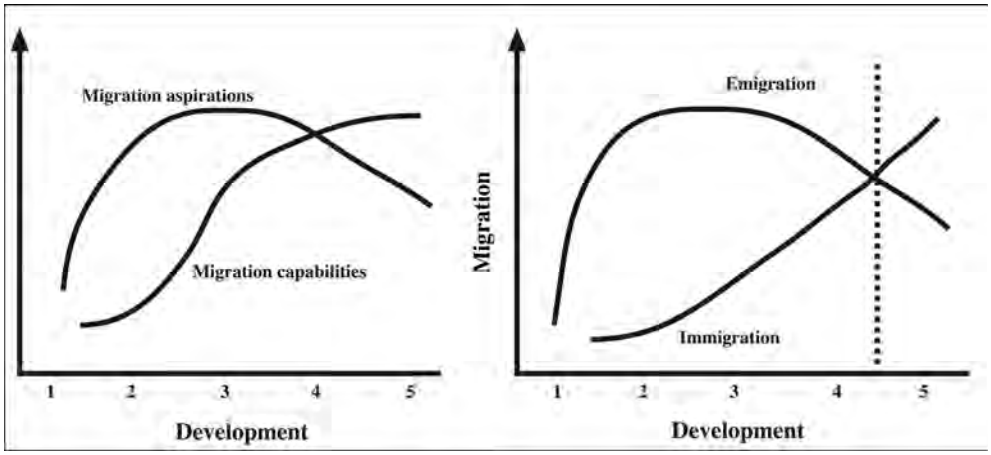

Fig. 1. The mutual dependencies of migration and demographic transition (after De Haas 2010, modified).

As a result, emigration is active as long as there is the necessary money available and it has its peak at stage three. In contrast to that, immigration remains low until stage three but rises high afterwards. A smaller but well situated population needs other people to do the necessary work.

Two studies from the Bertelsmann foundation (Fuchs et al. 2015, 2019) demonstrated a principal need of constant immigration ranging from about 300000 to 700000 people per year alone to Germany in order to secure the life standard of its population.

However, these reflections do not stay for the cases of war or catastrophes. Nuscheler (1996) already pointed to the mixing of migration and flight in the academic discussion as well as in reality. Oltmer (2017) resumed

that the general migration from countries of the South to those of the North remained low and stable the last 50 years, and the greater part of migration happens in West Africa, South America and eastern Asia (see also Muthumbi et al. 2018).

The number of wars or civil wars rose during the last 30 years (Schreiber 2016, Zand 2014). With the development of the various self-declared health armies, independence fighters, and religious terror groups it was the civil population taken as main target. Even near to Europe it was not realised as an important threat. Theories of "clash of cultures" (Huntington 1996) or the postulation of a "terror banana" (Keenan 2013) were discussed to explain these phenomena. However, in 2015 the invasion on the "Balkan Road" and the constant arriving of migrants via the Mediterranean with its horrible death rates surprised the EU enormously. It was declared "illegal migration"- with the exception of Syrians, accepted as refugees in the system of the Geneva Convention. From that time on, the official politics remained chaotic, whereas on the community level the situation arranged astonishingly with time. Attempts on the UN-level to understand these problems and to prepare solutions failed (see above). The memoranda on refugees and migration (UN 2018, UNHCR 2018) were not accepted unanimously and thus, a common base to react to these phenomena remains open.

In parallel-but less recognized in its dimension, a perfect organized economic and trade system is following the routes of migration. Very often it interferes with the market or it organizes the migration too, especially when it is considered as "informal /illegal". As Europe is the main market for heroine and cocaine the trade routes are often the same as for migrants. *Cannabis* however, is the old and long times accepted drug in Muslim countries which have a firmly rooted production and distribution system. Today, *Cannabis sativa, C. indica, Erythroxylon coca,* and *Papaver somniferum* are genetically modified plants with an enhanced content of psychoactive substances (CSRO 2002, Financial Times, 2004, Grotanhermen and Göttsche 2019, Mertens 2008, Page 2005). In addition, artificial drugs like opiates (cf. Tramadol) or amphetamines (cf. Captagon) became important in the last years. They work as stress killers and are also known as "army and terrorist drugs" (Becnas 2015). Moreover, as the financial dimension is as important, the trade is necessarily organized by involving officials and government members of the respective states, which are crossed (Gregoire 2001, Kraehe 2008).

Khat is the classical drug of migration and replacement economy. *Catha edulis*, Khat is a medium sized shrub or tree. Their leafs comprise the mild stimulant cathinone, which, however, oxidizes within 48 hours after harvest.

Thus, it cannot be stored and transported dry. Khat is chewed normally in a group of men during the afternoon and evening. It is traditionally cultivated in East Africa and Yemen. In these regions, it got the history of replacement cultivation (Cochrane & O´Reagan 2016, Omar and Mbugua 2019). With the coffee crisis in the 1970s, it became the favoured cultivation in Yemen and Ethiopia, where it represents today the major export good. As it cannot be stored it depends on the infrastructure and its area enlarged with the extension of roads or air transport. Moreover, the drug is directly connected to migration. The flight and emigration waves after the wars in Ethiopia, Somalia or Yemen created a diaspora, which today is the major clientele of Khat. With the ban of Khat in the UK and China, it became illegal in large areas and the economy of smuggle started. Today it is still legally cultivated in Kenya, Ethiopia, Djibouti and Yemen having Somalia as the greatest client (Cochrane & O´Reagan 2016).

3. MAPS AS A WAY OF UNDERSTANDING

Maps of northern and western Africa, the Near East and Europe shall help to explain the evolution of the last fifty years. They shall elucidate the interdependencies of these regions, which are mostly regarded separately. These maps show the main routes of migration and drug trade/traffic. Information comes from own observation during fieldwork and from the large literature body. It is clear, that an investigative research is risky - especially in the informal/ illegal environment. However, there is enough information accessible (for the most IOM 2018a-h, UNODC 2007, 2010, 2016, 2017). The long-time fieldwork and expeditions provided information on routes and tracks, which are inserted into a commercial satellite image map (TCDB 2004). A map can be easily overcrowded, and the scale limits the amount of information. Thus, we decided not to note the state´s borders, instead we gave the main cities and action points. As there is no generally accepted definition of migrants and refugees we follow the differentiation of Sejal (1993) between voluntarily (including transhumance) and involuntarily migrations / vulgo refugees. For the last we use the blue of the Geneva Convention. We also decided not to give any quantitative information because it would make the maps unreadable. Moreover, quantitative information is often too imprecise in these topics. Thus, these maps indicate the respective items in time slices for the 1960s, 1970s, 1990s and 2015 as well as for the winter situation in 2018.

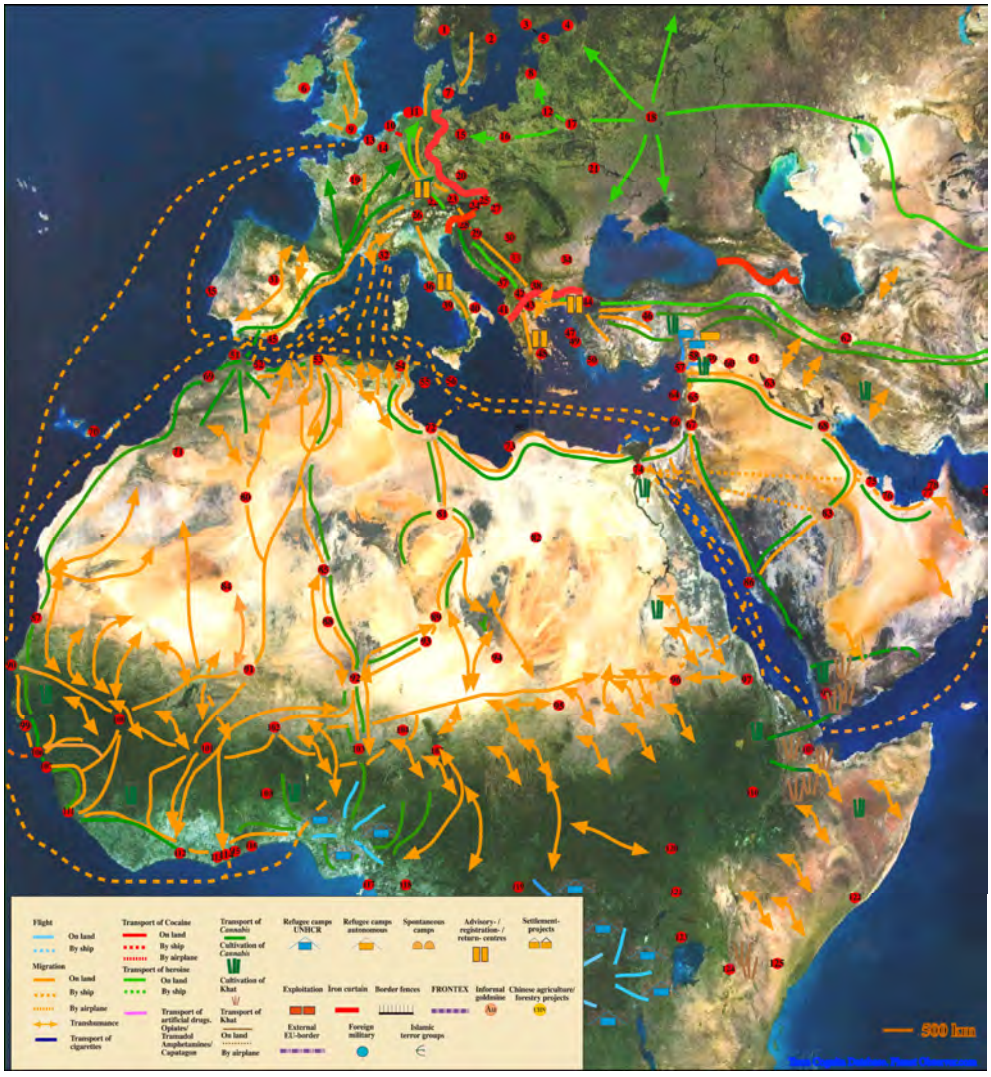

Fig. 2. Drug trade and migration in the years 1960. The map shows the traditional migration and transhumance in West Africa, the exodus from the Maghreb to Europe, the migration to Algeria and Libya, the recruitment from Italy, Greece and Turkey to Central Europe, the traditional commerce of *Cannabis* and the opium/heroine trade from Afghanistan to Europe. War and refugee streams in Biafra, Congo and Lebanon.

List of capitals and action centres mentioned in the maps

1 Oslo, 2 Stockholm, 3 Helsinki, 4 St. Petersburg, 5 Reval, 6 Dublin, 7 Copenhagen, 8 Riga, 9 London, 10 Den Haag, 11Bremen-Hamburg, 12 Vilnius, 13 Calais, 14 Brussels, 15 Berlin, 16 Warsaw, 7 Minsk, 18 Moscow, 19 Paris, 20 Praha, 21 Kiev, 22 Salzburg, 23 Passau, 24 Vienna, 25 Bratislava, 26 Brenner, 27 Budapest, 28 Ljubljana, 29 Zagreb, 30 Szeged, 31 Madrid, 32 Marseille, 33 Belgrade, 34 Bucharest, 35 Lisbon, 36 Rome, 37 Podgorica, 38 Sofia, 39 Napoli, 40 Bari, 41 Tirana, 42 Skopje, 43 Idomeni, 44 Istanbul, 45 Almeria, 46 Ankara, 47 Lesbos, 48 Athens, 49 Izmir, 50 Bodrum, 51 Ceuta, 52 Melilla, 53 Algiers, 54 Tunis, 55 Lampedusa, 56 Malta, 57 Latakia, 58 Aleppo, 59 Raka, 60 Deir Alzour, 61 Mosul, 62 Teheran, 63 Bagdad, 64 Beirut, 65 Damascus, 66 Tel Aviv, 67 Amman, 68 Kuwait City, 69 Rabat, 70 Canary Islands, 71 Tindouf, 72 Tripolis, 73 Bengasi 74 Cairo, 75 Manama, 76 Doha, 77 Abu Dhabi, 78 Dubai, 79 Muscat, 80 Adrar, 81 Sebha, 82 Kufra, 83 Riad, 84 Bodji Moktar, 85 Tamanrasset, 86 Jeddah, 87 Nouakchott, 88 In Guezzam, 89 Madama, 90 Dakar, 91 Gao, 92 Agadez, 93 Dirkou, 94 Faya Largeau, 95 El Fasher, 96 Khartoum, 97 Asmara, 98 Sanaa, 99 Bissau, 100 Bamako, 101 Ouagadougou, 102 Niamey, 103 Kano, 104 Diffa, 105 N´Djamena, 106 Conakry, 107 Freetown, 108 Abuja, 109 Djibouti, 110 Addis Abeba, 111 Monrovia, 112 Abidjan, 113 Accra, 114 Lome, 115 Cotonou, 116 Lagos, 117 Douala, 118 Yaounde, 119 Bangui, 120 Juba, 121 Camp Bidi Bidi, 122 Mogadishu, 123 Kampala, 124 Nairobi, 125 Camp Dadaab.

3.1. THE YEARS 1960 (FIGURE 2)

These years created a new mosaic of migration in the whole area. It was the period of independence of the former colonies. The end of the Algerian war provoked a massive exodus of the French colonisators and the Harkis – their collaborators – to France as well as from Morocco and Tunisia too (cf. Cote 1988). The Jewish population also exiled either to France or directly to Israel (Sejal 1993). The Sahelian and Sudanian countries showed an important mosaic of working migration/-exodus, the traditional transhumance or nomadic movements (cf. Breville 2018, Zachariah and Conde 1981). A special case was the complete exodus of the French from Guinea after independence (Gerrits 2019). However, a northwards migration tradition from the Sahelian countries was established, which answered the strong demand of work force for reconstructing infrastructure and building for the growing petrol-industry as well as agriculture projects in Algeria and Libya and which still prevails today (Cote 1988, Scheele 2010, 2011). These migrants used the century old commercial routes between the Sahel and the Mediterranean (Bensaad 2002, Brachet et al. 2011, Pliez 2000, 2002). Migration from Egypt and Tunisia was directed to Libya for working in agriculture, commerce and administration. In parallel people migrated from Egypt, Sudan and Palestine to the Arabian Peninsula (De Bel-Air 2018).

But also refugees were numerous. The Biafra war provoked an enormous amount of internal refugees as it developed in the eastern Congo too (cf. Ki Zerbo 1981, Schreiber 2016). Here the civil war started to burn as it still does today (cf. Schreiber 2016). The Near East saw the Lebanon civil war and its refugees (Zand 2014). Europe was impregnated by two phenomena. The iron curtain closed definitely, and people were massively recruited from Spain, Italy, Greece and Turkey as well as from the Maghreb countries to Germany, Belgium, Netherlands and France in order to assure the industrial development (cf. Calavita 2009, Stacher & Demal 2000).

The drug scene was still simple. *Cannabis* as the traditionally allowed drug for Muslims was mainly grown in Morocco and widely traded: to Europe via Spain and to Africa via the West African coast (cf. Duvall 2018, Klantschinig et al. 2016 a, b). However, in several countries *Cannabis* was cultivated too for the local consumption. Later on it became a compensation culture when the ordinary revenues from agriculture diminished too much (Perez and Laniel 2004). Also Lebanon and Turkey were important producers. For both *Cannabis* and opium/heroine the Afghanistan-Iran-Turkey –Balkan Road developed strongly as the Soviet Union was supplied via Kazakhstan to Moscow for further distribution (Buddenberg and Byrd 2010, Kteutzmann 2005, UNODC 2010, 2016). Khat cultivation and consumption was restricted to East Africa and Yemen (see Cochrane & O´Reagan 2016).

3.2. THE YEARS 1970 (FIGURE 3)

During this period the climate changed definitely in northern and western Africa. The humid period, which lasted with interruptions from the mid 19th century cf. (Nicholson et al. 2012) terminated. Degradation/desertification ruled in Africa (UNCOD 1978). Nomads and pastoralists loosed their herd almost completely and the nomad society collapsed. Many transhumances moved southwards or were given up. People fled to the neighbour countries, where large refugee camps were organised near the borders. This was the first wave of climate or environmental refugees. A phenomenon as well discussed for the future (Ioneco et al. 2017, Nouaillas 2013).

The conflict over West Sahara caused the long-lasting refugee camps near Tindouf in North-West Algeria where the Polisario movements declared the RASD (République arabe sharaoui démocratique) soon (San Martin 2010). The northwards migration in Africa continued and also the emigration to Europe by recruitment was still active (see Calavita 2009). Migration from Egypt and Tunisia to Libya was active too as it was for the Sudan for the Arabian Peninsula. Here the immigration tradition from Asia began, which still continues today (cf. Asian Century Institute 2014, De Bel Air 2018, Seyal 1993). The 1970s were also the period of several wars or civil wars as in Cyprus, Lebanon, Israel,

Yemen, Eritrea, Ethiopia/Ogaden or Uganda and the Congo (cf. Schreiber 2016, Zand 2014). Thus, a steadily growing mosaic of refugee streams and camps established. Moreover, the Indian diaspora was expelled from Uganda.

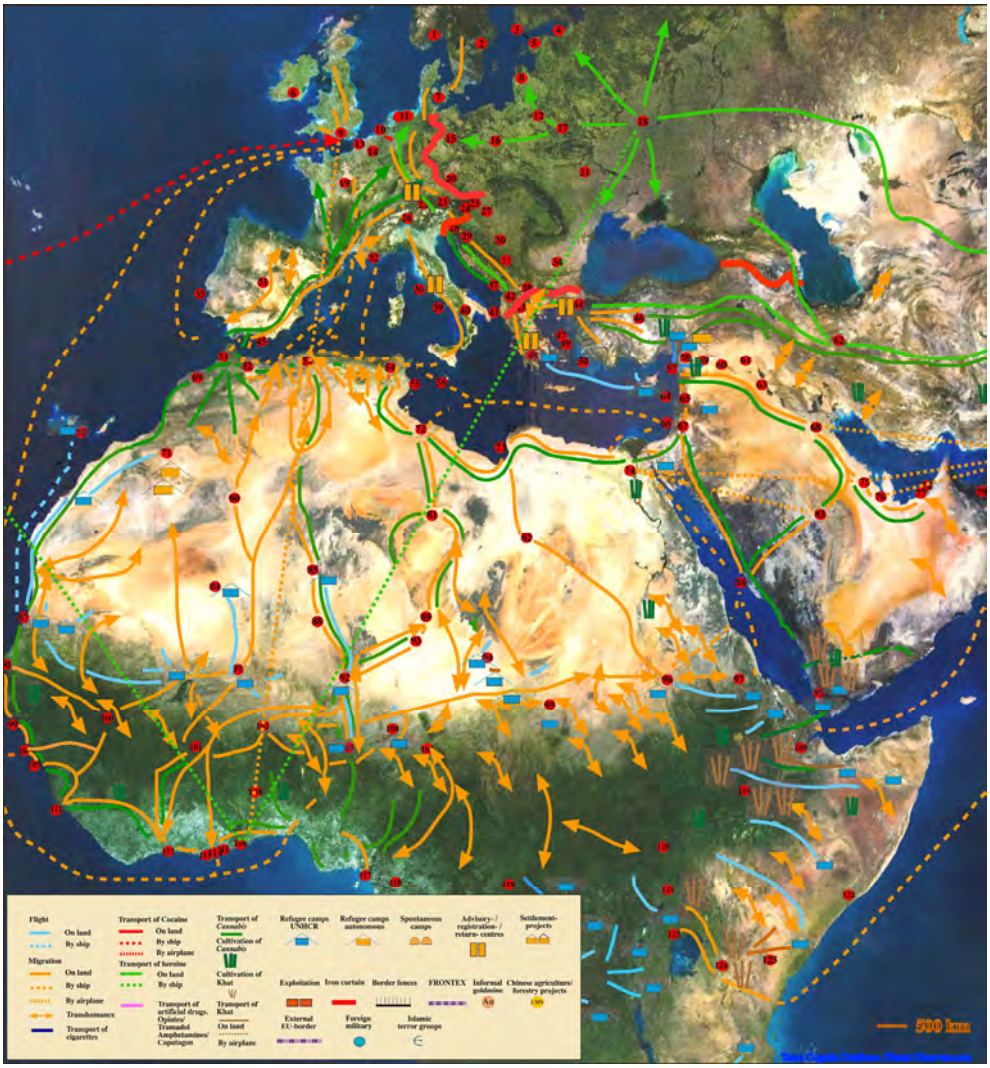

Fig. 3. Drug trade and migration in the years 1970. Climate refugees in the Sahel. Enlarged migration to Algeria and Libya. War and refugee streams in Congo, Ethiopia, Yemen, Lebanon and Cyprus. Extended drug trade of *Cannabis* and opium/heroine in West Africa and Afghanistan to the Balkans.

The drug scene developed slowly. The Afghan trading routes remained the same. The connections of Soviet Union with Ghana and Nigeria also fostered the "diplomatic suitcase" for the heroin exchange to Moscow and further distribution (cf. UNODC 2010, 2016). "Swinging London" also prepared the road of direct delivery to Europe, where the great ports became the doors to arrive to the main markets (Conesa 2007). Khat was still restricted to East Africa and South-West Arabia. However, the coffee crisis and the Yemen war provoked an extension of cultivation and the slight amelioration of infrastructure supported the Khat trade (Gebissa 2010, Rivera 2012).

3.3. THE YEARS 1990 (FIGURE 4)

This period was of great changes. The most important was the collapse of the Soviet Union, which created new gates for migration (Macung 2011, Samari 2007). The civil war in the states of the former Yugoslavia did send great waves of refugees to Central Europe. The wars in Afghanistan, in the Gulf region, Darfur, Ruanda, Congo, Somalia as well as in Liberia and Sierra Leone enlarged the amount of refugees as the genocide in Rwanda resulted in a continuing militia theatre in the eastern Congo (Belkaid 2011, Prunier 2009, Schreiber 2016, Zand 2014).

These years were those of the Algerian civil war and the Tuareg rebellions in Niger and Mali, which disturbed the civil exchanges to Algeria but fostered any kind of smuggle.

At the end of the Algerian civil war a great part of the Islamic rebels filtered to North Mali and built up their hinterland (Ousseini et al. 2009, Schulz et al. 2001). Further on they acted as founders of the various Islamic terror groups still active in these regions. The contact with the drug traffickers became fruitful, and a long cooperation started, financially lucrative for both parts (Alexander 2017, Coulderwood 2015, Gabriel 2019, Holmgren 2014, Ibrahim 2019, Julien 2011, Lounnas 2018).

Most refugees remained in the surrounding area (Rekacevicz 2009). Anyway, a great number got on the move in direction to Europe and prepared the routes via Ethiopia and Sudan either to Egypt or via Kufra to the Libyan coast (Morice 2012, Servant 2009). From here there was a dangerous boat transport to Italy or Greece and many of them drowned (Vermeeren 2008). The system of acceptance and integration in Europe was trained. Refugees from Afghanistan followed the Iran-Turkey road and then through the Balkans. The civil emigration from Tunisia-Egypt to Libya or from Sudan and Palestine to the Gulf States continued as the emigration waves from India, Pakistan and South-

East Asia did (Asian Century Institute 2014). They also used the air transport via Moscow in order to filter into Europe afterwards.

A third evolution started in Mexico. The Colombian cocaine cartels lost their war with the Mexican ones and were obliged to seek another way to deliver their goods to their main market – Central and Western Europe (cf. Smets 2011). Thus they targeted West Africa for the transport routes.

The delivery to West Africa was by air and ship to the islands of Guinea-Bissau or directly to the surroundings of Gao (Mali), where the freight was unloaded and the vessel burned afterwards (see AFP 2011, Bossard 2014, Gregoire 2001). From there the Sahara was crossed by lorries or 4-wheel-cars. At the same time they stated to prepare West Africa as a future market.

However, the road was already paved before. Unlicensed cigarettes from Asia were shipped to Nigeria and than to Cotonou (Benin). From here in official convoys of tens of lories to the Niger border and further on to Agadez and via Dirkou to the Libyan border. In Niger they profited from the World Bank's philosophy of privatisation. The World Bank asked the Niger government to decline state-owned firms. Thus, the system of cereal stores for times of drought was ceased but taken up by the BAT (British-American-Tobacco) in order to preserve the cigarette´s quality. Finally, a win-win situation in the sense of privatisation (see Gregoire 2001).

So, at the Niger border at Madama the lorries checked out officially, paid the legal duties, crossed the border somewhere and arrived in Sebha, where the transport was directed to the North-West or North-East for further distribution. Other ways were those from Agadez to Algeria or from Nouadhibou to Morocco and Algeria. Thus, the cocaine- and heroine- mafias in a kind of cooperation took up these roads. Cigarettes became less important but worked as a façade anyway. The Libya road was frequented by the civil transport activities too including the transport of people (Ousseini et al. 2009, Schulz et al. 2000). Niger did not participate to the official boycott of Libya. Cocaine was also transported by air directly to Moscow or Belgrade from Monrovia or Lagos. In parallel, the artificial drugs like opiates (Tramadol) or met-amphethamines (cf. Captagon) became popular, especially as the drug of the warriors (Becnas 2018, Signer 2018).

In these years, the economic connection between drug trade, migration, and militias became an important item.

Khat developed to a classical drug of migrants. Contrary to the other drugs, cultivation and trade were still legal. The diaspora from the Ethiopia, Somalia and Eritrea wars became an important clientele and the improvement of the road and air transport created an international trade to North America, Europe and East Asia.

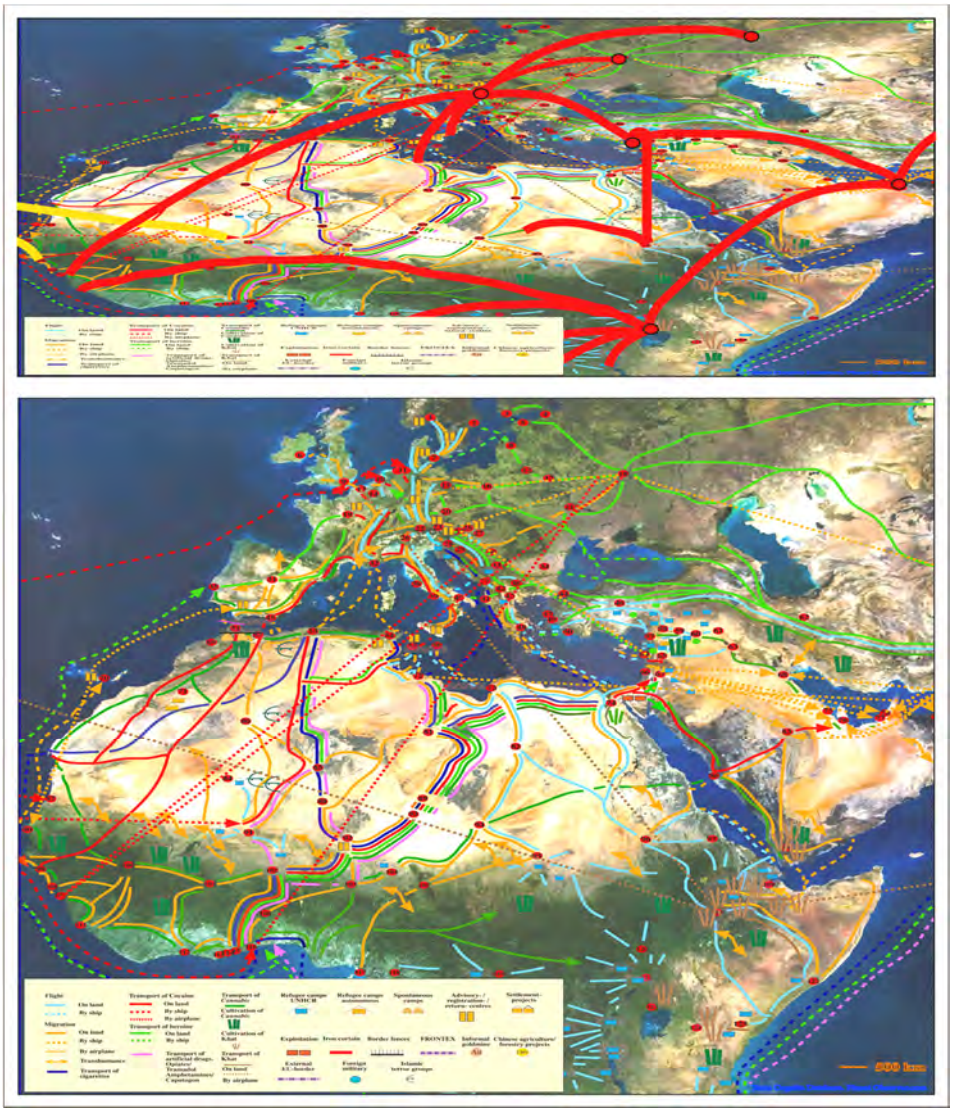

Fig. 4. Drug trade and migration in the years 1990 including the IL76/AN12 system (above). Collapse of the Soviet Union and new migrations in Europe. Extension of the immigration from South-East Asia to the Arabian Peninsula and to Libya. Entrance of the cocaine and artificial drug traffic in West Africa and establishment of the smuggle route from Cotonou to Tripoli and Cairo. War and refugee streams in Mali, Niger, Central African Republic, Congo, Rwanda, Somalia, Eritrea, Iraq, Ex-Yugoslavia, establishment of the deathly Mediterranean traverse to Europe. Establishment of the Islamic terror groups in Mali. Khat trade followed the migrants of the East African wars. Establishment of the IL76/An12 system for the weapon-drug exchange.

This ground mosaic was paralleled by a special system of air transport and trade. The collapse of the Soviet Union and the Red Army caused an unexpected pool of military material (air planes, weapons and others) and experienced crews. Privatisation led to a great number of new airlines, which were obliged to find clients and jobs. Some of them were serious but a great number were devoted to the informal business. Thus, an IL76/ AN12-system developed. With Yekaterinburg and Vitebsk as supply centres in the back, Belgrade was a perfect hub for them (Potter 2011). The Milosevic regime was desperately looking to find finances from informal weapon transports to banned regimes like in Libya, Angola, or Iraq. IL76 or AN 12 were perfect planes for these activities and the crews had their experiences from Afghanistan. Other bases were Malta as fuel supply and Cyprus and Sharjah as perfect hubs with a limited or manageable control systems. Entebbe was perfect for the transport to Karthoum, Mogadishu or Angola, whereas Sharjah was suitable to reach Kabul. The business was twofold. Weapons and other military goods were mostly exchanged for drugs, and as the planes had a great capacity of overload, the crews had their chances to buy and sell valuable goods on their own account. However, as maintenance of the flying material was reduced in order to save money, there was a regular loss of planes and crews.

3.4. 2015 – THE YEAR OF SURPRISE (FIGURE 5).

The preceding decade changed the whole region profoundly. The Arab world was shaken by civil upheaval, which led in Tunisia to a civil government, in Egypt finally to a military regime. Libya and Syria drowned into chaos and civil war (Gresh 2012). The war in Afghanistan continued. In contrast to the years before, several military invasions and intervention started in Mali and Libya (Bayo 2018, Chataigner 2019, Daguzan and Moisseron 2011, Lacher 2019, Poupart 2019). The wars in Syria and Yemen became proxy-wars with Iran and Saudi Arabia as main actors (cf. Kozak 2015). Sahara and Sahel developed into a theatre of several terror groups, which made the region into an insecure area for the civil population (Tubiana and Gramizzi 2018). Thus, the amount of refugees and migrants developed massively. However, as in the previous periods, the most of them remained in the region, as they could not afford a long journey. Mali became a war region and Libya collapsed as an ordinary state and got partitioned into regions of the respective militias. Algeria closed its borders for the civilian traffic and exchange. The Libyan borders got uncontrollable and all kind of traffic between drugs, migrants and refugees entered the country in order to seek work or chances to go to Europe (Altai Consulting 2015, Auti 2010, Ben Yahia et al. 2019, Bredeloup and Pliez 2018, Daguzan and Moisseron 2011, Deknatel 2016, Diaz and Hidalgo 2018, Ellis, 2009, Hammood 2006).

The organisation of the travel by the migrants up to the Libyan border was observed and described by Gatti (2009) and Tubiana (2017), while their European fate was analysed by Clochard (2017). The important development of telecommunication and of reliable cars fostered the traffic on new and dangerous

routes. The transport in the Maghreb and Mashriq countries is organised in a private manner and the migrants have to pay for it (see below). Thus, in many cases they have to earn the money for the next step and very often they are badly exploited. The oversea transport became a growing business, without any security measures. Anyhow, illegal immigrants were – and still are – an integral part of economy as the exploitation in irrigation projects in Almeria or in the Basilicata are only examples of that (Calavita 2009, Rechinger 2018).

And there arrived some new actors too. Chinese migrants settled in many African countries. They came aligned to official treaties or projects on industrial and agriculture projects or on a private base working in the service sectors (Alan et al. 2013, Mohan and Ton-Mullins 2008, Muttarek 2017).

The long time burning civil war in Syria provoked millions of refugees, which for the most were hosted in the surrounding countries. But as the food and medical supply of the refugee camps got uncertain in 2014, several hundreds of thousands took up the Balkan roads – to the surprise of Central Europe, which almost had ignored this evolution before. Since this year, the necessity of a common and adapted action of the European states is obvious.

However, there also is the migration wave of fighters for the IS coming from Maghreb and Europe (Masbah 2019, Peel et al. 2019).

The drug scene preserved the main traffic roads. But business got interconnected with the various warlords or militias and with government members on various levels too (see Beladi 2019).

The transport of people got a noteworthy part of their revenues too. Closed borders were no obstacles; the relations to the official persons were effective. The spectra of drug varied, but the part of the artificial drugs became more and more important.

At the arriving points near the coast, the two types of business separated again. People were dependent on the unsecure organisation of sea transport or on exploitation camps before. The drug transport, however, is carefully organised - between speedboats, ferries or freighters (Klaubert 2019, EUROPOL 2016). It explains why the connection of the two economies – drug and migration – finishes at the Libyan coast.

The international Khat trade faced some backslashes. Khat was declared illegal in the UK and in China and so the system got the character of legal cultivation but illegal trade (Cochrane and O´Reagan 2016) with a dynamic of smuggle.

The IL76/AN12 system still was active. NGOs and the UN were important clients as these planes were perfect to reach remote and poorly equipped airstrips. Material for medical aid or for refugee camps was bulky but not heavy. So, the load capacity was big enough to maintain flourishing drug commerce, mainly cocaine and heroine. The Congo region, Sudan, the Horn of Africa or Afghanistan were the most important regions of their activities. In addition, direct flights to South America via the Canary Islands were numerous to buy cocaine and to transport it

to Moscow or to St. Petersburg for further land transport to the West. A direct supply of cocaine by Boeing planes was still active to Dakar or Guinea-Bissau. However, the IL76/AN12 system faded out caused by the lack or maintenance of the planes by the airlines. Thus, there was a regular loss of material and crews.

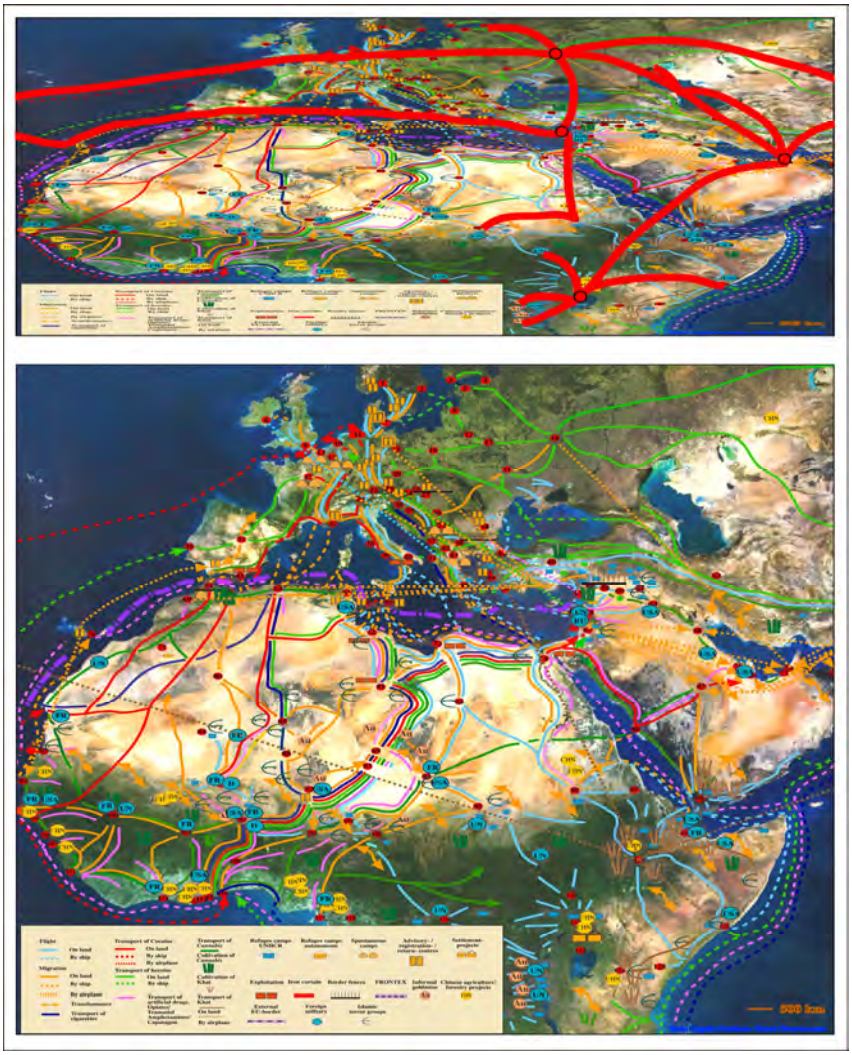

Fig. 5. Drug trade and migration in the year 2015 including the IL76/AN12 system. Eclipse of migration and refugee streams to Maghreb and Libya. Eclipse of migration on the Balkan-route. Migration of ISIS-fighters to Syria. Continuation of migration from Southeast-Asia to the Arabian Peninsula. War and refugee streams in Syria, Yemen and Afghanistan. Chinese migration to Africa. Informal gold mining in the Sahara. Large presence of Islamic terror groups in West Africa. Various foreign military missions

3.4.1. The informal gold mining

Surprisingly, an informal gold mining started in the Sudan and continued westwards to Chad, Niger and Mauritania in those years. Metal detectors became affordable in the early years of 2000. Via Dubai a great number was imported from the Sudan. Some hundred thousand gold miners were active in the Red Sea Hills. They exploited gold bearing quartz veins, and in 2008 the country became the third gold producer in Africa.

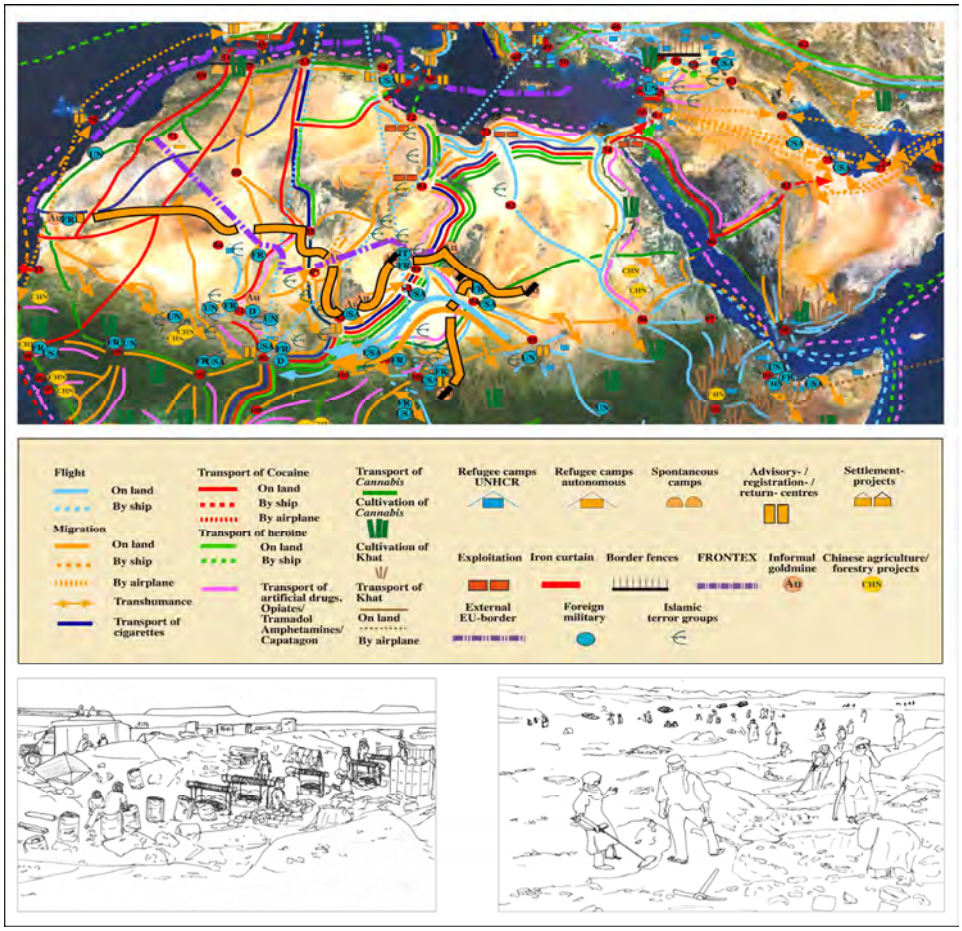

Fig. 6. The epicentre of migration. Informal gold mining in the Sahara. The map refers to the situation of 2017/20128 and demonstrates the direction of the gold rush form Sudan to Mauritania (big yellow line). The highly militarised situation is obvious. The drawings explain the deep mining in a gold bearing quartz vein (Tchibarakaten, Air Mts./Niger) and the superficial mining in the weathered Precambrian in the Djado area/Niger. Source: Gregoire (2017), modified. See also figure 5.

The detection of gold veins in the northern border region to Libya (cf. Chanda 2018, Chataigner 2019), Darfur, in the Djebel Amir, boosted the informal exploitation. In this period about a million gold miners should have been active in Sudan, and also a gold smelter was constructed (Afane and Gagnol 2016, Chevrillon et al. 2019, Deltendre 2012, ECA, AMC 2018, Graz 2014, Gregoire and Gagnol 2017, OCDE 2013, Pellerin 2017). In 2012 some important sites were detected in Chad. Especially the Tibesti Mountains were attractive. The Misky valley in the South and Koura Bougoudi and the Libyan border were the richest sites. However, in the Misky area a battle with the Chadian army led to the closing of the site. Gold mines in the South – at Fitri – were closed in 2016. It was in 2014, when some people, expelled from the Tibesti Mountains, discovered the gold bearing sediments in Djado. Here, nuggets and flitters could be (relatively) easily extracted. And within days some thousand people arrived; a short time later, traders assured the complete service as water, food, tools, chemicals or entertainment. Regulation was by gold. A barrel of 200 l water counted for about 45 dollars – in gold. The government tried to regulate the activities at least registration and for a minimum of equipment, and surely for all kinds of taxes. It tolerated the informal exploitation, also to avoid some upheaval in this area. But in 2016 the site was closed, officially out of security reasoning. The miners were transported to Agadez. The same year the French army took over in Madama in order to survey the circulation in the sensitive border region to Libya (cf. Chanda 2018, Chataigner 2019). From Agadez, most of the miners headed to the Tchitabaraden site in the North at the Algerian border. A deep vein is exploited here which continues to Algeria too. The gold bearing quartz is extracted in a long series of deep wells by several thousand miners. The quartz is mortared and the gold is enriched with the help of mercury. Market and services are present. Solid structures are banned in order to avoid permanent installations. A regular transport to Arlit and Agadez is assured too. In the market a series of traders will buy the gold. Afterwards they will sell it to some authorised traders in Arlit or Agadez. Only those are taxed by the state. The entire amount of gold is exported: either directly to India by the first traders or to Dubai, with its smelter and its huge gold market. In 2017 some sites in North Mali near Kidal were exploited too, but controlled by the regional movements. In 2016 the gold miners led by the Soudanians serving as experts started to dig in the vicinity of the copper mine in northern Mauritania. Some of them are supposed to explore already in northern Algeria too.

Information of the results is rare. For Niger there is an estimation of about 10 tons of gold extracted per year. However, the revenue of the miner itself is risky, by luck he could extract a kilo in some months, but he also could fail completely. One gram gold is sold by 16000 CFA / 24 Euro on the site, in Agadez by 19000 CFA / 29 Euro and in Niamey by 20-22000 CFA / 34 Euro.

This development could hold about 200,000 people in the country, gave them a chance to earn there a life in a civilian manner and diminish the number of people heading for the North. However, the most assured income is by the traders, or more and more by bandits – it means that the whole chain of revenue is assured. Figure 6 explains this situation.

3.4.2. The financial dimension of the drug and migrant trade

Estimation of the revenues from the interdependent drug and human trafficking is difficult.

For the most it is based on drug seizures or interviews. However, the published data may give an idea on the dimension of the financial impact (see Barzoukas 2017, Elefteriou-Smith 2016, EUROPOL 2016, Holmgren 2014, Laleix, 2015, Lounnas, 2018, Olson and Gordon 2018, Samuel Hall 2017, UNODC 2010, 2018).

- Human trafficking:

The general value of the migration to Europe is estimated to about 5-6 B. $. per year

The revenues for Libya counted at about 255-323 M. $ in 2015.

Travel fees in 2017 for the migrants.

The passage from Agadez to Dirkou in Niger was about 600-800 $ per person. About 70-80 convois per year with about 20-25 passengers per car gave around 2 M $ per day in the region and 10,000 $ revenues per trip for the car owner. A driver had an income of about 4-6000 Euro per week.

The passage from Libya to Europe might have costed 1500-1900 $.

The town of Dirkou earned about 3-4 M CFA (7000 Euro) of taxes.

Finally, around 5-6000 persons lived from the transport. For several years the economy of Agadez was marked by the service for the migrants.

- The value of migration for the home countries is remarkable and important.

Money transfer in % of the GDP counts for Senegal 11, for Morocco 9, and for Niger 5.8.

- Drug trafficking

Cocaine:

The general value of cocaine trafficking is estimated for 5-7 B. Euro per year. And the transit Africa-Europe accounts for about 13% of the world's trade.

Heroine:

The general value of heroine trafficking is estimated at 6-8 B. Euro per year.

As an example, the revenues of the Taliban in Afghanistan for 2014 are estimated at about 150 M $.

3.5. WINTER 2018 OR THE DESPERATE ATTEMPTS TO DIMINISH MIGRATION

The map demonstrates continuity. Continuity of the wars in Afghanistan, Syria, Yemen, Mali, Libya, Sudan, Congo without any sign of an end (Farah 2019). Continuity of the refugee movements as well as of the migration into the North in West and North Africa (Gänsler 2019, Molenar and Hamouni-Jannsen 2017, Tubiana et al 2018). Continuity of the drug trade and migration as well as the attempts to externalise the EU borders.

As the map stands for the wintertime, it represents the desperate hope of the EU politics to diminish the passage on the Mediterranean. In fact, the West Mediterranean passages are active as the Balkan road still is. Here the repression augments, but there are new side ways, even border fences are numerous now.

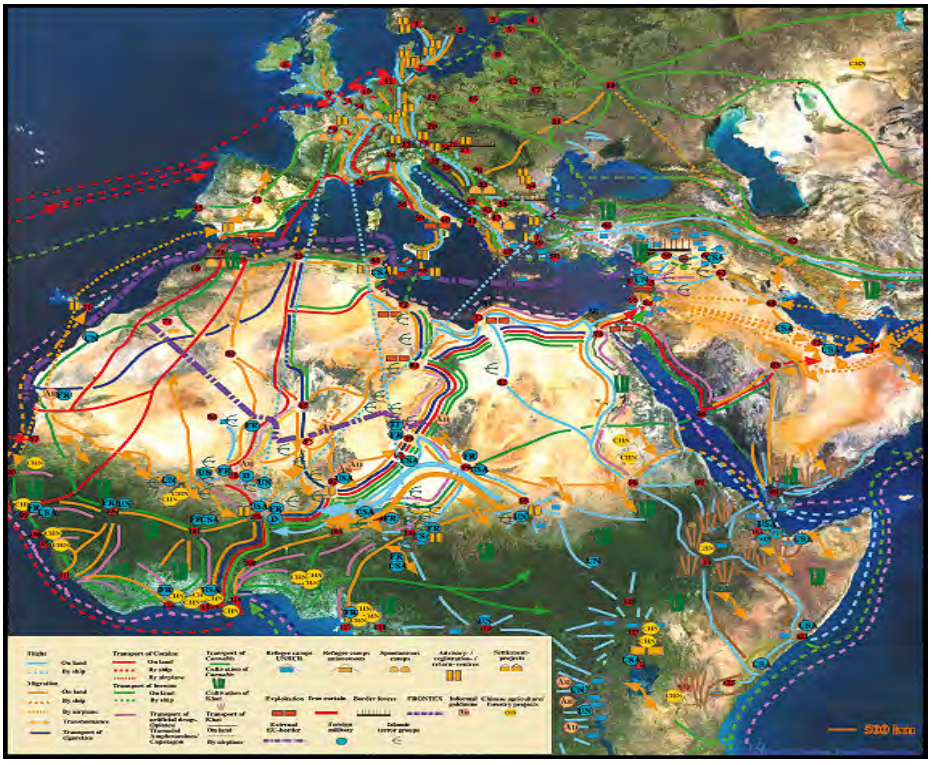

Fig. 7. Winter 2018/2019. Avoiding of the Central Mediterranean passage by migrants and growing importance of the western Mediterranean and of the Balkan routes. Externalisation of the southern borders of the EU to the Sahel. Partly change of the migration routes to Niger. Militarisation of the Sahel countries. Intensification of the various drug traffics.

The Sahelian countries are still marked by the activities of the various terror groups (Gregoire 2013, Seignobos 2019). The direct military interference by European and American troops continues too (Chanda 2018, Perouse de Montclos 2019). And there are the various military interventions of the UN too (United Nations 2019).

There is the attempt of the EU to externalise its southern border (cf. Boyer 2019, Jacob 2019). First by the enforcement of the Libyan coast navy in order to return boat people to Libya and to place return camps in the Maghreb states. Second to close and to control the northern border of the Sahelian states. Niger as the main target for migrants got modified to a police state of control of all African people. It violates the general freedom of mobility of people and trade of the ECOWAS, however the EU interventions were strong enough to install a general control and survey of people. Anyway, the military accompanied convoys from Agadez to the Libyan border still continue – as well as the convoys of the "illegal" migrants do (see Draper and Maitre 2019).

However, there are some results.

As the roads to and via Kufra became too dangerous, there is a development of migrants to cross the Chad for Zouarke at the northwestern border. From there they will continue to the North or they turn southwards to N´Djamena or via the Dirkou-Agadez road to Niamey. The knowledge spread that the UNHCR runs camps in N´Djamena and in Niamey, where they treat people acceptably. Moreover, they select people for the asylum in Europe. For several times French policemen came to those camps and selected a certain number of asylum seekers. They were flown to Paris or to Istanbul respectively. Thus, Niger is confronted with a growing number of asylum seekers now (IOM 2018 b, IOM 2019).

The drug scene in North and West Africa by now remained comparable to 2015. However, the cocaine imports – estimated from seizures – are more and more assured by container transport to the main ports such as Dakar or Abidjan, or also in Guinea-Bissau. It is the strategy of mass. A noteworthy control is hardly possible facing the enormous number of containers (Roger 2019). The African drug market will be developed systematically, but the transit to Europe is still important. East Africa or the Horn of Africa evolved to a promising market and as a transit region to South Africa (Bell and Lavellin 2017, Haysom et al. 2018, Lindskov-Jacobsen & Hoy-Carsco 2018). As the drug trade got officially forbidden in Niger, one tried new roads along the borders. Cigarettes lost in importance, but their transport is still active. Besides cocaine, heroine or *Cannabis*, the artificial drugs gained importance. West Africa is quite addicted as well as the Maghreb states of Libya and Egypt. The stress killers indicate the social divide. *Cannabis*, opiates or methamphetamines are for the

ordinary people, whereas heroine and cocaine are destined for people with the necessary financial background. Moreover, they are the war or terror drugs and the terror groups are large importers. And there is a geographical divide too. Africa belongs to Tramadol (opiates), whereas Captagon (metamphetamines) is the war drug of the Near East.

Khat, however, still has its regional importance. The legal trade has its centre in Somalia. The Somali-Ethiopian diaspora is more and more dependent on smuggle for its traditional habits.

There is little information on the former IL76/AN12 system or its remnants.

4. CONCLUSION

The cartographic approach of migration and flight as well as of the drug trade revealed several mosaics of these systems. It showed for the years 1960s and 1970s the combination of the classical transhumance and working exodus on the one side and on the other the recruitment-induced migration to North Africa as well as to Central Europe. The different wars and civil wars provoked large numbers of refugees, which however, mainly searched for shelter in the areas around. The intensive droughts in the 1970s led to the collapse of traditional pastoral societies and enlarged the tendencies to leave the regions. The drugs and their trade remained traditional with the exception of the opium/heroine trade to Europe via the Balkans and to the Soviet Union forced by the invasion of the Soviets from 1979 on. The 1990s saw a complete change of the systems. The collapse of the Soviet Union opened the gate of new movements. Civil wars and revolutions in the Guinean countries reduced the traditional working exodus dramatically. The way to the North and Europe became more and more attractive. Work in the informal sectors provided income, which was retransferred to the home countries and which represented an important part of the states income too. The arrival of the well organised cigarette and heroine/cocaine trade to the North fostered the general tendency to go to Libya. Migration became part of this transport / trade system, which connected Africa and Europe. The other connection was India-Pakistan or South Asia with the Gulf countries. It was a large-scale system of informal economy and exploitation. The civil war in Algeria created the first Islamic terror groups, which filtered into Mali, evolved and spread into the whole Sahel afterwards. The wars in Somalia, Ethiopia, Sudan enforced the migration to the North, targeting Europe. Here, however, the second wave of exodus from the Balkans was the result of the wars in ex-Yugoslavia, founding the transition of a steady migration to Central, Western and Northern Europe. The wars in Afghanistan,

Pakistan and Iraq, also provoked massive refugee streams. The large amount of migrants and refugees fostered the informal economies in all parts of the region and the so-called "illegal" migrants became an important part of that (Klawitter 2019). The reflections on the dimension of migration, whether "illegal" or not, and on the chances to reduce them – as long as it is directed to the North – often ignore the fact that this situation was deliberately provoked, even fabricated. Three decisive interventions are responsible for the present situation:

A: The Gulf war of 1990-1991 with no idea for the future development of the region.

B: The 2011 intervention in Libya with no idea for the future development of the region.

C: The refuse to support UNHCR and UNICEF sufficiently in 2014-2015, to help them assure the life of the refugees in the camps around Syria.

The fall 2015 with its massive exodus from Syria via the Balkans confronted Central Europe with the results of its ignorance or silent arrangements (see above). However, it was only the result of the evolutions of the last decade, which became visible at that moment.

It revealed the well-developed trade and transport systems of drugs and of human beings, the growing informal economies, where the "illegal" migrants were a calculated part of it (Ben Yahia et al. 2011, Calavita 2018, Klawitter 2019, Lacoste 2011, Rechinger 2018, Saviano 2009).

Anyhow, the dicussion on migration in Europe developed in two directions. First, into a panic- like politics in order to hold back any migration to Europe, and second on the incorporation of young migrants from the East and Central European countries into the western countries. Both regions are in the late period of their demographic transition but the western countries could arrive to a positive migration balance (Derens & Geslin 20129, Descamps 2019), whereas the Eastern Central European countries suffer from a lack of workforce. Two strategies of these countries are visible. Romania tries to hire systematically workers from Asia (Ledve 2019), while Hungary established an anti-migration policy. There is a natalisation initiative of many credits for young people getting children and on the other side the regime squeezes the remaining workers for more working hours. They passed a law allowing up to 400 additional working hours a year, which accounts for about a 13th month (Leotard & Lepeltier-Kutasi 2019, Seisel 2018).

Back to Africa: as the EU-politics are mainly centred on the avoiding of migrants, the declarations of a profound amelioration of the African economies as a chance for the youth are doubtful. Wars and civil wars continue in Africa as well as in the Near East such as the smuggle economy does (see Pienazek 2018). Moreover, as Clemens and Postel (2018) argue, an amelioration of the basic

income situation may even enlarge the tendencies to emigrate for long times. The networks of migrants who succeeded to arrive in Europe often cover the impact of the horror information of the travel. In general, the informal network is still a leading agent for motivation; even if there are tendencies to return (Adam et al. 2019, Breville 2018, IOM 2018 b-d) – or to seek for other chances.

The informal part of economy – in all fields – still grows. The demographic development of the Sahelian countries provides less chances of civil economics. Even if there is a progress of infrastructure, such as long-distance roads (Tchadinfos 2013), the general insecurity counteracts these developments. The overall presence of antipersonal and anti-vehicle mines represents a permanent danger for the civil population (GICHD 2017). Thus, the enforcement of borders alone will not help the European politics. The networks of migrants and their hopes or illusions are often stronger. Formation and skills are important motivations – also to have better chances after a possible return (see Sunjic and Kanert 2019). Moreover, as mentioned above, a steady immigration is declared necessary for the countries in late demographic stages as it is for the Central European countries.

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ÎNFIINŢAREA SECŢIEI DE GEOGRAFIE ŞI A INSTITUTULUI SĂU DIN CADRUL FACULTĂŢII DE ŞTIINŢE DE LA UNIVERSITATEA DACIEI SUPERIOARE DIN CLUJ

ALEXANDRU PĂCURAR[1]

ABSTRACT. ***The setting up of the Geography Department and its Institute within the Faculty of Sciences at the Upper Dacia University of Cluj.*** On 16 August 1919, the University Board, the organ created for the organization and employment of teaching staff for the Upper Dacia University of Cluj after its transition to Romanian administration (12 May 1919), presented and proposed the organisational chart by departments, seminars, laboratories and institutes of the future Faculty of Sciences, by means of the Board rapporteurs, scientists Gheorghe Ţiţeica, Ludovic Mrazec and Alexandru Borza. At the express request of professor George Vâlsan, the tertiary geographical education was also included in this Faculty, as an independent department, the Department of Geography, consisting of two sections and an Institute of Geography. This was a new situation, different from the study of Geography at the universities in Iaşi and Bucharest. The organisational chart of Cluj University, made according to the *"German model"*, was kept until the Stalinist reform of the Romanian education on 3 August 1948. By means of suggestive examples, the main Romanian university institutions newly-created at Cluj University are illustrated and described, some of them under the auspices of the Royal Foundations, such as the Astronomic Observatory and the Institute of Chemistry and Physics, as well as others, like the Sports Park, the new Botanical Garden with the Botanic Museum, the Palace of University Clinics, the Academic College and the Ethnographic Park and Museum. The materialization of George Vâlsan's concept regarding the study of Geography and its relations to the other departments of Cluj University, as well as the their scientific and logical foundation within the double specialization, are extensively presented, as a proof of the scientist's determination to lay solid grounds to the Romanian tertiary geographical education at Cluj University.

Keywords: *Upper Dacia University of Cluj, Geography Department, Faculty of Sciences*.

RÉSUMÉ. ***Création du Département de géographie et de son institut au sein de la Faculté des sciences de l'Université de la Dacie supérieure à Cluj.*** La commission universitaire, organisme créé dans le but d'employer et d'organiser le personnel enseignant de l'Université de la Dacie supérieure à Cluj après son

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transfert à l'administration roumaine (le 12 mai 1919), a présenté et proposé le 16 août 1919 l'organigramme de la future Faculté des sciences, structuré par départements, séminaires, laboratoires et instituts. Les rapporteurs de la commission étaient les scientifiques Gheorghe Ţiţeica, Ludovic Mrazec et Alexandru Borza. À la demande expresse du professeur George Vâlsan, cette faculté comprenait une section autonome consacrée à l'enseignement supérieur de la géographie – la section de géographie – composée de deux chaires et d'un Institut de géographie, ce qui représentait une nouveauté par rapport à l'étude de la géographie aux universités de Jassy et de Bucarest. L'organigramme de l'Université de Cluj, réalisé d'après le *«modèle allemand»*, a été conservé jusqu'à la réforme stalinienne de l'enseignement roumain, le 3 août 1948. Dans la présente contribution, nous illustrons et décrivons par des exemples suggestifs les principales institutions universitaires roumaines nouvellement créées à l'Université de Cluj, certaines d'entre elles sous les auspices des Fondations royales (les cas de l'Observatoire astronomique et de l'Institut de chimie et de physique), mais non seulement (le Parc des sports, le nouveau Jardin botanique avec son Musée botanique, le Collège académique ou le Parc et le Musée ethnographiques). Nous présentons dans le détail la mise en œuvre de la conception de George Vâlsan sur l'enseignement de la géographie et ses rapports avec les autres chaires de l'Université de Cluj, ainsi que leur justification scientifique et logique dans le cadre de la double spécialisation, afin de prouver la détermination de ce scientifique à jeter des bases solides pour l'enseignement supérieur roumain de la géographie à l'Université de Cluj.

Mots clés : *Université de la Dacie Supérieure de Cluj, Département de Géographie, Faculté des Sciences.*

După dobândirea hotarelor ei firești în urma Primului Război Mondial, prin alipirea Basarabiei, Bucovinei, Transilvaniei, Crișanei, Maramureșului și Banatului la Patria-Mamă, elita conducătoare a României a inițiat un vast program pentru formarea cadrelor naționale. În acest sens, s-a pus un accent deosebit pe învățământul din provinciile geografico-istorice reunite în mod democratic. În Transilvania și Bucovina, universitățile dublei monarhii austro-ungare din Cluj și din Cernăuți, au trebuit organizate pentru învățământul în limba română.

Organismul politic legislativ al Transilvaniei, Consiliul Dirigent, s-a preocupat să deschidă în toamna anului 1919 cursurile universitare în limba română la Universitatea Daciei Superioare din Cluj. În acest scop, după preluarea Universității în administrație românească, la 12 mai 1919, resortul Învățământului din cadrul Consiliului Dirigent al Transilvaniei, a înființat Comisiunea Universitară pentru organizarea și încadrarea cu personal didactic a Universității românești, sub conducerea profesorului Sextil Pușcariu.

Secţiunea ştiinţifică a Comisiunii universitare care îşi desfăşura lucrările la Cluj, a prezentat în şedinţa plenară a acesteia din 16 august 1919, propunerea organizării pe catedre a Facultăţii de Ştiinţe, totodată făcând şi propunerile pentru candidaţii la ocuparea posturilor. Raportorii acestor propuneri, profesorii Gheorghe Ţiţeica, Ludovic Mrazec şi Alexandru Borza, cuprinse în *„Raport sumar în chestia catedrelor, institutelor şi laboratoarelor ce sunt a se înfiinţa la Facultatea de ştiinţe a Universităţii din Cluj"* (xxx, Arhivele Naţionale ale României, Fond Ministerul Instrucţiunii Publice, D. 276/1919, f. 135-137, Bucureşti), au dovedit o viziune revoluţionară în raport cu universităţile din Iaşi şi din Bucureşti, propunând, printre altele, includerea învăţământului geografic la această facultate ca o secţie de sine stătătoare, cu două catedre şi un institiut de geografie. La Universitatea din Bucureşti, Geografia era cuprinsă în cadrul Facultăţii de Filosofie şi Litere, iar la Universitatea din Iaşi, în cadrul Facultăţii de Ştiinţe, însă sub o altă organigramă. Trebuie remarcată aici sublinierea lui Stelian Neagoe (1980, *op. cit.*, vol. I, p. 117) care menţionează că alcătuirea internă a Universităţii clujene, ca şi a celei din Cernăuţi, urma *„tipul german"* al organizării universitare, în timp ce al celor de la Iaşi şi Bucureşti din Vechiul Regat, erau alcătuite după tipul francez.

Dacă iniţial, în raport se propuneau trei secţii în componenţa Facultăţii de Ştiinţe, respectiv matematică, ştiinţe fizico-chimice şi ştiinţe naturale, ulterior, în final, Geografia a fost acceptată ca secţie de sine stătătoare. Trebuie remarcat aici, aşa cum subliniază Stelian Neagoe (1980, *op. cit.*, vol. I, pp. 78-79), că propunerile pentru organizarea şi încadrarea Facultăţii de Ştiinţe a Universităţii din Cluj aveau în vedere *„cu deosebire de trebuinţele Transilvaniei ca viitor centru al industriei româneşti, precum şi de ultimele achiziţii ale ştiinţei"*, punându-se *„greutate deosebită pe secţia fizico-chimică"*, pentru ca tineretul universitar să fie atras *„spre o ramură ştiinţifică plină de viitor şi atât de puţin dezvoltată în România"*.

Vizionari, membrii comisiei ştiinţifice vedeau în dezvoltarea ulterioară a acestei facultăţi adăugarea de noi şi noi secţii pentru medicină veterinară, agronomie, farmacie, metalurgie, dându-i o perspectivă luminoasă, aplicativă şi practică totodată, pusă în slujba valorificării potenţialului economic latent al Transilvaniei, spre deosebire de trecut, când, secţia ştiinţifică a Universităţii clujene maghiare *„avea menirea mai mult de a maghiariza"* (*idem*). În special preocuparea pentru înfiinţarea unei şcoli superioare de mine şi metalurgie a fost ardentă, având în vedere *„întreaga dezvoltare a industriei noastre viitoare şi pentru buna întrebuinţare a bogăţiilor extraordinare ale subsolului frumoasei noastre ţări"* (*ibidem*, pp. 81-82). Tocmai în acest scop, al investigării ştiinţifice a resurselor naturale, Catedra de Geologie s-a divizat, rezultând încă o catedră, de mineralogie şi petrografie. Se preconiza chiar ca, ulterior, să se înfiinţeze o *„Facultate de ştiinţe aplicate, care va cuprinde: fizica, chimia, tehnologia, minele, oenologia, silvicultura, pomicultura, apicultura, sericicultura, ştiinţele veterinare, ştiinţele farmaceutice"*! (*ibidem*, p. 172).

Întrerupem firul naraţiunii în acest punct pentru a prezenta cititorilor de vocaţie o serie de exemple concrete ale materializării ideilor privitoare la dezvoltarea Facultăţii de Ştiinţe aplicate, pentru care au fost create, după cum se va vedea mai jos, un institut şi un campus universitar, demonstrând astfel că aceste propuneri nu au fost doar vorbe în vânt, ci ele s-au materializat pe parcursul timpului, atât cât au permis vremurile, precum şi o serie de instituţii emblematice pentru *„cetatea"* universitară clujeană, exemple de bune practici ale unei administraţii care a slujit ideile enunţate la inaugurarea Universităţii româneşti, asumate ca *„datorie"* a vremii lor!

Prin urmare, în 1937, Dimitrie Gusti făcea următoarea menţionare cu ocazia prezentării Fundaţiilor Culturale Regale (*op. cit.*, pp. 28-29, 48-49): *„Nous devons la quatrième Fondation à notre Roi actuel, Carol II. C'est la première Fondation créée par lui depuis son avènement* – este vorba de Institutul de Cercetări ştiinţifice «Regele Carol II» din Cluj căruia, ulterior i-a fost adăugat Observatorul de astronomie de la Dubăsani [azi Dubăsarii Vechi) din Basarabia. – *Elle date de 1931 et nous prouve que son Fondateur ne poursuivait pas seulement l'établissement d'institutions occasionnelles, mais bien une organisation culturelle rationelle. La nouvelle Fondation a son siège à Cluj, capitale de la Transylvanie. Ce choix a été dicté par la pieté filiale envers la mémoire du défunt souverain* [Regele Ferdinand I, s.n.] *qui avait donné son nom à l'Université de Cluj et avait assisté, dix ans plus tôt, à son inauguration; ce fut aussi un acte de foi et de fierté nationale"* (*op. cit.*, pp. 28-29).

Fig. 1. Înaltul Patronaj al Fundaţiilor Culturale Regale: Regele Carol al II-lea şi savantul Dimitrie Gusti, unul dintre cei mai apropiaţi colaboratori**.** *Sursa:* Dimitrie Gusti, 1937, *op. cit.*, p. 21.

Despre Institutul de Cercetări ştiinţifice „Regele Carol II" al Universităţii din Cluj, Dimitrie Gusti notează mai departe: *„A l'occasion du X^ème anniversaire de l'Université de Cluj (octobre 1930), S.M. le Roi Carol II fit connaître sa décision de fonder à Cluj un Institut de recherches scientifiques.*

Cette nouvelle Institution fut reconnue comme personne morale par la loi du 27 juillet 1931. Le but qu'elle se propose est de poursuivre la recherche scientifique, sans toutefois faire double emploi avec l'Université. Le domaine scientifique choisi

par l'Institut est celui de la phisique et de la chimie. Par conséquent, il y aura une section de phisique et une autre de chimie.

Au sein de ces deux sections, l'Institut se propose de développer notamment deux disciplines ayant un caractère actuel au point de vue de leur applications: l'aviation, relié à la section de phisique, et le gaz, en connexion avec la section de chimie. Le nombre des sections pourra être augmenté avec le temps, dans la mesure des possibilités. Pour le moment, l'Institut s'est attaché l'Observatoire d'Astronomie phisique de Dubăsani (Bessarabie), qui fonctionne déjà depuis bien des années sous la direction de M.N. Donici. Cluj sera le siège principal de l'Institut. Néanmois, on pourra fonder des filiales partout ailleurs en Roumanie, si les circonstances réclament une pareille extension de l'Institut. L'Observatoire d'Astronomie physique de Dubăsani entre dans le cadre de ces intentions. L'esprit dans lequel l'Institut se propose de développer son activité est un peu différent de celui de l'Université, de sorte que loin de faire double employ avec elle, l'Institut de Cluj répond à un besoin qui se fait sentir de plus en plus.

Les principes de travail qui le distingueront de l'Université sont les suivants:

1. Les recherches seront dirigées de façon à avoir une application immédiate dans la technique moderne de la défense nationale.

2. Les personnes admises à pursuivre leurs recherches dans les laboratoires de l'Institut devront prouver la valeur de leur travail antérieur et de leurs idées scientifiques. Une commission spéciale aura à se prononcer là-dessus, en toute connaissance de cause. Aucun titre académique ne sera exigé.

On le voit, l'Institut comble une lacune dans notre vie scientifique, en mettant l'accent sur la qualité du travail et sur son utilité au point de vue de ses applications. L'Institut sera dirigé par un directeur et chaque section aura un directeur particulier. Chaque laboratoire (physique générale, chimie générale, aérodynamique, chimie des gaz etc.) aura un certain nombre d'assistants qui seront occupés en permanence à poursuivre des recherches selon un plan determine. D'autres personnes pourront être admises à faire des recherches dans les laboratoires de l'Institut et ells auront la possibilité d'être logées à l'Institut. Les résultats des recherches seront publiés dans le «Bulletin» de l'Institut. L'Institut possède un terrain de plus de 6 Ha (6,2298 Ha) situé dans la partie la plus hygiénique de Cluj. Monsieur Duiliu Marcu a été chargé d'élaborer les plans de l'Institut" (*ibidem*, pp. 48-49).

Într-adevăr, celebrul arhitect care a proiectat, printre altele, superbul edificiu al Ministerului Regal al Afacerilor Străine, în prezent sediul guvernului României, precum şi pavilionul României din cadrul Expoziției Universale de la New York din 1939, i-a realizat planurile, integrându-l în cadrul campusului universitar Donat (vezi Vlad Sebastian Rusu, 2015, *op. cit.*, pp. 144-151, 188-192).

Ideea creării unui campus universitar în afara centrului oraşului, după model anglo-saxon, a fost un deziderat al conducerii Universităţii din Cluj încă din 1919. Pentru edificarea lui s-au avut în vedere două locaţii: versantul nordic al Dealului Feleac, în continuarea Clinicilor universitare şi a Grădinii Mikó, precum şi malurile stâng şi drept ale Someşului Mic, pe amplasamentul actualului cartier Grigorescu, cunoscut drept Campusul universitar Donat, locaţie care a fost acceptată în cele din urmă. Arhitectul Vlad Valentin Rusu, în excelenta sa monografie *Evoluţia urbanistică a Clujului interbelic* (2015, *op. cit*., p. 145, *apud* Radu Loneanu, 2011, *op. cit*., p. 33) notează: *„Suprafaţa de 200 ha cerută de universitate s-a distribuit pe acest teritoriu de-a lungul perioadei interbelice, rezultând cca 70 ha pentru loturi de case (aproximativ 700 parcele), cca 40 ha pentru parcuri şi arene sportive (dispuse pe ambele maluri ale Someşului), 30 ha pentru loturi experimentale agricole (în nordul Calvariei) şi cca 60 ha pentru străzi, alei, şi noi pieţe"*.

Dintre solicitările expuse de rectorul Universităţii în anul 1922, în perioada interbelică *„s-au realizat parcelările (ocupate în timp cu locuinţe unifamiliale) şi străzile aferente acestora, s-au trasat noile pieţe şi scuaruri (1924-1937), iar dintre noile dotări ce urmau să servească acestui campus s-au realizat doar Parcul Sportiv (1932-1937) şi Institutul de Chimie şi Fizică (1939-1960)*" (*ibidem*, pp. 144-145). Acest institut, *„proiectat în anul 1939 de cunoscutul arhitect şi profesor Duiliu Marcu* […], *este singurul institut realizat* […] *de Universitatea Regele Ferdinand I în perimetrul campusului universitar Donat"* (*ibidem*, p. 188).

Conceput *„sub forma unui ansamblu pavilionar conţinând un corp central, ce găzduia funcţiunile de reprezentare şi administrative, flancat de două braţe, dintre care unul adăpostea secţia de fizică, iar celălalt secţia de chimie, la care se adăugau o serie de depozite pentru materii prime şi locuinţe, ce închideau incinta ansamblului pe latura nordică*" (*ibidem*, pp. 188-189). Început târziu, în anul 1939, *„dintre cele trei pavilioane, doar cel central şi cel al secţiei de fizică au fost create conform planurilor şi sub supravegherea directă a arhitectului Duiliu Marcu (în colaborare cu reputatul fizician Horia Hulubei)"* (*ibidem*, p. 192), restul finalizându-se pe parcursul a două decenii, fiind inaugurat *„în jurul anului 1960"* (*ibidem*, p. 188).

Referindu-ne la câteva dintre instituţiile emblematice ale Clujului universitar, trebuie menţionat faptul că încă din primul an de funcţionare a Universităţii Daciei Superioare, s-a constatat că zestrea materială naţionalizată şi preluată de la Universitatea maghiară, nu mai corespundea cerinţelor noi ale ştiinţei moderne, determinând conducerea Universităţii, încă de la întâiul său rector, Sextil Puşcariu, să schiţeze un plan de dezvoltare pe zece ani *„care urmărea reconstrucţia întregului complex universitar clujean începând cu anul 1920"*, avea să menţioneze Vlad Sebastian Rusu (2015, *op. cit*., p. 52), arhitectului Cezar Popovici fiindu-i încredinţată realizarea Planului General de Dezvoltare Urbanistică dublat cu schiţarea noilor edificii şi aşezăminte universitare. În acest sens, *„la sfârşitul anului 1922 vor începe negocierile universităţii cu administraţia oraşului în vederea realizării unui viitor campus în vestul urbei"* – campusul Donat,

de care am vorbit mai sus în legătură cu Institutul de chimie şi de fizică, şi a unui Parc Sportiv, *„gândit ca un ansamblu unitar”* ce *„urma să mobileze albia râului Someş, în partea de vest a Clujului, către vechiul sat Mănăştur”* (*ibidem*, p. 53). Astfel, în cei douăzecişiunu de ani de administraţie românească a oraşului până la refugiul Universităţii la Sibiu şi la Timişoara (1940-1945), sub o conducere determinată a rectorilor săi, Cetatea Universitară a Clujului s-a dotat cu o serie de edificii şi parcuri care au devenit emblematice, precum parcurile Etnografic (1929-1937) şi Sportiv (1931-1934, 1936-1940), Grădina Botanică (1920-1932) cu Institutul şi Muzeul (1929-1935) său, Colegiul Academic (1934-1937), Palatul Clinicilor Universitare (1938-1939), Institutul de Chimie şi Fizică (început în 1939-finalizat în 1960, cu modificări), ca să amintim doar pe cele mai semnificative dintr-un număr mult mai mare!

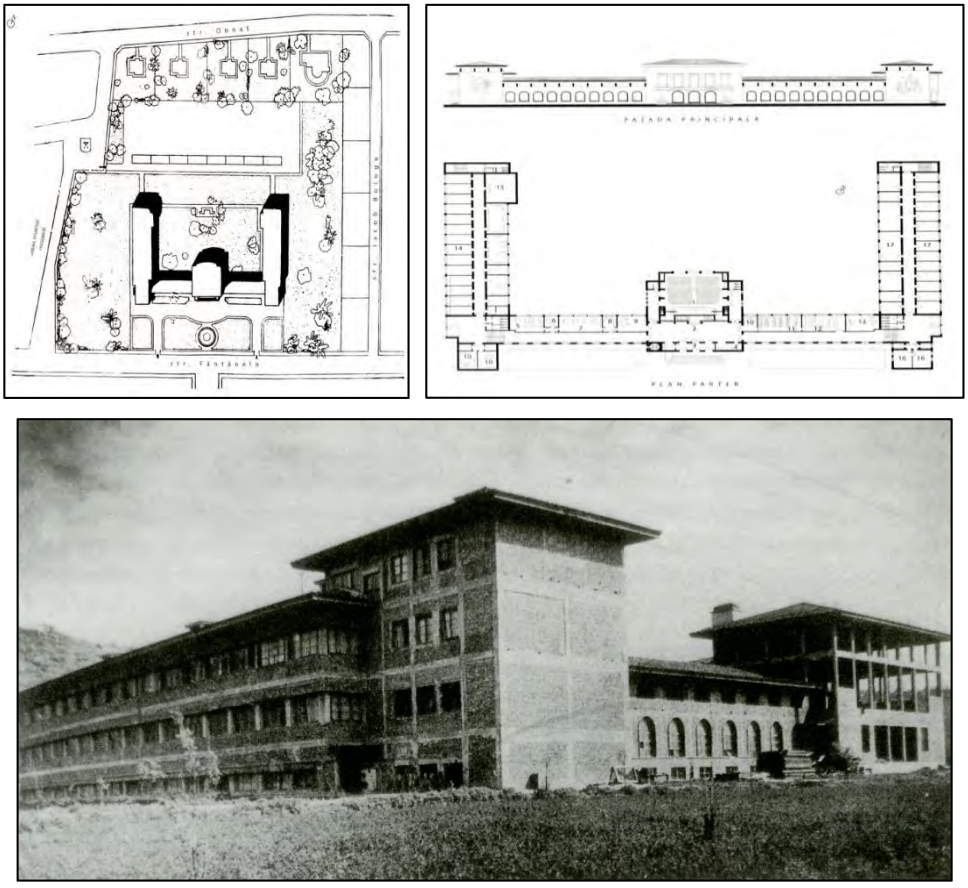

Fig. 2. Amplasamentul, planul şi edificarea Institutului de Chimie şi Fizică a Universităţii Regele Ferdinand I din Cluj**.**
Sursa: Vlad Sebastian Rusu, 2015, *op. cit.*, pp. 188, 189, 190.

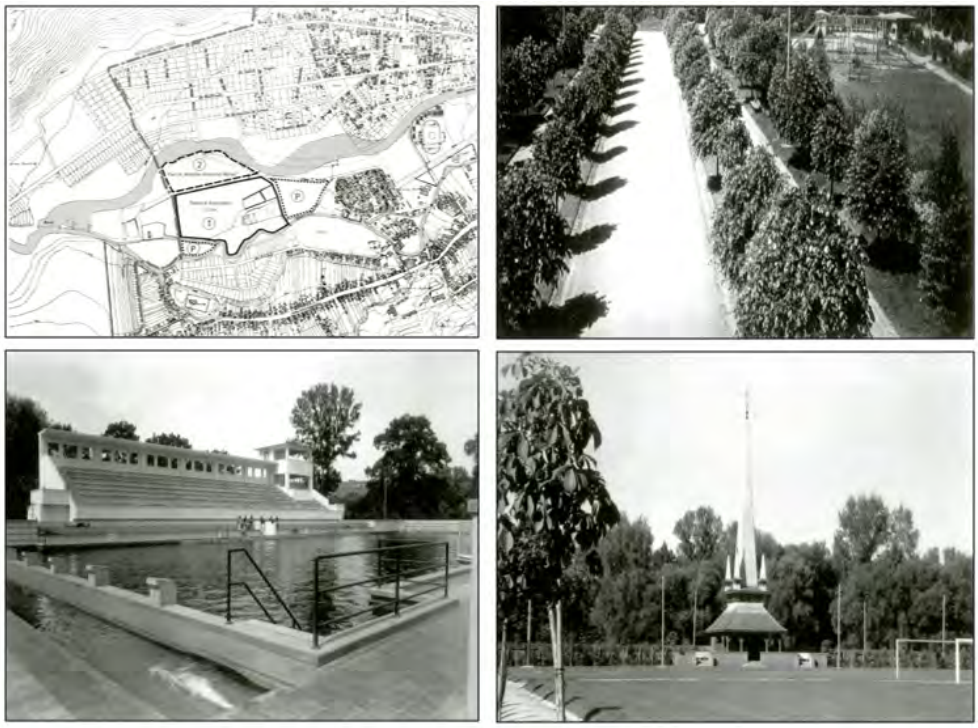

Fig. 3. Etapele realizării Parcului Sportiv şi imagini: aleea principală, bazinul descoperit pentru înot, bisericuţa de lemn.
Sursa: Vlad Sebastian Rusu, 2015, *op. cit.*, pp. 118, 121, 123, 124.

Dezvoltat în două etape, 1931-1934 şi 1936-1940, şi continuat apoi după război, **Parcul Sportiv** *„s-a născut simultan cu preocupările din mediul universitar legate de sănătatea publică şi nevoia introducerii educaţiei fizice ca disciplină în cadrul facultăţilor din noua universitate românească"* (*ibidem*, p. 117, *passim*). În acest sens, pe parcursul anilor 1921 şi 1925/1926, s-a încercat înfiinţarea unui Institut de Educaţie Fizică, idee abandonată însă din lipsa fondurilor. Sub rectoratul profesorului Iuliu Haţieganu, începând cu anul 1930, s-au iniţiat acţiuni concrete pentru înfiinţarea şi edificarea unui parc sportiv. Comisia creată ad-hoc a reuşit includerea educaţiei fizice ca disciplină obligatorie începând cu anul 1936.

Parcul Sportiv s-a edificat *„începând cu anul 1931* […] *pe locul numit «Grădina de Agricultură» în apropierea proiectului Campusului Universitar Donat"*, pe o suprafaţă de zece ha, respectiv pe terenul Asociaţiei ASTRA, obţinut prin schimb de la Institutul Agronomic în 1921. Apoi, prin alocaţii bugetare succesive, însă minime – datorită crizei financiare – dar a numeroase acţiuni de

voluntariat ai căror prestatori au fost studenţi, elevi, profesori şi militari, s-a reuşit edificarea arenei sportive cu pista de atletism, pista de sărituri, terenurile de baschet, volei, tenis şi de antrenamente, precum şi trasarea aleilor şi plantarea arboretului. A doua etapă a edificării Parcului Sportiv s-a desfăşurat pe o suprafaţă mărită cu încă zece ha, respectiv cu terenul numit *„Parcul Marele Voievod Mihai"*, care a fost primit *„pentru întregirea"* suprafeţei iniţiale a Parcului Sportiv, însumând în final o suprafaţă totală de 25 ha, pentru care s-a realizat pe parcursul anilor 1936-1937 un nou plan-proiect de amenajare. Proiectul a fost realizat de arhitectul Moll Elemér şi a fost materializat de inginerul Iuliu Kovács.

Grădina Botanică şi Muzeul Botanic a fost în atenţia conducerii încă din timpul procesului înfiinţării Universităţii Daciei Superioare, din cursul anului 1919: *„una dintre priorităţi o reprezenta amenajarea unei noi Grădini Botanice afiliate Catedrei şi Institutului de Botanică Sistematică din cadrul Facultăţii de Ştiinţe"* (Vlad Sebastian Rusu, 2015, *op. cit.*, p. 127). Vechea locaţie a Grădinii Botanice situate pe terenul Grădinii Mikó unde se aflau institutele de Zoologie şi de Chimie [în prezent sediul Facultăţii de Geografie, s.n.] din proximitatea estică a Clinicilor Universitare, a fost abandonată, optându-se pentru locaţia propusă anterior de profesorul Richter Aladár de la Universitatea Regală Maghiară Ferenc József. Terenul noii locaţii propuse, în suprafaţă de 11,2 ha, este situat pe versantul nordic al Dealului Feleac, pe o terasă a Someşului Mic, în bazinetul pârâului Ţiganilor.

Însărcinat cu realizarea planului noii Grădini Botanice, profesorul Alexandru Borza a demarat acţiunile de amenajare începând cu 1920, fiind secondat de Cornel Gürtler ca şef de culturi şi Gheorghe Filip, grădinar şef, pe baza unei scheme de organizare care ţinea cont de configuraţia terenului şi de expoziţia versanţilor. Edificarea noii Grădini Botanice s-a desfăşurat treptat, până la izbucnirea celui de-al Doilea Război Mondial, cuprinzând: mutarea plantaţiilor valoroase din vechea Grădină Mikó (1922-1923); plantarea arboretelui specific florei României; construirea unor sere de serviciu şi a reţelei de instalaţii hidrotehnice; amenajarea grupelor genetice: flora balcanică, a dunelor maritime, est-asiatică (1924-1926); amplasarea şi construirea serelor mari (începând din 1929, până în 1932). Edificiul **Muzeului Botanic** s-a construit în perioada 1929-1935, concomitent cu terasarea terenului din jur şi amenajarea rozariului; clădirea a fost proiectată de arhitectul I.I. Ivaşcu. Pe măsură ce amenajarea Grădinii Botanice progresa, ea a putut fi vizitată începând cu 25 iunie 1925, înregistrând un număr de vizitatori în 1926 de *„19000, ajungând la sfârşitul anilor '20 la 300000-350000 anual"*! (Vlad Sebastian Rusu, 2015, *op. cit.*, p. 131). Prin această măsură, taxând cu 5 lei pe fiecare vizitator, s-au *„rezolvat o parte dintre neajunsurile financiare"* (*idem*), permiţând dezvoltarea ei mai accelerată.

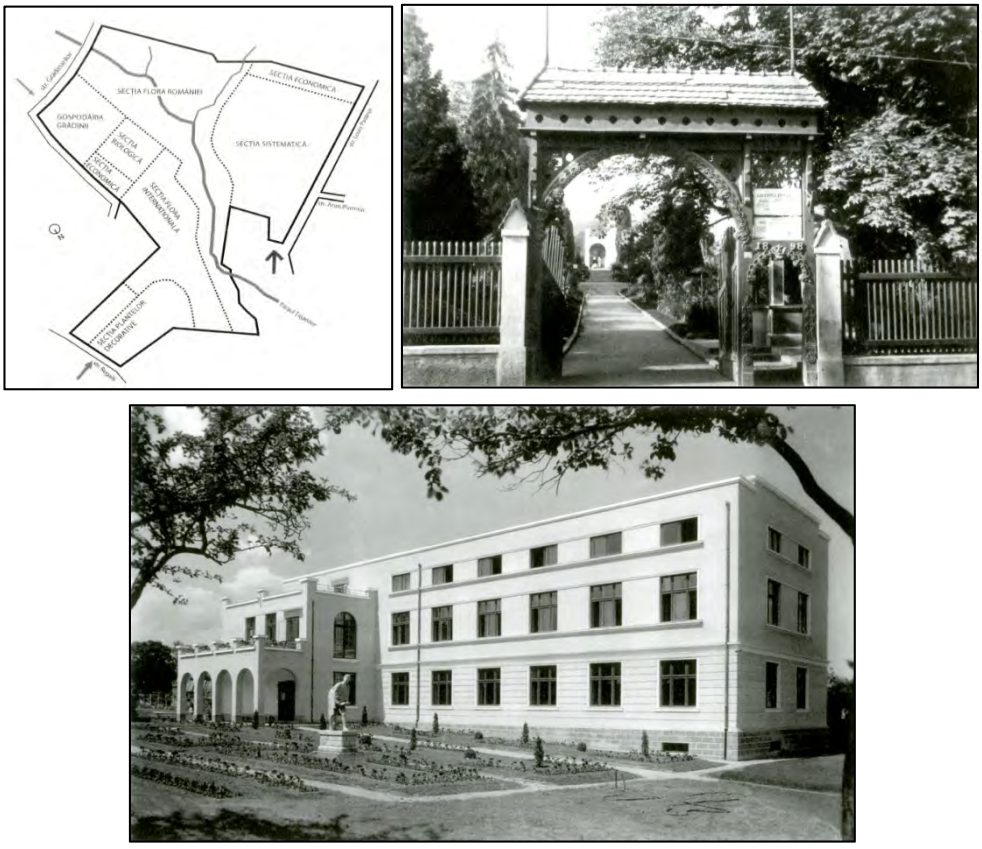

Fig. 4. Planul şi imagini din Grădina Botanică a Universităţii Regele Ferdinand I din Cluj: poarta intrării principale şi edificiul Muzeului Botanic.
Sursa: Vlad Sebastian Rusu, 2015, *op. cit.*, pp. 130, 131, 133.

Înfiinţarea unui **„Parc Naţional Etnografic"** în aer liber, precum şi a **Muzeului Etnografic** au reprezentat, de asemenea, o preocupare încă de la început a conducerii Universităţii clujene româneşti, iar materializarea acesteia *„a reprezentat prima realizare de acest gen la nivelul întregii ţări"* (Vlad Sebastian Rusu, 2015, *op. cit.*, pp. 137-141), având drept initiator şi susţinător pe Romulus Vuia, asistentul profesorului George Vâlsan. Ca preşedinte al Societăţii Etnografice Române din Cluj (1923-1927) şi al Secţiei geografice şi etnografice a ASTREI, George Vâlsan nu a pierdut din vedere latura etnografică a Anthropogeografiei, formând generaţii de studenţi cu această viziune; unul dintre discipolii săi cei mai valoroşi de la Cluj a fost Romulus Vuia, care, la rândul său i-a avut ca discipoli pe Teodor Onişor, Valer Butură, Lucia Apolzan, Tiberiu Morariu, de formaţie geografi, dar şi pe Ioan Maloş şi Gheorghe Pavelescu,

care au urmat Literele (Alexandru Păcurar, 2017, *op. cit*., pp. 62-64, *passim*). Peste ani, Valer Butură avea să scrie că Romulus Vuia, în calitatea sa de director al Muzeului şi al Parcului etnografic din Cluj (1923-1948), şi discipolii săi *„au făcut din capitala Transilvaniei cel mai activ centru de cercetări şi colecţionare a obiectelor în perioada interbelică din ţară"* (1972, *op. cit*., p. VII).

La iniţiativa Fundaţiei Culturale „Principele Carol", a directorului său Gheorghe D. Mugur, a fost înfiinţat la 4 mai 1922 Muzeul Etnografic al Ardealului din Cluj, ca urmare a avizării favorabile a comisiei create în acest scop, din care au făcut parte profesorii Emil Panaitescu, George Vâlsan şi Romulus Vuia. Om de litere, dublat de talent organizatoric, acţionând în chiar spiritul ideilor programatice ale Fundaţiei Regale pe care o slujea, publicistul Gheorghe D. Mugur (1878-1945), împreună cu membrii Comisiei în care au mai fost cooptaţi Sextil Puşcariu ca preşedinte, Alexandru Lapedatu şi George Oprescu (Tiberiu Morariu, Teodor Onişor, 1966, *op. cit*., pp. 299-300), au propus şi înfiinţarea unui muzeu în aer liber după modelul Muzeului Skansen de la Stockholm, pe lângă Muzeul Etnografic deja înfiinţat, cu scopul prezervării patrimoniului popular, a formelor sale autentice: edificii de locuire şi de cult, instalaţii tehnice, unelte şi obiecte de uz casnic, costume populare etc. Misiunea organizării Muzeului etnografic şi a înfiinţării unui Parc etnografic în aer liber i-a fost încredinţată lui Romulus Vuia, odată cu numirea sa la 1 ianuarie 1923 ca director al Muzeului etnografic al Ardealului. El a fost susţinut necondiţionat în demersul său de mentorul lui, profesorul Vâlsan care, la rândul său, în octombrie 1923, a fost ales preşedinte al Societăţii Etnografice Române.

În calitate de director al primului nostru Muzeu etnografic, Romulus Vuia i-a îmbogăţit colecţiile prin achiziţii, începând cu aceea a lui Andrei Orosz, continuată apoi cu adevărate campanii de achiziţii întreprinse în diferite zone ale Transilvaniei: *„Începutul colecţiilor s-a făcut prin cumpărarea a două colecţii particulare: colecţia etnografului ardelean Andrei Orosz (5500 bucăţi)* […] *material ardelean în general, şi colecţia Leitner (300 bucăţi)* […] *mai cu seamă ceramică săsească"*, avea să scrie Luise Treiber-Notolicza, o exegetă în domeniu (1931, *op. cit*., p. 247). Totodată, el a organizat şi catalogat artefactele populare după modelul celor din Apus, după ce a efectuat călătorii de documentare la muzeele etnografice de la Praga, Leipzig, Berlin, Stockholm, Copenhaga, Hamburg, Stuttgart, München, Basel şi Viena, în cursul anului 1924. Muzeul a funcţionat provizoriu în clădirea fostului Muzeu de Arte şi Meserii de pe stada George Bariţiu.

În anul 1925, directorul a reuşit să obţină pentru muzeu un local propriu în Piaţa Mihai Viteazul, în clădirea fostului Muzeu de Relicve, pe care l-a amenajat şi inaugurat la 17 iunie 1928 printr-o expoziţie permanentă. La inaugurare au participat, printre mulţi alţii, Emil Racoviţă, preşedintele Academiei Române, Nicolae Iorga, Ion Bianu, Gheorghe Bogdan-Duică, rectorul Universităţii Regele Ferdinand I, membrii Comisiei Muzeului etnografic, Ion Agârbiceanu, ş.a. Invitat de suflet al lui Romulus Vuia la inaugurarea muzeului a fost şi Gheorghe T.

Kirileanu care, la 4 iunie 1928 îi scrie: *„Am primit binevoitoarea d[umi]tale poftire la inaugurarea Muzeului etnografic al Ardealului din Cluj, pentru întemeierea căruia ştiu câtă muncă şi pricepere ai desfăşurat*", relatându-i în continuare impresia execrabilă pe care i-a lăsat-o edilul Clujului de la acel moment: „*Mai deunăzi am avut o explicaţie penibilă cu d[omnu]l primar al Clujului, T. Mihali, în faţa d[omnu]lui ministru al Casei Regale. D[omnu]l Mihali venise să se plângă, ca bun patriot român şi om de înaltă cultură, de sărăcia oraşului Cluj şi de hrăpirea care i s-a făcut (în valoare de 20000000), luându-i-se pentru muzeul d[umi]tale una din casele cele mai frumoase…"* (Mircea Handoca, editor, 1977, *op. cit.*, p. 307). Bibliotecarul Palatului Regal a primit şi o invitaţie oficială din partea lui Gheorghe D. Mugur, după uzanţele protocolare de atunci (*ibidem*, p. 567):

Fundaţia culturală
Regele Mihai I *14 iunie 1928*

Domnule Gh[eorghe] Kirileanu,

Duminică 17 iunie inaugurăm la Cluj Muzeul etnografic în care, timp de şase ani, am adunat tot ce am găsit caracteristic sau de preţ pentru sufletul din trecut şi de azi al Ardealului.

El cuprinde o parte numai din multiplele comori care alcătuiesc avutul specific al locului peste care vremea ameninţa să se surpe nepăsătoare.

Inaugurarea unui astfel de aşezământ e o sărbătoare care depăşeşte simplele cadre ale unei festivităţi locale într-o unanimă participare românească.

Gândit ca o arhivă a sufletului autentic românesc, acest muzeu e sortit să închege într-o mare imagine, pentru ochi şi pentru suflet, zestrea milenară etnografică ardeleană.

Fundaţia culturală "Regele Mihai I" râvnind să dea zilei inaugurale a Muzeului etnografic din Cluj un caracter de festivitate a culturii, vă roagă călduros să binevoiţi a lua parte.

Gh. D. Mugur

Ideea înfiinţării unui Parc etnografic nu l-a părăsit pe Romulis Vuia, care ia iniţiativa, afirmând că în anul 1928, *„sărbătorirea celor zece ani de la Unirea Ardealului cu Patria Mamă, nu s-ar putea face mai demn decât prin inaugurarea acestui Parc naţional, în care să se arate în mic icoana întregului Ardeal"*, făcând demersuri pentru dobândirea unui teren pe versantul Nordic al Dealului Hoia. Astfel, la 12 aprilie 1929, Romulus Vuia a obţinut pentru viitorul *„Parc naţional"* etnografic un teren cu o suprafaţă de 75 ha pe Dealul Hoia, teren *„parcă predestinat de la natură pentru acest scop"*, unde *„vizitatorul, plimbându-se prin acest parc,*

va putea vedea icoana fidelă a vieții și civilizației poporului nostru". Referindu-se la acest teren, Teodor Onișor scria: *„El* (terenul, s.n.) *este relativ aproape de oraș, cu un relief variat, care corespunde cu cele trei trepte de relief ale Ardealului: sus, creasta cu stejăriș și făget, unde se va reda viața din zona de munte și mai jos, povârnișuri domoale, potrivite pentru redarea vieții din zona colinelor și de pădure; iar partea de teren dinspre calea ferată* (terenul avea vederea spre calea ferată Cluj-Oradea, s.n.) *parcă este anume făcută pentru reprezentarea formelor de viață din zonele de câmpie. În acest fel, parcul va fi împărțit după regiunile geografice principale ale țării și fiecare clădire va fi așezată în cadrul său natural"* (Tiberiu Morariu, Teodor Onișor, 1966, *op. cit.*, p. 301).

Gheorghe T. Kirileanu, prieten intim al lui George Vâlsan, a cunoscut și a corespondat și cu Romulus Vuia, pentru care intervine la ministrul finanțelor Virgil Madgearu la 15 decembrie 1929, pentru finanțarea parcului său etnografic: *„…Iartă-mă apoi că vin și eu să te împovărez cu o rugăminte bugetară, tocmai când trebuie să duci o luptă așa de aprigă pentru însănătoșirea vieții noastre economice. Dar e vorba de singurul nostru muzeu etnografic, bine organizat de un om priceput și plin de râvnă ca Romul Vuia în orașul Cluj, unde avem cel mai mare interes să nu dăm înapoi cu lupta națională pe tărâm cultural. Aud că acest muzeu apreciat și de învățații străini a fost șters din buget"* (Mircea Handoca, editor, 1977, *op. cit.*, p. 158).

Convins că parcul va potența funcția de capitală a Transilvanei a orașului de pe Someșul Mic, că va fi un loc de recreere pentru locuitori, având și valențe educative în păstrarea și promovarea identității naționale, precum și de pătrunderea în conștiința publicului național și internațional a elementelor noastre identitare, Romulus Vuia s-a străduit, împreună cu echipa sa entuziastă, să doteze parcul cu artefacte reprezentative, vechi și originale, de pe cuprinsul Transilvaniei, Banatului și *„părților românești din Ungaria"*, sintagmă care cuprinde Maramureșul, Sătmarul și Crișana. Treptat, prin străduințele lui și ale colaboratorilor Tiberiu Morariu, Teodor Onișor și Ioan Maloș au fost achiziționate din zona Munților Apuseni o casă țărănească din Vidra și o troiță din Lupșa, o șură ungurească din Stana (Huedin), o stână din Poiana Sibiului, precum și o gospodărie țărănească completă din Telciu (Năsăud). Referitor la acest aspect, Vlad Sebastian Rusu (2015, *op. cit.*, p. 139) scrie: *„Planul tematic al parcului a fost întocmit de Romulus Vuia în 1929*", cuprinzând: *„clădirea Muzeului Etnografic, locuința directorului, locuința grădinarului, restaurantul Gaudeamus, arena pentru serbări populare, șasesprezece gospodării țărănești reprezentative pentru zonele Hațeg, Munții Apuseni (Vidra), Bihor, Banat, Munții Apuseni (Arieșeni), Cluj, Bistrița (români și sași), Câmpia Ardealului, Mărginimea Sibiului, Secuime, Maramureș, Alba, Țara Bârsei, Dâmbovița și Roman, șapte biserici de lemn, o clopotniță, cinci cruci și troițe, o stână, o lăptărie, două mori"*.

Concomitent cu eforturile de dotare a Parcului etnografic din Hoia cu artefacte specifice, ca urmare a frecventelor campanii de cercetare şi de achiziţii de pe teren, profesorul Vuia s-a preocupat constant de recunoaşterea instituţională a muzeului şi a parcului din aer liber. Cu timpul, cel de-al doilea sediu al Muzeului etnografic a devenit neîncăpător, spaţiul său expozabil de numai 278 m^2 adăpostind circa 10000 artefacte. Ca urmare a lobby-ului său, în martie 1932 a fost adoptată *„Legea Muzeului etnografic şi a parcului naţional din Cluj"*, muzeului fiindu-i dată o nouă locaţie, respectiv clădirea „Cazinou" din parcul oraşului, unde a funcţionat în perioada 1937-1957 (cu excepţia anilor refugiului la Sibiu, 1940-1945), după care a funcţionat până în prezent în clădirea „Reduta".

Iată, aşa a înţeles Romulus Vuia să-şi slujească ţara, pasionat etnograf care a contribuit de o manieră determinantă la apariţia şi dezvoltarea Muzeului şi a Parcului etnografic din Cluj. Eforturile lui şi ale echipei pe care a format-o în jurul său, cristalizată într-o veritabilă şcoală de Etnografie şi Folclor la Cluj, au convins şi pe alţi intelectuali să se aplece mai cu sârg asupra elementelor identitare româneşti. Exemplul elitelor de la Universitatea din Cluj care au militat pentru înfiinţarea şi înzestrarea muzeului şi a parcului etnografic în aer liber a avut ecouri în ţară, fiind preluat acolo unde conştiinţa de neam a fost mai arzătoare; două exemple grăitoare doar:

Refugiul Universităţii Regele Ferdinand I la Sibiu şi Timişoara, cu facultăţile, institutele, seminariile şi muzeele sale, inclusiv al celui etnografic, s-a constituit ca piatră de temelie pentru edificarea Parcului etnografic din oraşul de pe Cibin, într-o locaţie extrem de favorabilă, de generoasă, respectiv Dumbrava Sibiului, devenit în prezent cel mai mare parc de acest gen din ţară! Ea se leagă de refugiul survenit imadiat după 30 august 1940, data Dictatului de la Viena, când Muzeul etnografic clujean s-a refugiat împreună cu cea mai mare parte a Universităţii la Sibiu, salvându-se întregul patrimoniu mobil aflat în gestiune, lăsând însă în urmă la Cluj Parcul etnografic cu bunurile sale imobile!

Celălalt exemplu pe care îl prezint, este *„Apelul"* Asociaţiunii Generale a Învăţătorilor din România, secţia Botoşani, din 21 iulie 1943, adresat învăţătorimii botoşănene, pentru înfiinţarea unui muzeu etnografic în acel colţ de ţară, semnalat de Ionel Bejenaru (2013, *op. cit*.). Fundamentarea motivelor acelor învăţători este fără cusur, fiind un excepţional exemplu de conştiinţă de neam, spirit civic, probitate profesională. Logica demersului reprezentanţilor învăţătorimii botoşănene este ireproşabilă prin acuitatea sintetică: *„Mai mult decât la oricare popor – şi sub toate raporturile – satul românesc constituie temelia nu numai a neamului, dar şi a statului nostru naţional. Adevărat rezervoriu de vitalitate a neamului, satul românesc este în acelaşi timp şi depozitarul unui real tezaur de valori, spiritual şi material, reprezentate prin folclor şi etnografie şi corespunzând naţiunilor de cultură şi civilizaţie, ale căror obârşii coboară adânc în trecut, până la străvechea epocă iliro-tracică. Tezaurul acesta în care zac*

învalma – bătrânele noastre tradiţii şi datini, arta noastră populară, cântecele şi jocurile, uneltele noastre vechi, cu case, moşii şi părinţi, şi-au însăilat veştmintele, şi-au durat casele şi şi-au rostuit gospodăriile, constituite – după expresia unuia dintre marii noştri scriitori-poeţi – cenuşa fierbinte din vechea vatră de cultură băştinaşă, ce ne-a încălzit şi ne-a luminat în toată noaptea zbuciumatei noastre istorii naţionale. Prin el se lămureşte sufletul neamului nostru; el ne caracterizează casa şi geniul, stând mărturie pentru obârşia noastră măreaţă şi străveche. De aceea, unul din marile comandamente naţionale pentru orice intelectual român este acela de a căuta şi afla toate comorile risipite ale acestui scump tezaur şi a le aduna cu grijă şi cumpătare, adâncindu-le înţelesul şi lăsându-le să strălucească în lumina marilor învăţături". Această pledoarie se încheie cu vibrantul îndemn, de o tulburătoare perenitate: „*Iubite coleg, adună cu hărnicie de albină şi azi şi mâine, adună mereu* […] *toate aceste lucruri pline de sufletul trecutului care azi zac risipite şi mute în bezna satelor noastre şi care mâine, orânduite într-un muzeu etnografic, vor căpăta grai şi vor mărturisi tuturor că învăţătorimea botoşeneană stă, ca întotdeauna, cu o vrednică destoinicie, în slujba marilor comandamente naţionale"*.

Elitele româneşti au fost dintotdeauna conştiente de importanţa clasei ţărăneşti, fiind preocupate de emanciparea acesteia. Numai instituţia monarhică, pentru ridicarea ţărănimii, a demarat înfăptuirea celei mai ample reforme agrare din Europa de după Primul Război Mondial, instituţiile abilitate ale statului împroprietărind-o cu peste 6 milioane ha în baza Legii Reformei Agrare din 1921, şi cu 1,468 milioane ha, după cel de-al Doilea Război Mondial, în baza noii Reforme Agrare din 1945!

În acelaşi registru de idei, dar cu un alt exemplu semnificativ al înzestrării Cetăţii Universitare a Clujului cu instituţii emblematice, prezentăm **Colegiul Academic „Regele Carol al II-lea"**, situat în perimetrul „0" al oraşului vechi, al cărui edificiu *„reprezintă una dintre cele mai reuşite inserţii urbanistice şi arhitecturale interbelice clujene şi totodată cea mai mare realizare arhitecturală a Universităţii Regele Ferdinand I, prin directa implicare a rectorului Florian Ştefănescu-Goangă"* (Vlad Sebastian Rusu, 2015, *op. cit*., p. 181). Arhitectul Vlad Sebastian Rusu subliniază că ideea unui colegiu academic s-a născut din voinţa conducerii Universităţii care dorea *„crearea unei «cetăţi universitare» care să cuprindă un complex de clădiri noi"* (*ibidem*, p. 182), şi astfel primul proiect al acestuia a fost făcut în 1926 de arhitectul Grigore Balş, însă bugetul insuficient alocat nu a permis materializarea lui. Ulterior, *„ideea Colegiului Academic a fost reluată în 1934 de rectorul Florian Ştefănescu-Goangă"*, care a formulat cerinţele pentru realizarea lui. În acest nou context, arhitectul George Cristinel a realizat un proiect reuşind *„o integrare armonioasă a noii clădiri în sit, prin crearea unui permanent dialog cu vecinătăţile amplasamentului"* (*ibidem*, p. 184).

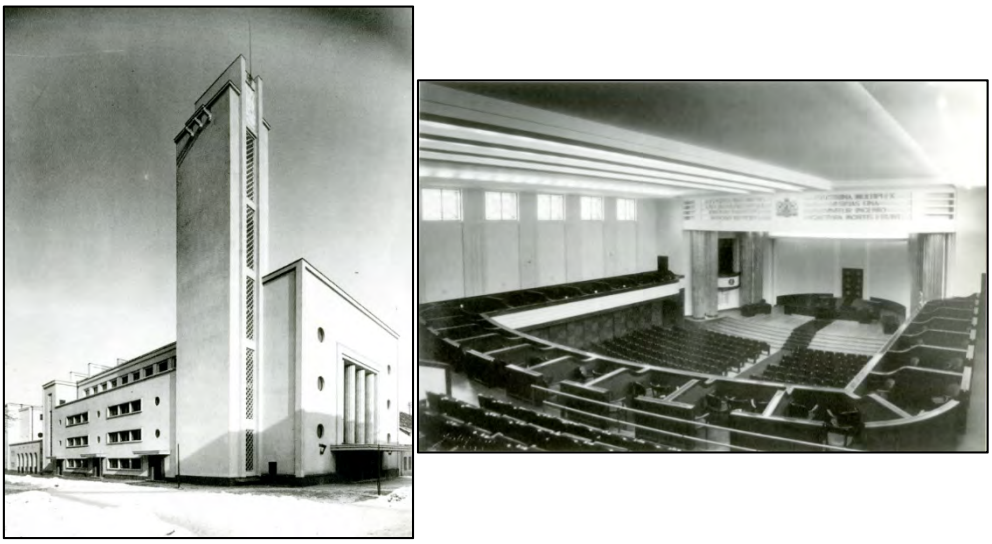

Fig. 5. Edificiul Colegiului Academic al Universităţii Regele Ferdinand I din Cluj: imagine de ansamblu şi din sala mare de spectacole.
Sursa: Vlad Sebastian Rusu, 2015, *op. cit.*, pp. 183, 184).

Edificiul, ale cărui costuri s-au ridicat la suma de 30 000 000 lei a fost construit pe amplasamentul vechiului Teatru Naţional Maghiar, câştigându-şi *„calitatea de reper urban la nivelul oraşului în primul rând datorită limbajului arhitecturii moderniste, care aducea o infuzie puternică de noutate în arhitectura zonei, iar în al doilea rând datorită calităţilor sale intrinsece, ele relevând talentul arhitectului şi sensibilitatea lui faţă de contextul istoric"* (*ibidem*, p. 181). Clădirea a fost finalizată în noiembrie 1936, fiind inaugurată în vara anului următor.

Funcţional, edificiul răspundea *„cu eleganţă celor trei tipuri de activităţi cerute"*, azi le-am spune caietul de sarcini, astfel: *„În corpul principal s-au organizat funcţiunile cu caracter oficial, dedicate manifestărilor culturale şi ştiinţifice, precum şi spaţiile destinate corpului profesoral"*, respectiv: sala mare de spectacole cu 1100 locuri, cu un foaier spaţios la parter; garderobe, salon de primire a oaspeţilor, bufet, fumoar, case de bilete, loja regală, loja Senatului universitar, saloane pentru conferenţiari, sală de banchete cu deschidere spre grădina interioară (în prezent ocupată de restaurantul Piramida); spaţii pentru profesori, sală de lectură, sală de primire, sală de billiard, bufet (etajul I); camera de cazare, salon de primire şi lectură (etajul II). Corpul de clădire opus, dinspre strada Ion C. Brătianu, cuprindea spaţiile destinate studenţilor şi organizaţiilor studenţeşti, cu acces din curtea interioară – patio-ul – care lega cele două corpuri principale ale edificiului (cel dinspre strada Mihail Kogălniceanu şi cel dinspre strada Ion C. Brătianu). În cadrul său *„s-a amenajat o cantină studenţească pentru serii de câte*

200 studenți, o sală de spectacole de 320-350 locuri (etajul I) pentru diferite manifestări studențești, conferințe, expoziții, cu un bar și bufet; birouri, bibliotecă, sală de consiliu pentru fiecare organizație studențească (etajul II)" (*ibidem*, p. 186). În partea de est a edificiului s-a propus *„o curte interioară* […] *sub forma unei grădini amenajate cu pergole şi terase pentru agrementul profesorilor şi studenților"* (*idem*), inaugurată într-un cadru festiv la 15 iunie 1937 în prezența Regelui Carol al II-lea. Azi grădina a dispărut, pe locul ei construindu-se un restaurant. Într-un mod nefericit, funcţia ei de agora, de relaționare profesori-studenți, a fost anihilată prin această intervenție nefericită. Materializarea concepției de agora, al dialogului profesori-studenți, a celor care transmit cunoștințe, deprinderi şi un un mod de viață, și a celor care le primesc, le duc mai departe şi le înnoiesc, în ultimă instanță dialogul între generații, a fost excepțional rezolvată de arhitectul George Cristinel.

Fig. 6. Ioan A. Vătășescu, secretar general al Universității Regele Ferdinand I din Cluj (primul din stânga, rândul de sus), în portretul de grup al membrilor Senatului Universității în robe de ceremonie, în vara anului 1937.
Sursa: Muzeul de Istorie a Universității „Babeș-Bolyai".

Trebuie să mărturisesc aici că am cunoscut această clădire în vremea studenției mele (1980-1984); eleganța ei mi-a atras atenția, dar, vai!, ce activități politruce găzduia între zidurile ei. Nicicum nu se împăca stilul ei nobil care respira prin toți porii ei, și vorbele goale ale limbii de lemn care propovăduia binefacerile comunismului al cărui faliment se putea constata la tot pasul în orașul asaltat de urbanismul de tip triumfalist, impersonal… O comparam cu un

albatros ale cărui aripi puternice fuseseră frânte, gândindu-mă la celebrul poem al lui Charles Baudelaire pe care îl analizasem în liceu cu profesoara noastră de franceză, domnişoara Luminiţa Morărescu. Pentru mine simboliza elanul universitar românesc interbelic frânt de ideologia sinistră proletcultistă şi internaţionalistă adusă de tancurile sovietice şi impusă cu forţa, o situaţie căreia i se potriveau perfect versurile poetului persan Forugh Farrokhzad (Firdoussi, europenizat în grafia franceză): *„Aminteşte-ţi de zbor,/Pasărea a murit"*!

Reluăm firul excursului istoric al Facultăţii de Ştiinţe al Universităţii din Cluj cu hotărârile care au fost luate în urma raportului Secţiunii ştiinţifice a Comisiunii universitare, readucând în atenţie principiile după care s-au călăuzit membrii ei, menţionate expres în documente, care au stat la baza croirii structurii acesteia, şi anume (xxx, Arhivele Naţionale ale României, Fond Ministerul Instrucţiunii Publice, D. 276/1919, f. 135-137, Bucureşti):

-provinciile româneşti, prin natura lor sunt destinate să contribuie la dezvoltarea industrială a ţării;

-nevoile unei culturi ştiinţifice generale bine armonizate, ţinând seama de progresul şi dezvoltarea ce a luat-o cultura ştiinţifică;

-direcţia recentă ce a luat-o ştiinţa, urmare a nevoilor generale de ordin economic şi social după schimbarea echilibrului general produs de război;

-luarea în considerare a energiilor naturale de care dispun provinciile geografico-istorice reunite cu Ţara-Mamă şi nevoia lor de a le valorifica cât mai curând;

-legarea facultăţii, a studiilor în general, în contact cu aceste cerinţe.

După acceptarea înfiinţării Secţiei de Geografie ca parte a Facultăţii de Ştiinţe, s-a hotărât ca aceasta să aibă în componenţă două catedre: Catedra de Geografie generală şi umană şi Catedra de Geografie descriptivă şi a României, precum şi un institut – Institutul de Geografie al Universităţii din Cluj, care reunea pe toţi membrii catedrelor, având un rol administrativ şi de cercetare ştiinţifică. Drept dovadă, după înfiinţarea lui, toate numirile, încadrările, detaşările, demisiile etc. se făceau în Institutul de Geografie.

Cu privire la încadrarea acestor catedre, Sextil Puşcariu a propus pe profesorul George Vâlsan de la Iaşi pentru Catedra de Geografie generală şi umană şi ca director al institutului, urmând ca ulterior, de comun acord cu acesta, să se pronunţe în privinţa lui Vasile Meruţiu pentru cea de a doua catedră, menţionând în raportul său: *„Să nădăjduim că dl. Vâlsan, care după părerea pe care mi-a exprimat-o personal Emmanuel de Martonne, marele geograf de la Paris şi profund cunoscător al geografiei României, este singurul nostru geograf de seamă, se va restabili din boala grea atât de mult încât să poată veni la Cluj"* (xxx, Arhivele Naţionale ale României, Fond Ministerul Instrucţiunii Publice, D. 276/1919, f. 66-67, Bucureşti). Astfel, ca o concluzie de etapă, la Universitatea Daciei Superioare, Secţia de Geografie cu Institutul de Geografie, a fiinţat la

Facultatea de Ştiinţe cu două catedre: Catedra de Geografie generală şi umană având ca titular pe profesorul George Vâlsan, şi Catedra de Geografie descriptivă şi a României, cu titular profesorul agregat Vasile Meruţiu. Institutul de Geografie al Universităţii din Cluj a luat naştere odată cu Secţia de Geografie, a cărui organizare, regulament şi încadrare iniţială i s-a încredinţat lui George Vâlsan, fiind conceput să cuprindă toate ramurile Geografiei.

Învăţământul geografic la Universitatea din Cluj s-a făcut pe baze noi, Geografia încadrându-se de la început Facultăţii de Ştiinţe ca secţie de sine stătătoare, nu ca disciplină a Ştiinţelor naturale, pe trunchiul acestora, şi nici al Istoriei, pe trunchiul Ştiinţelor sociale, ale căror anexă fusese mult timp, şi cum era încadrată şi funcţiona la universităţile din Iaşi şi din Bucureşti. În această logică, studenţii care urmau Geografia la Universitatea din Cluj aprofundau mai întâi problematica ei şi numai după aceea a ştiinţelor de specialitate secundară: Ştiinţele naturale, Istoria sau Ştiinţele exacte, în direcţia înclinării fiecăruia (Alexandru Păcurar, 2019, *op. cit.*, p. 44 *passim*).

Organizarea şi regulamentul de funcţionare a Facultăţii de Ştiinţe de la Cluj au apărut în Monitorul Oficial nr. 211 din 24 decembrie 1920. Cele două catedre mai sus menţionate din cadrul Secţiei de Geografie aveau la început următoarea schemă de funcţionare: Catedra de Geografie generală şi umană: câte un şef de lucrări, asistent şi preparator; la Catedra de Geografie descriptivă şi a României: câte un şef de lucrări, asistent şi desenator-cartograf. Ulterior, Institutului de Geografie i-a fost bugetat şi un post de secretar-bibliotecar. Prin Legea 383 din 1942, pe lângă cele două catedre a căror titulatură s-a schimbat în Catedra de Introducere în Geografie şi Geografie umană şi Catedra de Geografie fizică şi a României, s-a înfiinţat Conferinţa de Geografie regională (care a fost embrionul Catedrei de Geografie regională, înfiinţată mai târziu) al cărei întâi titular a fost Ştefan Manciulea. În cadrul Institutului de Geografie al Universităţii din Cluj fiinţa un laborator de Geografie fizică şi Geografia României.

În decursul timpului, organigrama personalului Instututului de Geografie al Universităţii din Cluj (IGUC) a evoluat în funcţie de buget, de asemenea şi încadrarea cu personal a cunoscut o fluctuaţie relativ ridicată. Din datele arhivistice pe care le-am consultat, personalul didactic-ştiinţific şi ajutător, administrativ şi de serviciu, al secţiei Geografie pe anul universitar 1920/1921 era format din următorii: profesor titular: George Vâlsan la Catedra de Geografie generală cu Institutul şi Muzeul de Geografie; profesor agregat: Vasile Meruţiu la Catedra de Geografie fizică şi descriptivă (Sextil Puşcariu, 1921, *op. cit.*, p. 36) şi director de laborator; 2 posturi de şef de lucrări, vacante; 2 posturi de asistent, ocupate de Aurelian Florinescu şi de Romulus Vuia; 2 posturi de preparator, ocupate de Iosif Silághi şi de Ioachim Rodeanu; secretar-bibliotecar, Lucia Chevereşan, studentă în anul IV; desenator-fotograf, Ion Vlad; 2 posturi de desenator, unul ocupat de Edmund Lazar, iar unul vacant; un post de „mechanic", ocupat de Michail Fekete; un post de laborant, vacant; un post de custode, vacant; 2 posturi de servitor,

ocupate de Geza Batiz şi de Marton Kertész; 2 posturi de paznic, vacante (Direcţia Judeţeană a Arhivelor Naţionale Cluj, Fond Universitatea Regele Ferdinand I din Cluj, nr. 798, Facultatea de Ştiinţe, nr. 25, foaia 39-47). Mai târziu, la 16 aprilie 1927, membrii IGUC au fost: profesor George Vâlsan, director IGUC şi şeful Catedrei de Geografie generală şi Umană; profesor Vasile Meruţiu, şeful Catedrei de Geografie Descriptivă şi a României şi şeful Laboratorului de Geografie fizică şi a României; Aurelian Florinescu, şef de lucrări; Sabin Opreanu, Eliseu Sighartău, asistenţi; Raul I. Călinescu, Laurian Someşan, preparatori; Tiberiu Morariu, secretar-bibliotecar; Andrei Petér, desenator; Vasile Isac, servitor. În 1928, organigrama personalului Institutului de Geografie se prezenta astfel: 1 Director de Institut; 1 Director de Laborator; 1 şef lucrări şi cartograf; 1 şef lucrări şi fotograf; 1 asistent de Geografie descriptivă; 1 asistent de Geografie general; 1 preparator de Geografie descriptivă; 1 preparator de Geografie generală; 1 desenator-cartograf; 1 desenator; 1 secretar-bibliotecar; 1 mecanic-fotograf brevetat; 1 laborant; 2 servitori. După transferul profesorului George Vâlsan la Bucureşti (cu data de 1 ianuarie 1930) şi a soţilor Aurelian Florinescu, şef de lucrări, şi Constanţa Florinescu, desenatoare (cu 1 octombrie şi, respectiv, 1 noiembrie 1931) la liceul din Giurgiu, în anul 1932 membrii IGUC au fost: profesorul Vasile Meruţiu – director, Romulus Vuia – şef de lucrări, Laurian Someşan – şef de lucrări; Nicolae Dragomir – şef de lucrări suplinitor; Alexandrina Haţieganu – asistentă; Radu V. Meruţiu – asistent; Elena Neteu (căsătorită Hotăran) – preparatoare; Constanţa Mehedincu – preparatoare; Fabiu I. Dumbravă – desenator; Andrei Petér – desenator-cartograf; Felicia Runcan – secretar-bibliotecar; Michail Fekete – „mechanic-fotograf"; Simion Terec – servitor; Ioan Man – servitor; Man Kiss – laborant. În anul universitar 1943/1944, secţia Geografie a Facultăţii de Ştiinţe, aflată în refugiu la Sibiu-Timişoara, avea următoarea organigramă şi încadrare: Institutul de Geografie – director, profesor Sabin Opreanu; Catedra de Geografie Generală şi Geografie Umană: şef de catedră, profesor Sabin Opreanu; asistenţi: Alexandrina Haţieganu, Radu V. Meruţiu; preparatori: Elena Hotăran, Fabiu I. Dumbravă; desenator: Ion Cordoneanu; servitori: Simion Turcu (român cu nume maghiarizat Töröc şi Terec) şi Loghin Becşa: Catedra de Geografie fizică şi a României: şef de catedră, profesor Tiberiu Morariu; şef lucrări: Pop Gheorghe; asistenţi: Radu V. Meruţiu; preparatori: Fabiu I. Dumbravă; şeful laboratorului de Geografie fizică şi a României, profesorul Tiberiu Morariu; conferinţa de Geografie regională, conferenţiar Ştefan Manciulea. În fine, în august 1947, membrii IGUC şi vechimea lor în serviciu la acea dată erau: profesor Sabin Opreanu, director al IGUC şi şef al Catedrei de Geografie Generală şi Geografie Umană, din octombrie 1923, ca asistent; profesor Tiberiu Morariu, şef al Catedrei de Geografie fizică şi a României şi al Laboratorului omonim, din noiembrie 1926 ca secretar-bibliotecar; Pop Gheorghe, şef de lucrări suplinitor, din 1 februarie 1940 ca desenator-fotograf; Butură Valeriu, şef de lucrări suplinitor, din 1 noiembrie

1946; Haţieganu M. Alexandrina, asistent titular, din 1 octombrie 1928 ca secretar-bibliotecar; Dumbravă I. Fabiu, asistent titular, din 4 ianuarie 1926 ca funcţionar; Ciortea Cornelia, asistent suplinitor, din 1 septembrie 1946; Bizerea Marius, preparator suplinitor, din 1 ianuarie 1947; Crăciun Teodor, desenator-tehnician, din 15 ianuarie 1939; Turcu Simion, laborant, din 1 octombrie 1929; Becşa Loghin, curier, din 1 septembrie 1935. Directorii IGUC au fost: George Vâlsan (1919 - 31 decembrie 1929), Vasile Meruțiu (1 ianuarie 1930 - 31 august 1941) şi Sabin Opreanu (1 septembrie 1941 - 1 septembrie 1947). În şedinţa din 22 octombrie 1947, Consiliul Facultăţii de Ştiinţe l-a „*girat*" cu direcţiunea Institutului de Geografie (IGUC) şi cu organizarea ţinerii cursurilor la Catedra de Geografie Generală şi a conferinţei de Geografie regională pe profesorul Tiberiu Morariu. Documentul este semnat de proaspătul (atunci) decan al Facultăţii de Ştiinţe, chimista cu vederi comuniste Raluca Ripan, care, aidoma lui Mihail Sadoveanu, s-a trezit o mare democrată, fiind preferată de autorităţile comuniste care lucrau vârtos la demolarea statului de drept, prin comunizarea instituţiilor ţării noastre, cu girul şi sub oblăduirea komisarilor sovietici. Ea tocmai îl înlocuise pe savantul Augustin Maior, fizician de renume mondial, care fusese ales democratic decan al Facultăţii de Ştiinţe în 1946.

La Facultatea de Ştiinţe, întâiul decan şi prodecan aleşi pentru anul universitar 1919/1920 au fost profesorii Dimitrie Călugăreanu şi Alexandru Borza, iar secţiile, catedrele, institutele, laboratoarele şi seminariile ei erau structurate astfel:

1. Secţia de Ştiinţe naturale, cu catedrele: Anatomia şi fiziologia vegetală, cu Institutul de Botanică generală; Botanică sistematică, cu Institutul de Botanică sistematică, Muzeul Botanic şi Grădina Botanică; Zoologie şi Anatomie comparată, cu Institutul de Zoologie şi Anatomie comparată; Institutul de Speologie; Biologie; Fiziologie generală, cu Institutul de Fiziologie; Geologie şi paleontologie, cu Institutul de Geologie şi paleontologie; Mineralogie şi petrografie, cu Institutul de Mineralogie şi petrografie;

2. Secţia de fizico-chimice, cu catedrele: Chimie generală, cu Institutul de Chimie şi Laboratorul de Chimie generală; Chimie anorganică şi analitică, cu Laboratorul de Chimie anorganică şi analitică; Chimie organică, cu Laboratorul de Chimie organică; Chimie fizică, cu Laboratorul de chimie fizică; Chimie tehnologică; Fizică generală şi experimentală, cu Institutul de Fizică generală şi experimentală; Fizică teoretică şi tehnologică, cu Institut de Fizică teoretică şi tehnologică;

3. Secţia matematici, cu catedrele: Analiză matematică, cu Seminarul de Matematici; Mecanică raţională; Teoria funcţiilor, cu Seminarul de Geometrie; Geometrie descriptivă, cu conferinţa de Geometrie descriptivă; Conferinţa de Algebră;

4. Secţia Geografie, cu catedrele: Geografie generală, cu Institutul de Geografie şi Muzeul de Geografie; Geografie descriptivă şi a României.

În publicaţia Institutului de Geografie al Universităţii din Cluj – *„Lucrările Institutului de Geografie al Universității din Cluj – Travaux de l'Institut de Géographie de l'Université de Cluj (Roumanie)"*, George Vâlsan, cel însărcinat cu organizarea şi încadrarea institutului, a învăţământului geografic clujean în general, a publicat un articol pe deplin lămuritor asupra organizării învăţământului geografic clujean, devoalând raţiunea care a stat la baza lui şi a afilierii Geografiei la Facultatea de Ştiinţe ca o secţie independentă; este vorba de articolul intitulat *„Învăţământul geografic la Universitatea din Cluj"* (1924 [1], *op. cit.*, pp. 335-348). Încă din prima frază, autorul pune accentele necesare, lămuritoare, astfel: *„Prin noul regulament al Facultăţii de Ştiinţe, învăţământul geografic capătă la Universitatea din Cluj o situaţie pe care nu o are la celelalte Universităţi române şi care merită, cel puţin ca informaţie, să fie cunoscută de cei interesaţi de progresele acestui obiect la Universitate"* (*ibidem*, p. 337). Urmăm îndemnul savantului şi prezentăm in extenso acest regulament, pe de o parte, pentru a arăta concepţia de încadrare şi de studiere a Geografiei la Cluj, iar pe de altă parte, ca o dovadă a geniului creator şi vizionar al lui George Vâlsan, cel chemat să pună bazele studiului Geografiei la Universitatea din Cluj. Se impune menţionat aici că meritele lui Vâlsan îi vor fi recunoscute; printre altele, Sextil Puşcariu consemna: *„Dintre profesorii din Ţara veche, unii, ca geograful Vâlsan, au dezvoltat în Transilvania cea mai strălucită activitate"* (*apud* Stelian Neagoe, 1980, *op. cit.*, vol. I, p. 97).

Articolul ne lămureşte pe deplin de locul Geografiei în curricula universitară de la universităţile româneşti ale vremii, explicând particularităţile fiecăreia, inclusiv raţionamentul afilierii Geografiei la Facultatea de Ştiinţe din Cluj şi locul ei de sine stătător. Prin urmare, la Universitatea din Bucureşti, unde Facultatea de Ştiinţe nu menţionează Geografia în regulamentul său, ea se predă la Facultatea de Filosofie şi Litere, unde există o *„licenţă în Istorie şi Geografie"*. Studentul care doreşte să devină geograf e obligat ca pe lângă Geografie, *„să treacă examenele anuale de istoria României, istoria veche, istoria medie, modernă şi contemporană, arheologie şi antichităţi greco-romane, limba latină sau greacă (sau limba paleoslavă şi filologie bizantină)"*, constatând că în aceste condiţii *„evident* […] *nu poate fi vorba de o specializare în geografie decât după trecerea licenţei"*, Geografia fiind considerată *„mai mult ca o anexă a istoriei"*. Absolventul *„rămâne un istoric cu o uşoară nuanţă de geografie, iar legătura cu ştiinţele naturale şi îndeosebi cu geologia, nu există"*. La Universitatea din Iaşi, Geografia se predă la Facultatea de Ştiinţe, şi există o *„licenţă în geografie"*, la care pot accede studenţii de la Litere şi de la Ştiinţe. Cel de la Litere, pe lângă disciplinele geografice, e obligat să mai dea examene de Geologie generală, Istorie generală şi la alegere Zoologie, Botanică, Fizica pământului sau Geodezie. Cel de la Ştiinţe, pe lângă disciplinele geografice, e obligat să mai dea examen de Geologie generală, Zoologie, Botanică descriptivă şi Istorie generală şi, la alegere, Fizica pământului sau Geodezie. Studenţii de la Litere înscrişi şi la Istorie (ca a doua specialitate), sunt obligaţi să dea un examen de Geografie. La Universitatea din Iaşi, această

organigramă *„arată un progres* – constată Vâlsan – *al regulamentării studiului geografic*" (*ibidem*, p. 338) faţă de Univrsitatea din Bucureşti, fiindcă studentului *„i se permite specializarea în geografie"*, însă aceasta *„numai în direcţia ştiinţelor naturale, din secţiunea cărora este considerată ca făcând parte şi geografia"* (*idem*). La Universitatea din Cernăuţi, *„care păstrează organizaţia germană"*, geografia este inclusă în Facultatea de Filosofie, *„în care sunt cuprinse toate materiile predate"* la facultăţile de Litere şi de Ştiinţe de la universităţile din Iaşi şi Bucureşti. Prin urmare, la Bucureşti, de la Facultatea de Filosofie şi Litere ies licenţiaţi în *„istorie şi geografie"*, *„familiarizaţi până la un anumit punct cu geografia"*, iar de la Facultatea de Ştiinţe ies licenţiaţi care pot ignora complet Geografia. La Iaşi, de la Facultatea de Filosofie şi Litere ies licenţiaţi numai în *„Istorie"*, iar de la Facultatea de Ştiinţe, ies geografi *„educaţi numai în direcţia ştiinţelor naturale"* (*idem*), admiţându-se ca studenţi de la Litere să-şi dea licenţa în Geografie, după ce trec un examen de Istorie generală.

Ca o concluzie la cele prezentate mai sus, Vâlsan menţionează în mod expres că: *„Îmi pare că prin aceste regulamente, geografia la Bucureşti este ameninţată să rămâie, cel puţin teoretic, un simplu auxiliar al istoriei, pe când la Iaşi, deşi a căpătat o independenţă evidentă, geografia este împinsă unilateral numai spre ştiinţele naturale, lăsându-se în umbră contactul atât de fertil cu unele discipline care se predau la Facultatea de Litere şi cari sunt indispensabile pentru o fecundă activitate în direcţiunea geografiei umane şi a geografiei descriptive"* (*ibidem,* pp. 338-339), având ca rezultat evident crearea la Bucureşti şi la Iaşi *„a două serii cu totul diferite de geografi – istorici geografi şi geografi-naturalişti"*! (*ibidem*, p. 339). Profesorul vede în aceste direcţii unilaterale *„piedici în progresul cercetărilor geografice"*, precum şi o *„scădere a eficacităţii geografiei în învăţământul secundar"* (*idem*), într-o perioadă când *„ies din licee sute şi mii de tineri cari se îndreaptă spre armată, spre inginerie, spre ştiinţe economice şi politice"* care *„au rămas cu cunoştinţele geografice din clasa a V-a de liceu"* (*idem*). În acest context, Vâlsan subliniază: *„contrastul e viu, mai ales în examenele de capacitate unde istoricii-geografi"* se prezintă superficial pregătiţi în geografie fizică, iar geografii-naturalişti sunt *„tot atât de slab pregătiţi în geografia umană"* (*idem*), continuându-şi aserţiunea logică analizând viciul care se propagă într-o pregătire unilaterală în liceu, nivel de şcolarizare menit să asigure cultura generală obligatorie unui intelectual, într-o perioadă *„tulbure"*, când este nevoie de *„o conştiinţă naţională şi de o cunoaştere cât mai adâncită a însuşirilor geografice ale ţării noastre, ale ţărilor vecine şi ale întregului pământ"* (*ibidem*, p. 340).

Având aceste idei atât de clare în minte, profesorul Vâlsan a fost chemat să alcătuiască regulamentul de funcţionare a Secţiei de Geografie de la Universitatea din Cluj, a cărei organizare *„separă Facultatea de Litere de Facultatea de Ştiinţe"* (*idem*), şi unde Geografia este *„o secţiune independentă (a cincea), alături de secţiunile matematică, fizică, chimică şi de ştiinţe naturale"*. În acest cadru organizatoric novator, studentul geograf, *„fie cu înclinări spre studiile care se*

predau la Litere, fie cu înclinări cari se predau la Ştiinţe, poate deveni şi rămâne în primul rând geograf"! (*idem*). La Universitatea din Cluj, ne lămureşte savantul, studentul are posibilitatea alegerii specializărilor secundare *„spre trei direcţii de studiu: spre matematică şi fizică, spre ştiinţe naturale şi spre ştiinţe istorice şi sociale"* (*idem*), mărturisind că *„potrivit caracterului enciclopedic al geografiei*" s-a avut în vedere intenţia creerii unui *„al patrulea grup de obiecte secundare* […] *în direcţia ştiinţelor economice şi politice"* (*ibidem*, pp. 340-341); această intenţie rămâne însă a se rezolva pe viitor, numai după *„înfiinţarea unei catedre de geografie economică şi politică"* (*ibidem*, p. 341).

Cu această organigramă de funcţionare, studentul geograf de la Universitatea din Cluj *„poate studia adâncit geografia în legătură cu obiecte predate la Facultatea de ştiinţe (direcţia matematică-fizică şi direcţia ştiinţe naturale), dar tot aşa de adâncit poate studia geografia în legătură cu obiecte cari se predau la Facultatea de litere (şi anume: preistorie, istorie, sociologie, etnografie)"*, menţionează Vâlsan (1924 [1], *op. cit.*, p. 341). Totodată, optimist, îşi exprimă speranţa că *„îndată ce va fi posibil, studentul geograf la Cluj, va putea studia geografia şi în legătură cu ştiinţele economice şi politice"* (*idem*). Totodată, înfiinţarea şi funcţionarea Secţiei de Geografie de sine stătătoare în cadrul Facultăţii de Ştiinţe la Universitatea din Cluj, a creat posibilitatea unei pregătiri superioare prin doctorat în Geografie.

Odată implementată această organigramă de funcţionare a Facultăţii de Ştiinţe la Universitatea din Cluj, George Vâlsan are speranţa formării unor *„serii de geografi cu o educaţie generală completă şi identică, şi cu posibilitatea de specializare în direcţia înclinărilor fiecăruia"*, pe de o parte, iar pe de altă parte, *„se va observa o mai vie infuziune a spiritului geografic spre ştiinţele de contact*" din cadrul facultăţilor de Filosofie, Litere şi Istorie, de Ştiinţe, iar pe viitor, de la Drept, şi aceasta *„nu spre paguba acestor ştiinţe"*!, ţine el să nuanţeze.

Savantul Vâlsan subliniază prin inducţie posibilitatea lărgirii culturii şi educaţiei prin Geografie, ale cărei contribuţii la formarea conştiinţei naţionale le-a evocat în lecţia inaugurală *„Conştiinţă Naţională şi Geografie"*, susţinută la 19 noiembrie 1919.

Elementele prezentate mai sus au făcut parte din proiectul de organizare al Secţiei de Geografie la Universitatea românească din Cluj, proiect care *„a fost discutat şi admis de consiliul Facultăţii de Ştiinţe în şedinţele din 30 aprilie şi 27 mai 1920"*, devenind astfel parte a Regulamentului final, aprobat prin Înalt Decret Regal la 27 noiembrie 1920, publicat în Monitorul Oficial no. 211 din 24 decembrie 1920.

Aidoma lui George Vâlsan, autorul şi promotorul acestor elemente-cadru de funcţionare ale Secţiei de Geografie din cadrul Facultăţii de Ştiinţe din Cluj, redăm in extenso articolele referitoare la Geografie din acest Regulament (1924 [1], *op. cit.*, pp. 341-344):

Articolul 19. – Facultatea de Ştiinţe din Cluj este subîmpărţită în cinci secţiuni:

a) Secţia Ştiinţelor matematice;
b) Secţia Ştiinţelor fizice;
c) Secţia Ştiinţelor chimiei;
d) Secţia Ştiinţelor naturale;
e) Secţia ştiinţelor geografice.

Articolul 20. – Licența în Geografie:

Se predau la Facultatea de Ştiinţe următoarele cursuri obligatorii pentru luarea titlului de licenţiat în Geografie:

Un ciclu de cursuri privitor la Geografia generală, cuprinzând:

a) Principii de geografie;
b) Pământul corp ceresc;
c) Atmosfera, hidrosfera, litosfera, biogeografia;
d) Geografia umană, politică şi economică.

Un ciclu de cursuri privitor la Chorografie, cuprinzând:

a) Geografia României;
b) Geografia Continentelor.

Fiecare ciclu ţine trei ani şi e împărţit între profesorii de geografie.

Seminariile, lucrările practice care cuprind lectura hărţilor, interpretarea hărţilor, cartografia, desenul geografic şi fotografia şi excursiunile cu lucrări practice pe teren sunt obligatorii timp de doi ani.

Se pot lua trei feluri de licenţă în Geografie:

A. Studenţii care urmează Geografia în legătură cu matematicile şi fizica, pe lângă cursurile de geografie menţionate, vor lua şi obiectele următoare:

Anul I
Matematici generale;
Geometria descriptivă.
Anul II
Geodezie şi topografie (când aceste cursuri se vor ţine);
Fizică generală.
Anul III
Astronomie;
Fizica globului (când aceste cursuri se vor ţine).

B. Studenţii cari urmează Geografia în legătură cu Ştiinţele naturale, pe lângă cursurile de geografie menţionate, vor mai lua şi obiectele următoare:

Anul I
Botanica generală;
Zoologia generală.
Anul II
Botanica specială, cu distribuirea plantelor;
Zoologia specială, cu distribuirea animalelor.

Anul III
Biologia generală;
Geologia;
Fizica globului (când acest curs se va ţine).

C. Studenţii cari urmează Geografia în legătură cu Literele, pe lângă cursurile menţionate, vor mai lua şi următoarele cursuri:

Anul I
Istoria antică;
Istoria universală;
Preistoria (când acest curs se va ţine).
Anul II
Istoria Românilor;
Toponimie (când acest curs se va ţine);
Etnografia.
Anul III
Istoria Românilor;
Etnografia;
Sociologia.

Articolul 31. – Consiliul facultăţii va putea decide şi asupra altor moduri de grupare a materiilor sau asupra creerii de cursuri noi, în vederea îndrumării speciale spre alte specializări practice, potrivit cerinţelor ce se vor ivi sau pentru pregătirea studenţilor în vederea trecerii lor la anumite şcoli speciale superioare.

Articolul 32. – Toate cursurile din anul I, II şi III, împreună cu lucrările lor practice, sunt obligatorii. Asupra lor se trec examenele.

După trecerea tuturor examenelor, studentul capătă dreptul de a se prezenta la examenul de licenţă.

Examenul pentru gradul de doctor

Articolul 48. – Facultatea de ştiinţe din Cluj acordă cinci feluri de diplome de doctorat în ştiinţe:

a) Doctoratul în Ştiinţele matematice;
b) Doctoratul în Ştiinţele fizice;
c) Doctoratul în Ştiinţele chimice;
d) Doctoratul în Ştiinţele naturale;
e) *Doctoratul în Geografie.*

Iată ce regulament modern a fost implementat la Secţia de Geografie a Facultăţii de Ştiinţe de la Universitatea Daciei Superioare din Cluj, de către savantul vizionar George Vâlsan, cel căruia, pe drept cuvânt, i s-a spus *„creatorul Şcolii Geografice Clujene”*!

Legat de regulamentul mai sus prezentat, precum şi de momentul venirii lui la Universitatea din Cluj, într-un moment de stare fizică precară, dar animat de voinţă în punerea bazelor învăţământului geografic românesc superior, inclusiv

prin intenţia invitării savantului francez Emmanuel de Martonne de a susţine o serie de prelegeri, îi scrie următoarele rânduri de la Cluj prietenului său Gheorghe T. Kirileanu, la 29 noiembrie 1919: *„Neplăcerea cea mai mare a venit imediat după sosirea mea la Cluj, când am avut o criză de stomac mai grozavă şi mai lungă decât toate celelalte*. […]. *Boala aceasta îmi încătuşează voinţa”*, descriindu-i apoi „*pe scurt ce am mai făcut aici*", la Cluj, în perioada octombrie-noiembrie 1919: *„pe David* [Mihai, profesorul de geografie de la Universitatea din Iaşi, s.n.] *l-am înştiinţat demult* […] *că trec la Cluj şi că nu mă opun să suplinească el catedra*" […]. *Un proiect de organizare a Instit[utului] geografic înaintat Consiliului dirigent, care arată mare bunăvoinţă facultăţii noastre. Am propus un institut cu muzeu geografic, cu secţie de cartografie şi fotografie. Scopul: studierea geografică a ţării şi în special a Ardealului, ridicarea personalului didactic geografic şi lămurirea tuturor chestiunilor de interes naţional în legătură cu geogr[afia], aşa ca împrejurări ale păcii de acum să nu ne mai găsească nepregătiţi”* (Mircea Handoca, editor, 1977, *op. cit*., pp. 638). În seria activităţilor de început, Vâlsan menţionează că *„împreună cu d[omnu]l Murgoci şi alţii am rugat rectoratul să invite pe de Martonne pentru semestrul de vară, când vom organiza aci conferinţe, lucrări, excursii, la care vom invita pe specialiştii şi studenţii înaintaţi de la toate universităţile noastre”* (*idem*).

Prezentarea, chiar şi succintă, a înfiinţării şi organizării Secţiei de Geografie din cadrul Universităţii din Cluj, gândită şi aplicată de profesorul George Vâlsan, în paralel cu evoluţia ei instituţională, ne relevă un corp profesoral şi o administraţie universitară determinată în materializarea misiunii ei, aceea a formării elitelor, a tinerilor, viitoare cadre naţionale, asumată ca „*o datorie a vremii lor*"!

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THE NATURAL POTENTIAL AS A PREMISE FOR THE DEVELOPMENT OF TOURISM IN SĂLAJ COUNTY, ROMANIA

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ABSTRACT. ***The Natural Potential as a Premise for the Development of Tourism in Sălaj County, Romania.*** The tourism resources integrate the totality of attractive elements within a territory. The natural attractions of Sălaj County have been approached in this paper by analysing the four categories that are long-established in the scientific literature: morphological, climatic, hydrological and biogeographical tourist attractions. The geographical location of Sălaj County provides a privileged situation and a relative geographical unity, marked by a complex and complementary natural environment derived from the presence of a varied morphology. The karst morphology includes caves (Cuciulat, Măgurici), gorges (Babei Gorges), karst springs (Barcău Springs), and other attractions. The alternation of hard rocks and softer rocks, more friable and less resistant to erosion, led to the emergence of interesting forms, the result of differential erosion, such as the Dragons' Garden (*Grădina Zmeilor*), the Devil's Rock (*Stânca Dracului*), "The Old Man and the Old Woman" ("*Moșu și Baba*"). Mineral and thermal waters are used for curative purposes at Băile Boghiș, Băile Bizușa, Jibou and Șimleu Silvaniei. The biogeographical potential is represented mainly by the vegetation cover, which is very diverse, including both forests and valuable flowering plants. Sălaj County has a significant natural potential, which is yet to be capitalized from the perspective of tourism, because natural attractions in Sălaj County are still little known to tourists, even in Romania.

Keywords: *Sălaj County, tourism potential, natural attractions, Romania.*

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1. Introduction

The tourism resources integrate the totality of attractive elements of a territory that may be capitalized in the field of tourism, regardless of their natural or human origin and the existing relations between them. They lie at the basis of the emergence and development of tourism and represent its "raw materials". Also, their qualitative, quantitative and locational features, as well as the insertion of structurally, physiognomically, dimensionally and functionally adapted tourism facilities, may determine the setting up of convergent tourism flows, which may be different from the point of view of size, intensity and diversity. They may also determine the option for the type or form of practiced tourism and the intrinsic value of the tourism consumption, according to which one may account for the economic efficiency of the associated tourism act (Cocean and Dezsi, 2009; Snak, Baron and Neacşu, 2001; Glăvan, 2000; Glăvan, 2010; Cândea and Simon, 2006; Muntele and Iaţu, 2003; Ielenicz and Comănescu, 2009).

The attractive resources belonging to the natural environment are a "gift of nature" and they represent a tourism category which integrates the entirety of the physical-geographical components of a territory (Cocean and Dezsi, 2005, Cocean and Dezsi, 2009). Their intrinsic features constitute the determining factor in terms of tourism development in a territory and also play the predominant role in establishing the value of the tourism potential of that territory (Muntele and Iaţu, 2003, Cocean and Dezsi, 2005, Cocean and Dezsi, 2009, Dezsi, 2006, Ciangă and Dezsi, 2007, Ciangă, 2003, Ciangă, 2007). The natural attractive resources reveal a high genetic, dimensional and physiognomic diversity. They include certain concrete, material elements of the geographical environment, such as the landforms, the waters, lithological structures, vegetation, fauna, but also certain characteristics of the natural environment (the climate, especially). In fact, the natural enviornment plays a double role, that of material support for all tourism activities, and also the essential reason for such activities, when its beauty determines the emergence of tourism flows (Cocean and Dezsi, 2009). Therefore, the tourism potential of the natural environment, in its entirety or by means of its components, exercise a different power of attraction for varied categories of effective and potential tourists, supporting the development of a large range of tourism types and forms.

Tourism, as a phenomenon and activity that has a growing impact on the contemporary world, has favourable conditions for development in the territory of Sălaj County in Romania. It is stimulated by a varied tourism potential including natural and man-made components which stand out in terms of originality and even unicity, exerting a differentiated power of attraction and representing the fundamental factor in the development of tourism.

2. Methodology

In order to provide a general image of the tourism resources of a territory, the natural attractions of Sălaj County will be approached in this paper by analysing the four categories that are long-established in the scientific literature: *morphological, climatic, hydrological and biogeographical tourist attractions* (Cocean and Dezsi, 2009; Ciangă and Dezsi, 2007; Muntele and Iațu, 2003; Ielenicz and Comănescu, 2009; Cocean and Dezsi, 2005; Dezsi, 2006; Cândea and Simon, 2006; Glăvan, 2000; Glăvan, 2010).

The identification, inventory, and analysis of the attractive features of the tourism resources belonging to the natural environment in Sălaj County is founded on a comprehensive field research. The countless visits in the field were doubled by a thorough bibliographical documentation. However, this has revealed a rather low number of contributions, which had in view mainly the research and the description of specific realities for certain settlements in Sălaj County (Pop, Bălaș, Bodiș, 2017, Pop, 2011, Burghele, 2015-2017), the whole county by means of monographical-type of studies or tourism-related ones (Mór, 1901-1904, Morariu and Sorocovschi, 1972; Cormoș, 1980; Babih et al, 1980; Abrudan, 2007; Medve, Daroczi and Coste, 2011; Pop, 2008, Vedinaș et al., 2018), research projects and grants (Sălaj County Masterplan - https://www.cjsj.ro/), and a few scientific papers published in journals or volumes of proceedings from national or international scientific events (Ciangă, Dezsi, Pop, 2007, Pop, 2007, 2008a, 2008b, 2009a, 2009b, 2011, 2015).

3. Results and discussion

Due to its position, Sălaj County is at the contact of three major geographical regions, that have a complex and complementary tourism potential – Apuseni Mountains, the Transylvanian Basin and the Western Hills.

The geographical location of Sălaj County provides a privileged situation and a relative geographical unity, marked by a complex and complementary natural environment derived from the presence of a varied morphology. The lithology, as well as the geological and hydrological evolution, led to the structuring of a morphological matrix consisting of a set of mountainous, hilly, plateau and basin units, fragmented by valley corridors.

All these determined a stratified structure in terms of morphology and altitude, and a high fragmentation generated by the drainage network, implicitly leading to a physiognomy characterized by a peculiar landscape diversity. Moreover, all these had a specific impact on the climatic and bioclimatic features, on the hydrological component and, not in the least, on the

biogeographical vertical stratification. Each of these incorporate their own attractive resources, but also represent the auxiliary factors of promoting the characteristics of the others, so that the favourable aspects derived from the cooperation between the parties are added to the individual contribution of each of them, therefore resulting a complex, diversified and attractive natural environment.

Despite the fact that the altitude does not exceed 1000 m anywhere in Sălaj County (the maximum height is 996 m in Măgura Priei, Meseş Mountains), the county is characterized by the presence of a significant natural tourism potential, especially due to the existence of interesting landforms, the presence of mineral and thermal waters, the richness and diversity of the flora and fauna.

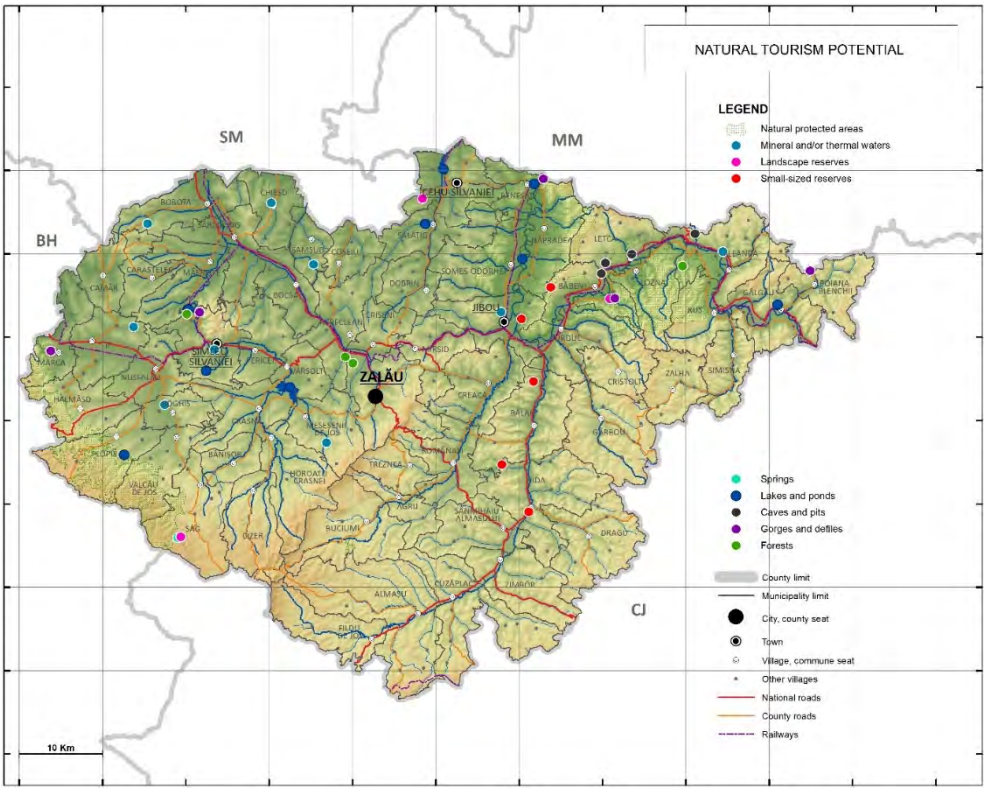

Fig. 1. The natural tourism potential of Sălaj County, Romania.
Source: the authors

The morphological tourism potential is provided by the presence of special forms and processes, that have an attractive potential, mainly by means

of forms and microforms specific for **karst morphology** – caves (Cuciulat, Măgurici), gorges (Babei Gorges), karst springs (Barcău Springs), escarpments, karst plateaus (Ponorul Negrenilor), pot caves, sinkholes, limestone pavements.

The Eocene limestones cover extended areas in the North-East part of the county, in Purcăreț – Boiu Mare Plateau and Prisnel Ridge, especially North of Someș Valley, a region which is characterized by a **high potential for speleotourism**.

Close to Cuciulat village (Letca commune), during the exploitation works in the limestone quarry, a cave was discovered in 1978. It was named **Cuciulat** (like the village) and was initially explored by a team from "Emil Racoviță" Speleological Club in Bucharest, who noticed red-coloured parietal paintings. Together, the cave galleries are 1707 m long and 34 m deep. In 1979, there was more substantial research, which revealed the presence of cave paintings of exceptional importance, unique at the time in Romania and this part of Europe. They represented mainly animal figures (a horse, a cat, a bird, as well as others, harder to identify), but also some human figures, belonging to the Stone Age (Late Paleolithic or, according to other researchers, Mesolithic or Neolithic). Because there was a danger of vandalism, the authorities closed the entrance to the cave in 1984 with an iron railing. Later, the slope collapsed, covering the entrance, which is no longer accessible. The cave might be introduced in the scientific and tourism circuit if large works would be executed to stabilize the slope where the entrance is located. Works are also needed to plan a controlled way of access to the cave and inside, taking into account that access (when was still possible) was difficult even for experimented and well-equipped speleologists. Funds are difficult to access also because the cave is located exactly on the boundary between Băbeni and Letca communes, which raises a problem of authority regarding the juridical regime of the land. An easier alternative would be the construction of a "replica" cave, a kind of natural science museum, where interested visitors might enter without problems to see replicas of the original paintings in Cuciulat Cave. Such a small replica was built in 2014 at the County Museum of History and Art in Zalău.

Close to Cuciulat and Șoimușeni, in Purcăreț – Boiu Mare Plateau and Prisnel Ridge, there are also other caves. For instance, **Lii Cave,** near Cuciulat, has a total length of the galleries of 1510 m and is 29 m deep. It is relatively easy to explore in the first part, before the first sump. **Moara lui Pocol Cave** is located near Letca, and is the longest one, with 3493 m of galleries and it has a total depth of 79 m, but it is very difficult to access. There are many other smaller caves, without spectacular speleothems, as well as potholes and other karst-related landforms, attractive for tourists who enjoy nature and subterraneous adventures.

A special attraction is **Măgurici Cave** near Rostoci village (Ileanda commune), which became a protected area of national interest (corresponding to IUCN Category III – speleological reserve) by Government Decree 2151 of 30 November 2004. It is a natural monument and a Site of Community Importance (SCI) and therefore part of Natura 2000 network. The cave was explored and mapped in 1978, having a total length of 543 m and a depth of 30 m. The estimated area is 1 ha. Its importance resides particularly in the presence of five bat species, of which three are unique in Europe and represent priorities for EUROBATS (The Agreement on the Conservation of Populations of European Bats) – greater horseshoe bat (*Rhinolophus ferrumequinum*), lesser horseshoe bat (*Rhinolophus hipposideros*) and common bent-wing bat (*Miniopterus schreibersii*). Also, the cave has several galleries (the Ascending Gallery, the Bats Gallery, the Guano Gallery), round halls (Junction Hall), diaclases, humps and calcite parietal deposits.

The cave also shelters antodites and gypsum monocrystals. For the first time in Romania, gypsum crusts of the starburst type have been discovered here, along with gorgeous gypsum aggregates formed in the clay mass on the cave floor. Among the discovered minerals, the novelty would be the presence of phosphammite (only for the second time in the world, it exists only in another cave in Australia), francoanellite (it exists in only three other caves in the world), mirabilite, bassanite, cesanite, monetite and taranakite, all rarities for the mineralogy of caves in Romania.

The cave is a site of hibernation, reproduction and breeding for the bats, so its introduction in the tourism circuit is problematic both from the perspective of bat conservation and that regarding the rare minerals existing here.

Also in the limestone area in the North-East of Sălaj County, on the boundary with Maramureş County, one finds **Babei Gorges**, epigenetically carved in limestones by Poienii Valley (also locally named Gorges Valley). The gorges are 1 km long and may be easily crossed along the county road 109 F, which follows the riverbed, connecting Someş Valley (Gâlgău) and Lăpuş Land. The closest villages are Poiana Blenchii (Sălaj County) and Baba (Maramureş County).

Babei Gorges have been included on the list of nature reserves even since 1977, and in 2000 they became a protected area of national interest, corresponding to IUCN Category IV (geological reserve), covering an area of 15 ha. They present an interest for tourists mainly because of the spectacular landscape dominated by scarps, and secondly as a result of the presence of karst-related landforms – small caves, karst springs – **Bulbucul**, dry valleys, canyon-like valleys (**Devil's Dell - Vâlceaua Dracului**), where small waterfalls also emerge, with 2-3 m water drop, sinkholes, limestone pavements, along with the specific flora and fauna. From the point of view of human use, two traditional lime kilns are preserved, as they are still in use by the local population, out of the 40 or more which had existed here in the past.

At the southern end of Prisnel Ridge, on the right bank of Someș River, close to Rona village (Jibou town), there is another nature reserve, **Rona Limestones**. It became a geological-type protected area of national interest by means of Law 5 in the year 2000, covering an area of 0.5 ha. It presents lacustrine deposits made of white-grey and cream-rusty limestones, alternating with grey-blueish marls, lying in monoclinal strata, containing a high number of fossilized remains of mollusks, fish or reptiles. It is also a nature monument and presents especially a scientific (paleontological) interest and it is of a lesser interest for tourists.

The limestones also emerge in the southern and south-western parts of Sălaj County, at the contact between Meseș Mountains and Plopiș Mountains (Oșteana Col or Piedmont), on the territory of Tusa village (Sâg commune), where a specific karst morphology has developed. The area is dominated by **Ponor Plateau**, a rather flat karst area, representing a suspended syncline. It is also named **Negreni Plateau**, to differentiate it from other plateaus that have identical names, in Apuseni Mountains or elsewhere. There are many karst landforms and microforms, such as caves, potholes – the **Pothole with a Hall near the Large Spring**, sinkholes, limestone pavements, springs, swallow holes, waterfalls. There are also two karst springs that have a substantial discharge, the **Large Spring (Izbucul Mare)** and the **Small Spring (Izbucul Mic)**, known mostly under the name **Barcău Springs**, taking into account that they represent the main springs of Barcău River, which is representative for the western area of Sălaj County. The region is well covered by forests, mainly beech (*Fagus sylvatica*) and hornbeam (*Carpinus betulus*), to which one may add other plant species, such as coralroot (*Dentaria bulbifera*), and animal species of interest.

The whole area has been included in the **Tusa-Barcău landscape reserve**, which became a protected area of national interest (forestry and landscape reserve) by Law 5 of 2000, covering an area of 15 ha. It partly corresponds to the site of community importance (SCI) of the same name, **Tusa-Barcău**, which covers however only 10.7 ha and is part of Natura 2000 network in Romania. It is an area quite often visited by tourists, especially in summer and in week-ends. This would require a larger view on the planning of the entire region, to make it more accessible, and, on the other hand, to make the tourists stay for longer periods, by developing facilities or accommodation units in the nearby villages (particularly, in Tusa). Also, information and warning boards would be needed for tourists who are careless regarding nature conservation. Tusa trout farm, close to the reserve, is a tourist attraction in its turn, somehow connected to the specific nature of the protected area.

The landforms developed on other hard rocks, such as **crystalline schists** (Meseș Mountains, Plopiș Mountains, Șimleu Hill, Coșeiu Hill, Dealul Mare-Țicău Hill, Prisnel Hill, Preluca Hill) or **igneous rocks** (the southern part of Meseș

Mountains), is also potentially attractive, especially in those areas characterized by loftier forms (locally named "Osoaie" or "Măguri", especially in Meseș Mountains), which present scarps on the contact with the surrounding areas.

The alternation of hard rocks with softer rocks, more friable and less resistant to erosion, led to the emergence of interesting forms, the result of differential erosion. The sandstone strata, well represented in Someșan Plateau and Almaș-Agrij Basin, determine the formation of scarps and structural inselbergs, such as those at the **Dragons' Garden (Grădina Zmeilor)** located near Gâlgău Almașului, Bălan commune, and also locally known as "La Încheieturi". The Oligocene – Lower Miocene microconglomerates and sandstones suffered processes of weathering, run-off and collapses, which led to the emergence of a ruiniform morphology, characterized by the presence of rocks and groups of rocks that have all kinds of shapes, and very diverse names ("Soldier's Daughter", "The Dragon and the Dragoness", "The Old Man", "The Monks", "The Captain", "Cleopatra's Needle", "The Soldiers", "Eve", "The Guard Soldier", "The Small Finger", "The Sphinx"). They form a chaotic set of rocks, that have most bizarre shapes (towers, fungi, needles), surrounded by spectacular escarpments.

Fig. 2. The Dragons' Garden (*Grădina Zmeilor*).
Photo by Raularian Rusu

The region became a protected area of national interest (geological and landscape reserve) and also a natural monument according to Law 5 of 2000, covering an area of 3 ha, which includes the entire slope of Dumbrava Hill, where these rocky formations lie. It is a very popular tourist attraction, often visited, reason for which supplementary works would be needed for the tracks and paths, as access is difficult in rainy days or in winter. Also, information boards would be very useful.

Many protected floristic and faunistic species have been identified within the reserve, and some of them are endemic to this area.

Similar in terms of origin and aspect, but less spectacular due to the smaller size, are the **Sandstones of the Devil's Rock**, a rocky formation in the area of Hida village, which became a protected area of national interest (geological and landscape reserve) and also a natural monument according to Law 5 of 2000, covering an area of 0.001 ha. The rock, located close to Almaș Valley, was formed by its detachment from the package of sandstones as a result of water erosion and weathering. It has the shape of a fungus, 6.5 metres high, and is made of sandstones in the upper part, and microconglomerates and weaker sandstones at the base.

In the same category, of rocky formations that have a special shape, one includes the set of rocks known as "**The Old Man and the Old Woman" ("Moșu și Baba")**, near Someș-Guruslău village (Năpradea commune), approximately 2 km away from the built-up area of the village, close to Valea Caselor, on Prisnel Hill, below Stogu Peak. Unlike the Dragons' Garden and the Devil's Rock, this rocky formation is made up by Eocene limestones, which are harder and more resistant to erosion compared to the friable rocks around them, and therefore stand out significantly. "The Old Man" is 13 m high and slimmer, while "The Old Woman" is only 5 m high but has a larger diameter. There are also other smaller rocks around them. It also became a protected area of national interest (geological and landscape reserve) and also a natural monument according to Law 5 of 2000, covering an area of 0.2 ha. The area is covered by forest and is also of interest from a floristic, faunistic and paleontological point of view.

The large **cliffs** may also represent attractive areas. In this category one includes **Stanii Cliţului landscape reserve**, located near Cliţ village (Băbeni commune). It is a significantly high and wide rocky escarpment, made up predominantly by Oligocene sandstones, including intercalations of red clays and brown coal. The cliff guards the left bank of Someș River between two of its tributaries, Cliţ Valley and Ruginoasa. It is very impressive as normally seen from DJ 109 E county road which runs on its base, along Someș River.

The area became a protected area of national interest (landscape reserve) by Law 5 of 2000, covering an area of 16 ha. Apart from the beautiful

landscape, it also presents a floristic interest. Besides the usual arborous and arbustive species, there are some peculiar herbaceous species, such as heather (*Calluna vulgaris*).

The cliffs may also occur in the narrow sectors of streams, in gorges and canyons, such as those created by valleys when crossing areas characterized by the presence of harder rocks. This is the case of Someş River, which crosses several narrow sectors. At its exit from Sălaj County, on the boundary with Maramureş County, Someş River has cut the hard rocks of Dealul Mare – Ţicău Hill, creating the **Benesat – Ţicău Defile**. Crasna River has also cut Şimleu Hill in its north-western part, creating **Cehei Defile**, while Barcău River has a narrow sector at Preoteasa, then crosses a crystalline promontory near the village of **Marca**, creating a small sector of gorges at exiting Sălaj County into Bihor County. These areas are very beautiful and are very well-known and visited by tourists, because streams are usually accompanied by roads along them. Cliţ Gorges and Teişoara Gorges in Şimişna-Gârbou Plateau are less known and less visited. They are cut into sandstones, they have spectacular abris and very narrow sectors.

Table 1. Nature reserves in Sălaj County

Reserve	Type	Importance	Location	Area (ha)
Dragons' Garden (Grădina Zmeilor)	Geological and landscape	National	Bălan, Gâlgău Almaşului	3
"The Old Man and the Old Woman" (Pietrele Moşu şi Baba)	Geological and landscape	National	Năpradea, Someş-Guruslău	0.2
Racâş-Hida daffodils glade	Floristic and landscape	National	Hida, Racâş	1.5
Rona Limestones	Geological	National	Jibou, Rona	0.5
Cehei Pond	Faunistic	National	Şimleu Silvaniei, Cehei	18.2
Sălaj Valley floodplain with fritillary	Floristic and landscape	National	Cehu Silvaniei	10
Stanii Cliţului landscape reserve	Landscape	National	Băbeni, Cliţ	16
Devil's Rock Sandstones (Gresiile de pe Stânca Dracului)	Geological and landscape	National	Hida	0.001
Tusa-Barcău Landscape Reserve	Forestry and landscape	National	Sâg, Tusa	15
Iaz Marsh	Faunistic and floristic	National	Plopiş, Iaz	10
"La Castani" Forest	Forestry	National	Ileanda, Negreni	7.8
Panic Oak Forest	Forestry and landscape	National	Hereclean, Panic	2.2
Panic Pin Oak Forest	Forestry and landscape	National	Hereclean, Panic	1.7
Lapiş Forest	Faunistic and forestry	National	Nuşfalău	430.4
Măgurici Cave	Speleological	National	Ileanda, Răstoci	1

Table 2. NATURA 2000 sites in Sălaj County

Site	Type	Location	Area (ha)
Middle Stream of Someş River	SPA (ROSPA0114)	Sălaj and Maramureş counties	33259
Lozna	SCI (ROSCI0314)	Băbeni, Ileanda, Lozna, Rus, Surduc	10249
Şes Mountain (Muntele Şes)	SCI (ROSCI0322)	Sălaj, Bihor and Cluj counties	34881
Măgurici Cave	SCI (ROSCI0192)	Sălaj and Maramureş counties	96
Racâş-Hida	SCI (ROSCI0209)	Hida commune	239
Tusa-Barcău	SCI (ROSCI0257)	Sâg commune, Tusa village	10.7

The climatic and bioclimatic potential. Due to its geographical position, Sălaj County has a moderate continental temperate climate, with some Western (maritime) influences, which is characteristic for the western and north-western regions of Romania. The western winds are prevailing.

The specific climate is that of the hills and basins below the mountains, with absolute heights between 200 and 800 m. It is favourable for all people, as a sedative-indifferent sparing bioclimate. It has relatively moderate climatic elements and bioclimatic indices throughout the year, slightly stimulant or non-stimulant for the human organism, which does not need to make special efforts for adaptation or acclimatization. It is considered an ideal bioclimate, which does not have therapeutic contraindications in any season. It is only above 800 m high, on the highest summits of Meseş and Plopiş Mountains, where one finds the features of the mountain tonic stimulant bioclimate, which demands more the neurovegetative and endocrine functions which coordinate and determine the acclimatization of the human organism to specific environmental conditions.

The major configuration of the landforms, as well as the detailed morphology and the vegetal cover, are elements which influence the climate, and therefore the human organism as a result. The climatic factors that have a bioclimatic impact (temperature, precipitation, humidity, winds, duration of sunshine, air composition, solar radiation, etc.) are elements which also influence the tourism activities or the practice of seasonal sports. The treatment of different illnesses depends largely on the relation between the organism and bioclimate, while thermic and hydric factors should be taken into account to carry out a climatic therapy. In carrying out the *aerotherapy* as a type of cure by direct contact of the organism with the atmosphere, the thermic factor and the air ionization are taken into consideration.

The hydrogeographical tourism potential is provided in the first place by the presence of streams in the county, especially Someş River and its tributaries, mainly Almaş, Agrij and Sălaj; Crasna River and its tributaries, especially Zalău; and Barcău River and its tributaries. The manners in which the drainage networks crossing Sălaj County participate to the support and

development of tourism activities come from the edge effects they have, the facilities provided by some sectors for leisure (picnics) or fishing, and the diversification of the landscape they create.

The physiognomy of the river banks (the configuration and detailed morphology, which is different according to the landforms crossed) has a major role in attracting tourists, while their typology imposes the type of practiced tourism. For leisure, forested banks are preferred, which provide a better edge effect, a low fragmentation and an extended riverbed.

Waterfalls are very important for tourism. They are present both in some karst areas (Barcău Springs, Devil's Dell – Vâlceaua Dracului) and in crystalline schist areas, for example in Meseș Mountains.

The lakes are remarkable both due to their esthetic and landscaping component, and their ichthyologic fauna (fish). There are several natural lakes – floodplain lakes, karst lakes or landslide lakes (like those on Teștioara Valley - Iezerul Mare and Iezerul Mic), and several reservoirs, such as those at Vârșolț and Sălățig.

Among the natural lakes, **Cehei Pond** stands out. It is located in Crasna River floodplain, close to the village of Cehei, in between the county road and the railway towards the town of Șimleu Silvaniei, and also close to Cehei Defile. The pond lies on a dead branch of Crasna River, separated from the current stream by means of alluvial deposits over a bedrock made of clays and marls. It became a protected area of national interest (faunistic reserve) by Law 5 of 2000, covering an area of 18.2 ha.

It presents a specific palustrine vegetation and a rich fauna, including invertebrates (Coleoptera, Heteroptera and crustaceans), fish, reptiles, amphibians and birds. The reserve was created to preserve the biodiversity, therefore any fishing activities are restricted.

Vârșolț Lake is the largest reservoir in Sălaj County, covering an area of 652 ha. It is located on Crasna River, near the village of Vârșolț. The dam is 17 m high and 2160 m long, and retains a water volume of about 50.2 million cubic metres. It was created in 1976-1979 to stabilize the Crasna River discharge, to control the floods, to protect from flash floods, to provide water to urban and rural settlements in Sălaj County.

From the point of view of tourism, it is attractive especially for those enjoying fishing, which is allowed on the basis of a special permit from Sălaj AJVPS, and for those who want to spend some time on the lake shores. Unfortunately, the lake has a lower level of attraction because it has not been properly designed, taking into account the esthetic and landscaping values of the areas where it is located. It does not benefit from facilities meant for tourism capitalization. There is an almost complete lack of tourism facilities, such as

camping areas, chalets, small accommodation units, nautical leisure bases, areas meant for the practice of sports.

The same holds true for the smaller reservoirs in the county, such as the one at **Sălăţig**, on Mineu Valley. The lake was created by raising a dam in 1982. The purpose was to stabilize the discharge and to control the floods on Mineu Valley and in the catchment of Sălaj River. The dam is 265 m long, 11 m high, while the reservoir covers an area of 70 ha, with an estimated water volume of 3.4 million cubic metres. The reservoir is one of the favourite destinations for recreational fishing lovers.

Unfortunately, the reservoirs in Sălaj County are confronted with the issues of alluviation and siltation. Therefore, the water cover decreases, while the palustrine vegetation advances.

Recreational fishing amateurs may also take into account other smaller natural or artificial lakes in Sălaj County, such as those near Benesat, Someş-Odorhei, Glod (in Someş floodplain), Motiş (Cehu Silvaniei), Şimleu Silvaniei.

Among the swamps, one remarks **Iaz Marsh**, which became a protected area of national interest (faunistic and floristic reserve) by Law 5 of 2000, covering an area of 10 ha. The marsh is located near Iaz village (Plopiş commune) and is an active bog, rich from the floristic and palynological point of view. The vegetation is made up by elements that are specific for peat bogs, including several rare herbaceous species. The wooded vegetation consists of species that are adapted to water and moisture (willows and alders). From the perspective of animal life, there is a high number of Coleoptera species, including a beetle (*Phytobius velaris*) which is unique in Romania. The swamp presents however a low interest for tourists, because the area is difficult to access without specific means.

Mineral and thermal waters are also present and are used for curative purposes at Băile Boghiş, Băile Bizuşa, Jibou and Şimleu Silvaniei. They are also present in other places, where they have been used on a larger scale in the past, but not anymore (for instance in Zalnoc, Zăuan-Băi, Meseşenii de Sus).

At **Băile Boghiş**, a spa resort located in the northern part of Boghiş village (Boghiş commune), one finds sulphurous, sodic, bicarbonated, iodinated and chlorinated mineral waters, as well as thermal waters with temperatures above 42˚C.

They are recommended for the treatment of the following illnesses and diseases: chronic degenerative rheumatic diseases – cervical, dorsal and lumbar spondylosis, arthrosis and polyarthritis; abarticular rheumatism – tendinitis, periarthritis, scapulohumeral periarthrosis; peripheral neurological disorders – light paresis and minor sequels of poliomyelitis; post-traumatic disorders – articular post-traumatic disorders, disorders after surgery on muscles, joints or bones, disorders after sprains, dislocations and fractures; gynecological

diseases – ovarian insufficiency, chronic cervicitis; nutrition and metabolic diseases, and dermatological diseases.

At **Bizușa-Băi** (Ileanda commune), the mineral waters spring from several places below the rocks along Secătura Valley, out of the Oligocene deposits which start in a continental facies, made up by a complex of brown clays, including strata of lignite, sandstones and limestones with pyrite concretions, which mineralize the waters at Bizușa. The waters are slightly sulphurous, sulphated, very lightly chlorinated, calcic, sodic and magnesic. Apart from the sources of cold mineral waters, there is also a natural spring with hypothermal waters (19˚C). These waters are characterized by the presence of hydrogen sulfide and carbon dioxide. The hydrogen sulfide is used both for the internal cure in hepatobiliary, nutrition and urination disorders, and for the external cure in locomotor disorders, degenerative rheumatic diseases, post-traumatic sequels and disorders of the peripheral nervous system.

Mineral or thermal waters are also present in other place in Sălaj County, especially in Silvano-Someșene Hills, but they are not momentarily capitalized for tourism, although they have been used for such purposes in the past. Such waters are found at Zăuan-Băi (Ip commune), where one finds mineral springs including sulphated, magnesic and calcic waters, at Zalnoc (Bobota commune) – sulphurous mineral waters, Valea Pomilor (Șamșud commune) – sulphurous mineral waters, Chieșd (Chieșd commune) – bicarbonated, calcic and magnesic waters, Meseșenii de Sus (Meseșenii de Jos commune) – sulphurous mineral waters.

The biogeographic potential is represented mainly by the vegetation cover, which is very diverse from the perspective of the association of components, and leads to a high landscape diversity.

Within the vegetation cover, the **forest** is very important for tourism. It is considered the most complex natural ecosystem, having a different vertical development according to the age. It is perennial and its physiognomy depends on the species it includes. It covers relatively vast areas, especially in the mountain ranges (Meseș and Plopiș), but also in the plateaus, hills, basins and valley corridors.

The deciduous forests (including mainly beech, sessile oak, pedunculate oak, and hornbeam) are predominant in the mountain ranges and in some hilly areas. They include certain vegetal associations as well as rare plant species which are of interest for tourists or for scientists.

The forest vegetation is therefore attractive for tourists, among other functions, because it represents a natural area in the great outdoors, an oasis of silence, lacking pollution or with low levels of pollution, a possible destination especially for those wishing to evade from the urban space (but not only). The

forest may become a place for leisure, recreation and relaxation by performing certain activities: observation of nature, photography in nature, landscape contemplation, walking, hunting, fishing, phytotherapy, food-related activities, traditional activities. Therefore, the forest combines the features of leisure tourism with those of the curative and sport tourism.

The forests covering the main summits of Meseș and Plopiș Mountains are among those that are the most visited in Sălaj County. They also cover large areas, down the slopes near to the villages located at the feet of the mountains. The tourist trails and routes in these mountains usually cross important forested areas.

Apart from these, there are also large forests in the hilly and plateau areas. Some of them have also become protected areas.

It is the case of **Lapiș Forest** located on the territory of Nușfalău commune, in Barcău catchment. The forest became a protected area of national interest (faunistic and forestry reserve) by Government Decision no. 2151 of 30 November 2004, covering the considerable area of 430.4 ha. It is managed by Zalău Forestry Direction, Șimleu Silvaniei Forestry Department. The reserve was created to protect biodiversity and to preserve the wild flora and fauna in this part of Romania.

The forest features several rare arboreal species, such as grayish oak (*Quercus pedunculiflora*), small-leaved lime (*Tilia cordata*), Turkish oak (*Quercus cerris*), Hungarian oak (*Quercus frainetto*), black locust (*Robinia pseudoacacia*), black pine (*Pinus nigra*), to which more usual species such as pedunculate oak (*Quercus robur*) and sessile oak (*Quercus petraea*) are added. The reserve also provides good living conditions for diverse mammalian and bird species, including several protected species.

Another special forest is **"La Castani" Forest**, located near Negreni village (Ileanda commune). The forest is relatively close to Someș floodplain and is characterized by the significant presence of the sweet chestnut (*Castanea sativa*), in association with beech, sessile oak, hornbeam, birch, sycamore, and cherry. It became a protected area of national interest (forestry reserve) by Law 5 of 2000, covering an area of 7.8 ha.

Panic Oak Forest is located near Panic village (Hereclean commune), between Miții Valley and Panic Brook. It became a protected area of national interest (forestry and landscape reserve) by Law 5 of 2000, covering an area of 2.2 ha. It is characterized by the presence of a rare oak species, the red oak (*Quercus rubra*), associated with other trees (hornbeam, pedunculate oak, hazel). Nearby, there is another reserve, **Panic Pin Oak Forest**, which became a protected area of national interest (forestry and landscape reserve) by Law 5 of 2000, covering an area of 1.7 ha. It is remarkable due to the presence of pin

oak (*Quercus palustris*), along with a rich and varied fauna of mammals, birds, reptiles and amphibians.

Racâș-Hida daffodils glade is one of the reserves meant to preserve special floristic species, including some that have an impact on the landscape and are attractive for tourists during the flowering period. It became a protected area of national interest (floristic and landscape reserve) by Law 5 of 2000, covering an area of 1.5 ha, and is also a site of community importance (SCI) integrated into Natura 2000 network, which however covers a much larger area.

The reserve has the role to protect mainly the daffodil species (*Narcissus stellaris* and *Narcissus augustifolius*), but also other flowering species which occur on this natural meadow, which also includes some clumps of woodland. The area is mainly visited during the flowering period of the daffodils (usually in May).

The **Sălaj Valley floodplain with fritillary** is a similar attraction. It became a protected area of national interest (floristic and landscape reserve) by Law 5 of 2000, covering an area of 10 ha. The reserve is located close to the town of Cehu Silvaniei, in the floodplain of Sălaj Valley, and is meant to protect a species of fritillary (*Fritillaria meleagris*).

The faunistic component represents an element that plays an important role in the diversification and in increasing the attraction of the studied territory. In the context of the current analysis, it is of interest from a scientific, esthetic, sporting and tourism perspective, as it may be capitalized by such activities like hunting or fishing. The natural balance can be maintained by a thorough control of the forestry and environmental authorities.

In order to protect and preserve the threatened species of cynegetic interest, it is important to control the hunting activities and, at the same, to facilitate such activities under strict surveillance. In Sălaj County there are 30 hunting areas, where the above-mentioned risks have reduced or disappeared, because there is a control in terms of reproduction and location of certain animals, and the hunting infrastructure is built and maintained, including hunting lodges, shooting boxes, feeding facilities, observation points, hunting trails.

4. Conclusions

Sălaj County has a significant natural potential, especially due to the existence of interesting landforms, the presence of mineral and thermal waters, the richness and diversity of the flora and fauna. However, this potential is yet to be fully capitalized in terms of tourism. The natural attractions of Sălaj County are still unknown or less known for a wide of range of tourists, even in

Romania, and they are mostly visited by locals. The landscape-related attractions are "in the shade" of other attractions in the Carpathians, while the thermal water resorts suffer from the competition of famous resorts in western Romanian counties. Therefore, the next step would the setting up of a very thourough strategy to make tourists aware of the natural attractions of Sălaj County and to work on the overall image of the county as a tourist destination.

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THE TOURISM ACCOMODATION INFRASTRUCTURE OF THE SETTLEMENTS IN MOŢILOR LAND

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ABSTRACT. ***The Tourism Accommodation Infrastructure of the Settlements in Moţilor Land.*** In Romania, though there were some attempts to develop the rural tourism during the communist times, this domain has really started developing only after 1990. In Moţilor Land the exact extent of this development is hard to grasp from the official documents as most of the tourism accommodation infrastructure is still not fully certified. The present paper would like to size as accurately as possible the difference between what the official documents are saying and the reality of the situation. We concentrate our analysis on the evolution of the accommodation infrastructure before 2010 and after. We also take a short look at the road and rail infrastructure as it plays a significant role in the development of tourism in the area.

Keywords: *"Moţilor Land", accommodation, infrastructure, development.*

1. INTRODUCTION

Moţilor Land is an ethnogeographic region of Romania located in the Apuseni Mountains, on the upper basin of the Arieş River. The exact extension of the area is subject to many studies, but for us the one presented by C.N. Boţan in his doctoral thesis "Moţilor Land. A Study of Regional Geography", that includes the areas of the main valleys of Abrud, Sohodol, Arieşul Mic and Arieşul Mare (upstream from Bistra), seems the most accurate and well documented. From an administrative point of view, the region covers 1068.89 km^2 of the NW part of Alba County and has a population of 38397 (2020). The only towns in the region are Câmpeni with 7375 inhabitants and Abrud with 5248. The rest of the 322 settlements are comprised in 14 communes[2]: Albac, Arieşeni, Avram Iancu, Bistra, Bucium, Ciuruleasa, Gârda de Sus, Horea, Poiana Vadului, Roşia Montană, Scărişoara, Sohodol, Vadu Moţilor and Vidra.

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[2] Commune= the smallest administrative unit in Romania, comprised of several villages.

The region of Moţilor Land has been confronted with both demographic and economic problems for a very long time. From a demographic point of view, the region has faced continuous depopulation throughout the last sixty years which has led to the feminization and aging of the population and to a high dependency rate. From an economic point of view, the main traditional activities in the area have been for many years, animal breeding, mining for silver and gold and forest exploitation. Agriculture is limited by the restrictions imposed by relief and climate. In the 1990s, the mines of Roşia Montană and Bucium closed and the locals had to find other sources of income so they started to invest in rural tourism and to develop the accommodation infrastructure.

Generally speaking, the tourism infrastructure is made up of the *accommodation infrastructure and the tourism facilities* on one side and the *communication network* (the road infrastructure) on the other side. The level of development of the tourism infrastructure is determined by the way and the degree in which the tourism resources of a region are capitalized so implicitly by the level of development of the administrative units that comprise the Land of Moţi.

2. MATERIALS AND METHODS

The accelerated dynamics of the development of tourism in the area within the last 30 years, makes difficult the process of inventorying and updating the list of the number of the accommodation units due to the rapid change in ownerships, in classification, and beds available, as a lot of the boarding houses are still in the process of being certified, some working with permits from the local administrations and a lot more working without any permit. On the webpage of the Ministry of Regional Development and Tourism, one would find that only 50 from the total number of 211 accommodation units were considered classified in 2011. Abrud, Câmpeni, Scărişoara and Horea each had one classified accommodation unit, Vidra 2, Vadu Moţilor 3, Albac 10, Gârda de Sus 13 and Arieşeni 18. On the A.N.T.R.E.C.'s webpage we find that there were a series of boarding houses from Moţilor Land that belonged to this organisation: one in Vadu Moţilor and Câmpeni, 2 in Abrud, 12 in Gârda de Sus and 18 at Albac. O.V.R. member boarding houses were significantly less: 5 in Gârda de Sus and Arieşeni and 2 in Albac while there was only one boarding house located in Albac that was a member of B&B network. In order for our study to represent the situation regarding the accommodation infrastructure as accurately as possible, we completed the data obtained from the sources mentioned above with information obtained from the numerous web pages dedicated at promoting accommodation units, from the National Institute of Statistics data for Alba County and the field

inquiries we completed in the period from 2005 to 2020. The bibliographical resources consulted only partially represent the reality of the situation as they mainly refer to board houses members of A.N.T.R.E.C. and O.V.R. and those that exist on the Ministry of Tourism website. The difference between the numbers these studies present and the reality on the field is significant.

The accommodation infrastructure in Moților Land is composed of several types of units: boarding houses, hotels, villas, motels, chalets, rooms for rent and campings. In the present study we counted also the entire number of accommodation units located in the holiday village of Vârtop even though administratively some belong to the Bihor County as the border between Alba and Bihor counties goes right through the middle of the tourist village developed around Arieșeni ski slope.

3. RESULTS AND DISSCUSSIONS

3.1. The accommodation infrastructure before 2010

Before 1990, within the studied region the level of development of the tourism infrastructure and thus the degree of capitalization of the tourism resources was relatively low. At that time there existed only two campings on Arieșul Mare Valley, at Gârda de Sus and at Arieșeni, two hotels, one in Abrud and one in Câmpeni, and one ski slope in Arieșeni.

After the fall of communism, the area went through a process of assertion of the rural tourism as a result of the logistic and financial support of the European Community, especially due to the non-governmental organizations like A.N.T.R.E.C. (National Association of Rural Ecological and Cultural Tourism) and O.V.R (Opération Villages Roumains) and to the involvement of the local authorities and the rural communities. The Land of Moți, in particular the communes Albac, Scărișoara, Horea, Gârda and Arieșeni were included in two sets of programmes that were developed in the 1990s: *the pilot villages project launched by O.V.R.* (1991) that aimed to establish an inter-communal partnership among Romanian communes and foreign ones and the project coordinated by A.N.T.R.E.C. that aimed to implement the programme *Phare Tourism (1993-1997)*. As a result of these projects, the accommodation infrastructure went through some significant changes regarding both the number of accommodation units and their diversity and quality, but in an unbalanced way at the regional level. Thus, on the Arieșul Mare valley, there was a significant leap in both the quantity and quality of the accommodation infrastructure while in the other communes this „leap" was comparatively smaller or it lacked completely.

In 2010, the accommodation capacity of the Moţilor Land comprised 3326 beds. The majority of the accommodation units totalling 171 (other 27 located in Vârtop-Bihor) were boarding houses out of which just 4, all located in Abrud, would qualify as urban boarding houses, the rest being rural boarding houses. The greatest majority of them, 66 (without the 10 located in Vârtop-Bihor), were located in the *tourist resort of local interest* of Arieşeni (Government Decision no. 329/2006) while in Gârda de Sus and in the *tourist resort of local interest* of Albac (Government Decision no. 801/2005) there were 34 boarding houses in each of them. Significantly less boarding houses had Scărişoara with 10 units and Horea with 9.

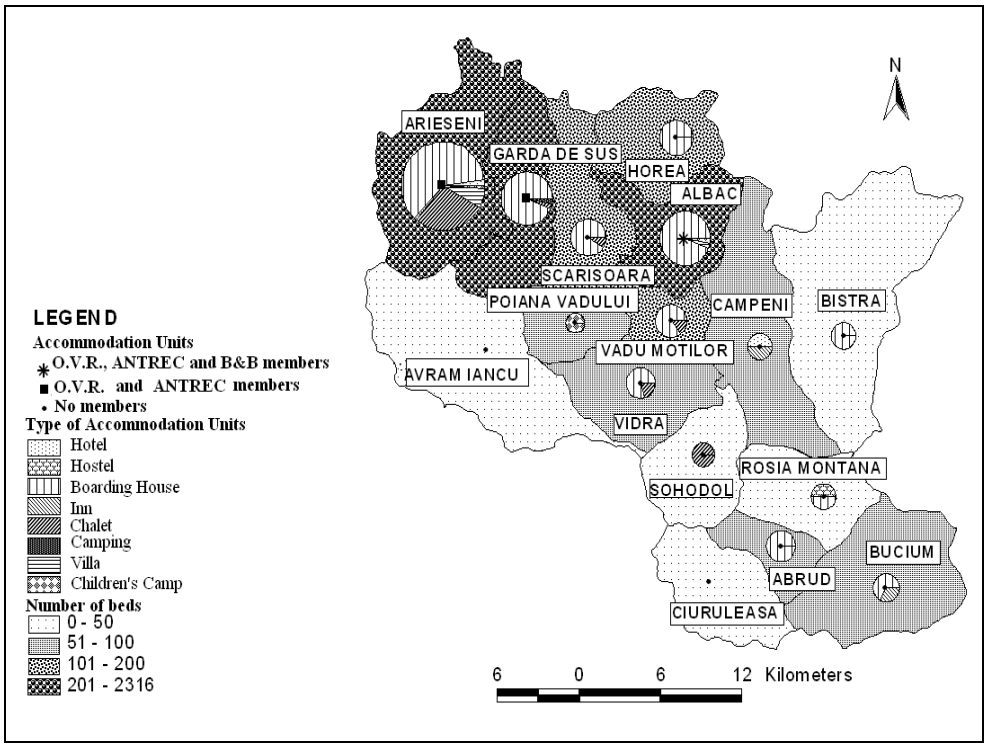

Fig. 1. The Accommodation Infrastructure in Moţilor Land (2010)

The rest of Moţilor Land was characterized by the presence of very few boarding houses. The rural tourism had just recently started to develop there due to the fact that the support of the non-governmental organizations and of the authorities had been far less than in the case of the previously mentioned 5 communes on Arieşul Mare Valley. Added to this, in some cases the problem had been the restrained attitude of some of the communities towards tourism,

while in others, like in the case of Roșia Montană, the local authorities actively opposed any attempt to develop tourism infrastructure as they supported the approval of the mining project of the company Roșia Montană Gold Corporation. Thus, for the remaining part of Moților Land, we had the following situation: Vadu Moților with 6 boarding houses, Abrud and Vidra with 4, Bistra and Bucium with 2, Roșia Montană with 1, Câmpeni, Sohodol, Poiana Vadului, Avram Iancu, Ciurulesa with no boarding houses. In the region of Moților Land there were 2596 beds available in boarding houses (another 157 beds in Vârtop-Bihor), so an average of 15.18 beds per boarding house, the highest number of available beds being in Arieșeni which had an average of 16.72 beds/boarding house.

The following type of accommodation structure in what regards the number of units is that of chalets. Within the studied region there were a number of 30 chalets (other 10 were in Vârtop-Bihor with 178 beds) with an accommodation capacity of 423 beds, so an average of 14.1 beds/chalet. As in the previous case, the most numerous accommodation units were in Arieșeni, 25, while only 1 chalet could be found in each of the following communes: Gârda de Sus, Scărișoara, Sohodol, Vidra and Vadu Moților.

Significantly less in number were the other types of accommodation units. There were 4 hotels with 276 beds available (one in Câmpeni and Abrud and 2 in the Vârtop-Bihor area), 1 hostel with 6 beds in Roșia Montană, 2 inns with 50 beds, one in Câmpeni and one in Bucium, 10 villas with 268 available beds (10 units in Vârtop-Bihor, 6 in Arieșeni and one at Albac) and just 1 camping with 20 beds in Gârda de Sus. Besides these types of accommodation units, two children's camps functioned at Poiana Vadului and Arieșeni within the local boarding schools during summer. The bigger one was in Arieșeni, with 100 beds.

In conclusion, in Moților Land the development of rural tourism has made a significant leap from the level it was before 1990 to the level it was in 2010, when there were 238 accommodation units with a total number of 3938 beds available (including the Vârtop-Bihor area that had 27 accommodation units totalling 612 beds). The Arieșeni-Vârtop area had the highest average of beds per accommodation unit, 18.32. The majority of the accommodation places were classified as two stars/daisies units. The highest numbers of boarding houses had developed slowly paced by the owners' income level and had few tourist facilities.

3.2. The accommodation infrastructure in 2020

The region, in spite of its great natural and anthropogenic attractions, is one in which tourism has only begun to grow within the last 30 years and as a result the health and recreation facilities are few and of lower quality. Scărișoara Ice Cave, the biggest attraction of the area, was electrified and properly equipped for tourists only in 2001, while the other beautiful caves in

the area remain completely unequipped. The ski slope in Vârtop, Arieşeni commune, was extended and equipped with a ski lift in 1996 and only in 2005 a ski lift started functioning also on the second ski slope, Vârtop II.

Table 1. The size and the structure of the accommodation units in Motilor Land (2020)

Administrative Units	CIURULEASA	ABRUD	BUCIUM	ROŞIA MONTANĂ	SOHODOL	VIDRA	POIANA VADULUI	AVRAM IANCU	VADU MOŢILOR	CÂMPENI	BISTRA	ALBAC	SCĂRIŞOARA	GÂRDA DE SUS	HOREA	VÂRTOP	ARIEŞENI	TOTAL
No of accommodation units	0	4	8	13	2	10	2	4	10	13	2	46	3	63	18	52	93	343
No. of beds	0	70	84	107	17	97	60	32	176	275	38	634	32	845	167	1080	1595	5309
Hotel	0	0	0	0	0	0	0	0	0	5	0	0	0	0	0	3	0	8
No of beds	0	0	0	0	0	0	0	0	0	164	0	0	0	0	0	171	0	335
Motel	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
No of beds	0	0	0	0	0	0	0	0	0	0	24	0	0	0	0	0	0	24
Boarding house	0	4	5	4	0	6	0	1	3	2	0	24	2	30	12	12	33	142
No of beds	0	70	50	59	0	56	0	12	43	46	0	323	20	477	111	258	588	2113
School Camps	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	2
No of beds	0	0	0	0	0	0	48	0	0	0	0	0	0	0	0	0	106	154
Chalet	0	0	0	2	2	1	1	1	4	2	1	7	0	17	2	20	15	75
No of beds	0	0	0	15	17	10	12	6	47	23	14	65	0	194	29	405	264	1101
Villa	0	0	0	0	0	0	0	0	1	0	0	1	0	0	1	5	5	13
No of beds	0	0	0	0	0	0	0	0	32	0	0	51	0	0	13	78	165	339
Camping	0	0	1	1	0	0	0	2	0	0	0	0	0	0	0	0	0	4
No of beds	0	0	20	11	0	0	0	14	0	0	0	0	0	0	0	0	0	45
Rooms for rent	0	0	2	6	0	3	0	0	2	4	0	15	1	16	3	12	40	104
No of beds	0	0	14	22	0	31	0	0	24	42	0	195	12	174	14	168	578	1274

In the winter ski season of 2010-2011, a new ski slope equipped with a ski lift, was opened nearby, at Piatra Grăitoare, Nucet, Bihor County, but no connection with the Vârtop slopes was made due to a mix of economic, administrative and political dissensions. Another ski slope was in construction in Gârda de Sus, and was scheduled to open in the winter season of 2011-2012 but did not, due to divergent interests between the investor and some local businesses, though it was 90% built.

In spite of the limited investments from the authorities and all the dissensions, the biggest one being the Roșia Montană Gold Corporation mining project, tourism continued to develop in the period between 2010 and 2020 mostly due to private initiatives especially in the accommodation sector. The number of accommodation units rose in the region to 343 and increased by 44.11%, while the number of places available rose to 5309, an increase by 34.81%. One should bear in mind that these are mostly small accommodation units, with an average of 15 beds per unit.

To get a better picture of the development of tourism in the region, we divided the administrative units according to the number of accommodation units present on their territory, as follows:

- Communes/Towns with very poor tourism development, that have less than 10 accommodation units: Abrud, Bucium, Sohodol, Poiana Vadului, Avram Iancu, Bistra, Scărișoara, Ciuruleasa, the last one having none.
- Communes/Towns with poor tourism development, that have between 10 and 15 accommodation units: Roșia Montană, Vidra, Vadu Moților, Câmpeni.
- Communes/Towns with a good tourism development, that have between 15 and 30 accommodation units: Horea.
- Communes/Towns with a very good tourism development, that have over 30 accommodation units: Albac, Gârda de Sus, Arieșeni.

As one can see, the most developed of all the communes continue to be Albac, Gârda de Sus, Arieșeni, the local resorts that developed around the two main attractions: the ski slopes of Vârtop and Scărișoara Ice Cave. The Abrud region and the Arieșul Mic valley are least developed due to the uncertainty caused by the mining project in the first case and due to the geographical position, in a cul-de-sac, for the latter.

The most numerous accommodation units continue to be the boarding houses (142), followed by rooms for rent (104) and then chalets (75). Boarding houses also have the greatest number of beds available, 2113, followed by rooms for rent, 1274 and chalets with 1101. The great number of rooms for rent type of accommodation is a sign that locals are highly involved in the tourism business and that they have not been overtaken by big outside investors. The last ones can be mostly found in the Vârtop slope area.

In 2010, the number of overnight stays, according to the INSS data, was 18668, while in 2019 it amounted to 81613 (2020 was a pandemic year and tourism declined). The index of net utilization of accommodation capacity in operation was about 35.49% in 2010, while it was 53.76% for 2019. In both cases, this is an upward trend compared to the period before 2010.

3.3. Communication and transportation network

In Moţilor Land, the communication and transportation network is solely terrestrial - roads and railways - and presents significant restrictions in its development due especially to the nature of the relief: height, steep lime slopes and isolated plateaus. The main road routes follow the important valleys of the region: Arieş, Arieşul Mare, Abrud and Arieşul Mic. The national roads that cross the region are DN 74 between Bucium-Sat – Abrud – Ciurulesa – Buceş Pass, DN74A between Abrud – Abrud sat – Coasta Henţii –Câmpeni, DN1R (former DJ108) limit of Cluj County – Mătişeşti – Horea – Albac, and DN75 between Bistra – Câmpeni – Vârtop Pass. The secondary road network is made of ten county roads, DJ 762 that connects Avram Iancu and Vidra with DN75, DJ107I Aiud – Mogoş – Bucium Sat, DJ742 Gura Roşiei (DN 74A) – Iacobeşti – Roşia Montană, DJ750 Gârda de Sus – Ordâncuşa – Gheţar, DJ750A Gura Sohodol – Sohodol, DJ750B Vadu Moţilor – Burzeşti – Poiana Vadului, DJ750D Arieşeni – Stei – Arieşeni – Buciniş – DN75, DJ750E from DN 75 – Holiday Village – Vârtop, DJ762A Vidrişoara – Muntele Găina – limit of Arad County and numerous commune and local roads that connect the localities that form up the commune. Though on paper there are 10 county roads, in reality the quality of these roads is most of the times very bad, in fact DJ750D and DJ705E are dust roads. Arieşeni mayoralty expressed its desire to change the category of these roads into that of communal roads in order to be able to access European funds to modernize them.

The railway transportation is limited at present. There used to be a narrow gauge railway nicknamed „Mocăniţa" that connected Turda and Abrud and was used mainly for ore transportation, but it also transported people. It was closed in 1997. A part of it, 12 km, was rehabilitated in 2004 on the route between Câmpeni, Abrud and Roşia Montană and was reintegrated in the tourist circuit in 2020.

4. CONCLUSIONS

Concluding, the not so good state of the national roads and the bad one of the other types of roads added to the degradation of the Turda-Abrud narrow gauge railway are considerably limiting the movement of tourists and thus the development of tourism in the whole region.

The accommodation infrastructure in Arieşul Mare area continues to be the most developed as a result both of the programs launched by OVR and ANTREC in the early 1990s and the existence of the two main attractions: the ski slopes of Vârtop and Scărişoara Ice Cave. The accommodation infrastructure is otherwise deficient, with some notable improvements over the last 10 years in Roşia Montană (from 2 to 13 units), Bucium (from 3 to 8 units) and Vidra (from 5 to 10 units).

Though rural accommodation type of two daisies predominates, most boarding houses are not officially registered and classified, there are major differences between the data held by the authorities and the real ones regarding the tourist phenomenon in the region. And in this aspect resides the originality of our paper as there are many studies that have as a focus the tourism development in this area of the Apuseni Mountains but fail to have an in depth analysis of the situation on the ground as they focus only on the official data. For example, Roşia Montană does not appear in any of the official documents as having tourism accommodation, neither in the National Institute of Statistics' data, nor on the ministry's website, when in reality there are 13 units. Overall, according to the data from Ministry of Economy, Entrepreneurship and Tourism there are 179 accommodation units in the region for the year 2020, while in the National Institute of Statistics' data there are 82. From our detailed research we found out that there are 343, a statistically significant difference when it comes to an accurate study regarding the development of tourism in the area.

Finally, though it is a tourist area with a natural and anthropogenic tourist potential of great value, the area is still deficient in tourism infrastructure, especially in terms of recreation and treatment equipment and the state of the roads, which considerably slows down the development of tourism, even though there is a significant local initiative shown by the fact that the number of accommodation units increases over time and that most of them are boarding houses and rooms for rent type of accommodation which is a sign that locals are highly involved in the tourism business.

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TEACHING AND EVALUATION OF ONLINE GEOGRAPHY LESSONS DURING THE COVID-19 PANDEMIC IN ROMANIA

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ABSTRACT. ***Teaching and Evaluation of Online Geography Lessons during the COVID-19 Pandemic in Romania.*** Today, primary, middle and secondary schools in Romania access eLearning from different educational platforms, students manage connecting to virtual classes, sending/receiving emails, watch PowerPoint presentations, taking online tests. All these take place in the context of the pandemic determined by COVID-19. The authors tried to point out some observations to all the changes generated in the traditional Romanian schools, because of the generalized digitalization. Geography teachers try to make the necessary changes in their teaching and evaluation methods, to keep up with the digitalised demands of nowadays society.

Keywords: *digitalisation, online classes, COVID-19, Google Classroom, SWOT analysis.*

1. INTRODUCTION

The occurrence of the first COVID 19 cases in Romania started the forced digitalization process of the Romanian educational system. Teachers and students face a reality without precedent in the history of Romanian educational system: taking classes online.

On 11 March 2020, due to a national decision to stop or lower the expansion of COVID cases in Romania (Decision no. 6 of CNSSU), the schools were closed initially for 2 weeks, act followed by the implementation of online education.

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During the emergency state in Romania (16 March – 15 May 2020), teachers and students managed to stay connected with each other, accessing the WhatsApp application, forming groups for each class, in order to receive the lessons and homework. Then the reversed process started after learning the lessons and writing the homework: sending the homework back to the teachers. The difficulty of this process was on both sides, teachers and students depended on the phone's capacity to process all the sending and receiving data.

Later, by using the Zoom application, the online educational process developed differently. Thus, teachers and students were able to see and talk to each other, a most welcoming event during the lockdown. But the educational process was influenced by many problems: poor or no internet connection, the lack of modern gadgets, laptops, computers, etc.

There was an upgrade of the educational process, emphasised by the utilisation of Google Classroom, which assured a better connection between the two sides, and the improvement of the educational system.

In order to better organize the educational system during this pandemic situation, for the 2020-2021 academic year several scenarios were established in Romania by the Ministry of Education and Scientific Research, together with the Minstry of Health, according to the COVID infection rate (Decree no. 5487/1494/2020):

- Green (face-to-face) scenario: all students and teachers go to school (under 1‰ COVID-19 positively-tested people)
- Yellow (mixed) scenario: half of the class is online and half at school (between 1 and 3‰ COVID-19 positively-tested people)
- Red (distance learning) scenario: classes are held online (over 3‰ COVID-19 positively-tested people).

In the autumn of 2020, the school started in Romania according to the mixed scenario, which lasted from September 2020 to November 2020, followed by the distance learning scenario. Some of the geography teachers considered the mixed scenario a real challenge, as they had to pay the same attention to all the students (in class / online), to check the connection to his/her online students, to assess the students present in class, while providing exercises to those online. Most of the times, the Geography lessons were disturbed by poor internet connexion, which led to the fragmentation of the lesson and loss of interest for the new lesson.

2. METHODOLOGY

In this paper, the authors analysed online education as a social phenomenon in the whole Romanian education system during the coronavirus pandemic period. The results were drawn from descriptive observations upon students in the middle school and secondary school and the effects upon the learning system, by the different teaching modalities: online, hybrid, onsite.

Differences may be easily noticed not only in changing tools applied for teaching, but also changing the methods of teaching, that must adjust to eLearning demands.

According to Edelhauser and Lupu-Dima (2020), the "2020 coronavirus crisis has shown an old weakness of the Romanian education system, the incomplete adaptation of the teaching process to the use of digital tools. In the Romanian education system, eLearning became a must on 16 March 2020, when the whole education system was reset for eLearning because of the state of emergency".

We agree with these authors that there is a growing impact of the internet in daily life as well as in education, because of the technological transformation to which humanity has been subjected and ignoring the digitalization is the equivalent of refusing to progress.

3. IMPLEMENTATION OF eLEARNING IN ROMANIAN PRIMARY, MIDDLE AND SECONDARY SCHOOLS

Górska (2016) stated that eLearning would bring a new quality to academic education, as access to advanced technologies is very highly valued by young people accustomed to the daily use of electronic media. Many high school students approaching future studies at university are guided by the possibility of following courses offered not only with traditional methods.

According to Castle and McGuire (2010), one of the biggest assumptions commonly made in the development of eLearning programs is that the more visually appealing a program, the more the learning that will occur.

The vast internet network has provided access to multiple geographical data, most of it used for the first time by many geography teachers. Thus, geographical information could be easily linked to history facts (tutorials about the great geographical discoveries, the digital map of the European Union, etc.), biology (images about different biogeographical areas of the Earth, endangered animal species, etc.), maths (exercises of calculating the local hour, the scale of the map, different locations on Earth, using Google Maps, etc.), foreign languages

(different tutorials are presented in a foreign language, so it is important for the teacher to translate the new terms correctly, for a precise understanding of the new geographical notions).

Fig. 1. Use of a foreign language in a PowerPoint Presentation, followed by accurate translation.
Source: the authors

Therefore, a successful lesson requires a consistent amount of work on behalf of the geography teacher, in order to reach the ideal education, established by precise objective activities (Maria Eliza Dulamă, 2000), and depends on the access and implementation of new and diverse information sources in the Geography lesson (Maria Eliza Dulamă, 2008). Before the online teaching, most geography teachers used for their Geography classes the Geography book, theme maps, scientific articles, different magazines, etc, while nowadays, the sources of information are mostly taken from the internet: YouTube tutorials, digital maps, spectacular geographical images, geographical articles, etc. The lessons themselves changed their presentation mode, so instead of just writing down the new lesson, students are presented PowerPoint lessons, are required to do different exercises in Excel, Paint, etc. The result is a better and faster way to understand new geographical terms, with the help of inserted images, maps, links, terms borrowed from other areas of study. The main goal at the end of the lesson is a better understanding of the geographical reality (Maria Eliza Dulamă 2008, O. Mândruţ and Steluţa Dan 2014, N. Ilinca 2015, Elena Matei 2020).

But the teacher's effort to make a great lesson may be in vain sometimes, because of the poor internet connection, caused by the massive number of internet users, lack of proper network structure, loss of the wireless internet signal, as a result of a bad weather, and so on, and the lessons are thus shortened

and inefficient. The positive aspect in online is that the teacher can upload the lesson on Google Classroom, to be accessed by those interested.

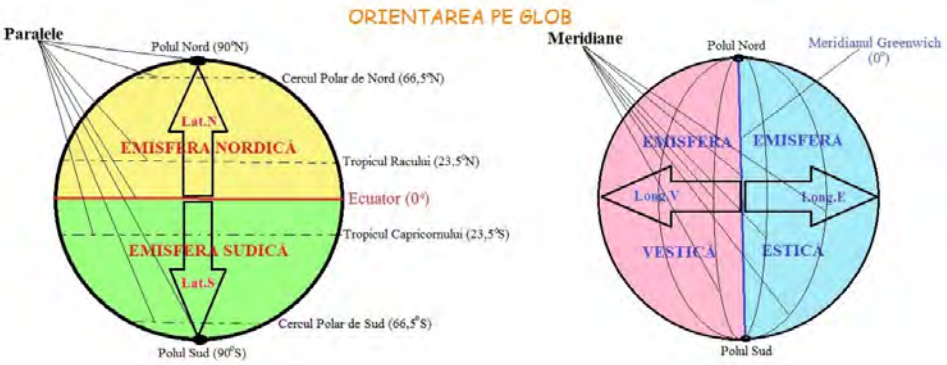

Fig. 2. The sketch of a Geography lesson made in Paint during a Geography class.
Source: the authors

Drawing a parallel between the classic Geography lesson in school versus the online Geography lesson, one can establish pros and cons for each system, with some differences in particular cases.

In the classroom, the teacher can use the Geography lab (unfortunately not all schools have it), the blackboard (the smart board is not present in all the classes or schools), the map, the Geography book, all these for the benefit of the students, who are more or less motivated to study Geography. Teaching Geography in school follows the steps already established by the methodology: after checking the homework, along with the geographical notions from the last lesson, the new lesson and its objectives are announced and written on the blackboard/smartboard/Geography notebooks, the new geographical terms are explained for a better understanding and finally the homework is set, in some cases (see also Maria Eliza Dulamă 2000, Maria Eliza Dulamă 2008, O. Mândruţ and Steluţa Dan 2014, N. Ilinca 2015, Elena Matei 2020).

Online, the teacher can create new, spectacular geographical lessons, by inserting lots of different pieces of materials during the Geography lesson, such as: images, short videos, YouTube tutorials, digital maps, PowerPoint slides loaded with interesting reality facts, etc.

For a successful result, according to Castle and McGuire (2010), the course content is the most important component in the teaching process, no matter how advanced the technology is and how competent is the teacher's ability to connect with students. "The positive impact of efforts to constantly

upgrade course content material, especially with respect to online instruction, is clearly seen in student assessments. Once course content has been addressed, then instructor teaching skills and the ability to connect with students and motivate them is likely an important component" (Castle & McGuire 2010, p. 38).

The most important disadvantages of online classes are that the field trips are not allowed, and the big group projects are replaced by individual projects. The time for presenting these projects is also limited or restricted because of the internet connection.

There are pros and cons for each educational system methods. In order to reduce the gap in the educational process of the students, a full-time commitment of both parties (parents and school) is necessary. So, in order to stay connected to the online educational system, students need internet access, computer/laptop/tablet, a desk and ideally their own study room. But these elementary conditions for accessing online education are not within reach to some poor and large families, who live in precarious conditions, with no money to invest in the education of their children. The consequences of these events will be seen in the years to come and will lead to a higher rate of unfinished studies for poor children or even abandoning school completely.

Other disadvantages of the online education are: the lack of legislation in force to establish the rules for what information is good or useful for the students in the educational process, how many digital competencies a teacher should possess in order to adapt himself/herself to the online reality, whether parents are capable to replace the teachers in order to fill in the gap in the educational knowledge where online education is not possible. But the process of online education continues and so, the necessary amendments will be established gradually, for a better online school environment.

4. SWOT ANALYSIS OF THE ONLINE GEOGRAPHY LESSONS

STRONG POINTS

- use of visual material resources (images, pictures, maps, diagrams, movies, geographical videos, video applications, online games, etc) in a higher percentage compared to the lessons in school;
- the use of motion pictures or films (films, geographical videos, geographical video applications) compared to those motionless leads to a higher rate of understanding of the geographical notions and the geographical reality;

- the possibility to assess the students' knowledge in far more diverse and attractive ways by means of Quiz tests, tests made on Google forms, Kahoot! tests;
- earned time resources (working online from home favours earning more time usually spent in going/coming to/from school) which can be used for other purposes.

WEAK POINTS

- time-consuming resources on selecting the right information for the Geography lesson (images, pictures, maps, diagrams, graphics, etc). All these must be sorted out, processed and adapted to the online lesson scenario (PowerPoint lessons, maps in Paint, etc);
- assessing the students' knowledge is not as accurate as in the classroom. Many students are overrated, because of the possibility that their answers are influenced/offered by someone else: parents, brothers, classmates, etc.
- for a proper evaluation of the students, the teacher should come up with more tests on a certain theme (more numbers), in order to limit the possible fraud;
- the large amount of time a teacher has to spend sitting, in front of the computer, as a teacher has to evaluate the students' tests and homework, which can lead to health issues for the teachers: poor sight and back bone pain. This occurs because the teacher has to establish a feed-back for each individual student, while in the classroom, the information is provided only once, for the entire class;
- children in primary school need adult supervision until they are capable of using the technology and can participate and interact during online lessons;
- online activities lead in time to a more sedentary life (teacher or student), and higher risks of childhood obesity.

OPPORTUNITIES

- the implementation of network infrastructure in school units, to access online education, with the help of the Ministry of Education and Scientific Research;
- the parents' support to provide high tech resources to their children and private spaces for learning;
- the large amount of geographical information on the internet (images, pictures, maps, diagrams, graphics, etc.);

- use of the digital school manual;
- use of various methods for students' assessment: Quiz tests, tests made on Google forms, Kahoot! tests.

THREATS

- power outage/no internet connection for periods of time and in different locations;
- the lack of high-quality technology: computers, laptops, smartphones, web cameras, high speed internet network;
- although the Geography lessons can provide quality information and offer spectacular visual effects, some of the students are not one hundred percent involved in the educational process because of the presence of other disturbing factors, such as: more family members in the same room, radio/TV on, temptation of computer games, written communication to classmates or friends, etc.;
- the teacher does not hold total and fair control in the assessment of his/her students, as many students close their web cameras, in order to easily communicate with their parents/brothers/classmates in order to get better grades;
- without parental support, some of the students cannot handle alone the technology, and have difficulties in sending the homework to the teacher, in due time.

5. SUGGESTIONS

These months of COVID-19 pandemic determined teachers and students to face and deal with outstanding situations for the Romanian educational system. The government, the local authorities, the schools' directors, the teachers and parents, have all tried to find and apply measures to support their children for accessing educational platforms. With tremendous efforts, they have succeeded to implement eLearning across most of the country and we all hope to make use of it in the future as well, when the pandemic ends. Below, some suggestions of using online education are presented, and maybe, if applied, will make the educational life for some students more fulfilling:

- Free access to online education, if there are health issues that do not allow students to be in school;

- Possibility for students to connect to online classes, if due to some impediments (bad weather, broken school bus) the student cannot be in the classroom;
- Possibility for smart children to access better education, provided by top schools, if the student is enlisted to that school, for online classes;
- Openness for school directors and teachers, to enlist at their school, for online classes, children who would/could not be there physically.

6. CONCLUSIONS

Despite all the challenges that brings along, eLearning opens the path to new ways to access primary education in Romania and follows the trend imposed by the more efficient use of technology, in Romania's 21st century society. Before the pandemic situation there was no possibility to access primary, middle and secondary school online, as often there was no internet in schools, no educational platform, no trained teachers able to handle hybrid lessons. In Romania, only some universities had distance learning platforms. Maybe in the future, eLearning will still be used for diverse situations, to allow students who cannot be at school physically, to access online education.

The positive impact on the Romanian educational system of this forced digitalization is that the traditional Romanian schools face a lift-up of their old, traditional teaching methods, and the result will be a skilled young generation, able to respond to the demands of a highly technologized society.

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ROMANIAN ACADEMY

DEPARTMENT OF ECONOMIC AND LEGAL SCIENCES AND SOCIOLOGY
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CENTRE for MOUNTAIN ECONOMY "CE-MONT" VATRA DORNEI

CE-MONT
Centrul de Economie Montană

"A VISION OF SUSTAINABLE - MOUNTAIN - DEVELOPMENT FOCUSED ON THE VALORIZATION OF QUALITY "MOUNTAIN PRODUCTS". THE INCREASING IMPORTANCE OF MOUNTAIN AREAS IN THE POST-COVID-19 CONJECTURE"

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Bucharest
4 September 2020

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PART I:

The ADVANTAGES of the MOUNTAIN AREAS and AGRI-FOOD "MOUNTAIN PRODUCTS" - for MITIGATING/COMBATING the EFFECTS of the COVID-19 PANDEMIC - on the POPULATION'S HEALTH.

● MAJOR CONTRIBUTIONS, for PREVENTING the EXPANSION and APPARITION of NEW VIRAL FORMS – with SIMILAR EFFECTS – through:

1. **Territorial location of farms/households, mountain villages/settlements.**

● The increased spread, with increasing altitude, isolation and a (partial) economic independence, **significantly reduce** the chances of infection and spread of COVID and other diseases.

2. **The unpolluted air in the mountains** is a supporting factor for the health of the inhabitants and the urban population who travel, periodically, to the mountains (unlike urban agglomerations, exposed to pollution).

3. **Drinking water:** unpolluted, good quality, for PEOPLE and ANIMALS. It includes mineral and flat waters, with rich resources in the Romanian Carpathians.

4. **The ozone layer** and solar radiation, with static or harmful bacterio/virus effects.

5. **The aerosols** from coniferous and deciduous forests, which help treat and prevent respiratory diseases (associated with COVID) and maintain human health.

6. **Agri-food "mountain products"**, in **ZERO-CHEMIZATION** conditions.

It is a factor of the greatest significance, for supporting the combating/ mitigation of the effects of pandemic/endemic aggressions, current and future - by preserving/improving health for the people in mountain areas (farmers, communities), with major contributions for the urban population as well.

CONCLUSIONS

The "**mountain product**" represents **a NOVELTY at EU and world level** (with a Romanian contribution) and a **new OPPORTUNITY/CHANCE to SAFEGUARD a large socio-economic segment of Romania** (> 30% of the territory/20% of the population), **marginalized** for the last 30 years[1].

[1] R. Rey – The books "Future in the Carpathians" (1979), "Mountain Civilization" (1985), "The mountains and the 21st Century. Comparative study of European strategies on mountain areas, with special reference to the area of the Romanian Carpathians. M1-SEE plan" (2011/2014 – reissue).

● **The COVID-19 pandemic highlighted the considerable importance of the mountain area, in the economic and social ensemble of Romania and the European Union.**

The "mountain product", according to EU/EC Regulations 1151 and 665 and the current Romanian legislation, represents **an agri-food product of the highest quality** (dairy, meat, vegetables), achievable exclusively in the natural conditions of the mountain area;

- is obtained in conditions of **ZERO CHEMIZATION** through the **polymorphic flora of the natural mountain meadows** (multivitamins, mineral salts, the intake of medicinal plants). Animals are raised "free-range" (elimination of toxins through perspiration, with clean water, without stress…). **The products obtained do not contain preservatives, dyes, E-s, etc.**, with cumulative effects that are unsafe for health.

At the National Mountain Area Agency (NMAA) is evolving the **"Registry of Mountain Products"**, **certified (>1,100 mountain farms/July, 2020**).

● Mountain products are **more difficult** to obtain, with **lower** yields and in **harder** working conditions for mountain farmers, an aspect that justifies **the need for a satisfactory MOTIVATION for producers,** essential for the young generation.

The organization of the production, collection, transformation and capitalization of "mountain products" is **A GREAT OPPORTUNITY** for a **SUSTAINABLE FUTURE for the mountain areas** - **AMPLIFIED by the COVID PANDEMIC**.

The first beneficiaries of the "mountain products": all those **IN THE FRONT LINE:**

- COVID patients.

- medical and adjacent staff involved in combating/preventing the pandemic (today and for the future).
- MIA staff (police, gendarmerie).
- the military personnel involved.
- children.
- people with great responsibilities in leading the country (good health, ensures resistance to stress and an **optimistic** attitude).

Organizing a **warehouse(s) of "mountain products"**, with distribution **dedicated** especially to **CORONAVIRUS patients** and **the medical and adjacent staff, from the front line**. **State support for motivating** producers (farmers) of "mountain products", through **compensatory, attractive prices, provided when receiving products in warehouses (contracts)**.

CONTRIBUTIONS of the RESEARCHERS from CE-MONT/INCE; SCIENTIFIC PERSONALITIES and SPECIALISTS "ASSOCIATED" with CE-MONT.
● Representative factors in the mountain area: mayors; GAL; entrepreneurs; NGO – for

MITIGATION of the EFFECTS of the COVID-19 (PANDEMIC) EPIDEMIC and for the RECOVERY of the POST-COVID-19 MOUNTAIN ECONOMY
Selections – IDEAS – PROPOSALS

● Outlets, specialized in "mountain products", in supermarkets and markets (separate spaces, easily identifiable).

● Online digital platforms for promoting and selling "mountain products".

● The involvement of courier companies to operate in hard-to-reach mountain areas.

● Sustainable regeneration projects, with the production of masses of raw materials (e.g. fruit growing, arboriculture).

● Attracting **motivating** investment funds for the return to the country of young mountain farmers.

● Preparation of human resources for specializations/vocations, administration - with application in mountain areas.

● Mobile shops for "mountain products".

● No taxation - during the production processes of "mountain products".

● No taxation of mountain farms, which are part of a cooperative, for 10 years.

● A diet specific to the period of isolation (current - insufficient).

● The concept of "GLOCALIZATION" – "pioneering" through government policies.

● Priority: safe foods to boost immune function.

● New research: foods with antiviral potential (tannins, "concentrated" residues/extracts).

● COVID highlighted the high value of small mountain households/ farms - as a mechanism of economic security and social protection.

● Research results: **1 cubic meter** of air (**mountain**), includes up to **5,500 microbial germs**; in a hospital - over 10,000; in houses - up to 20,000; in a crowded office - up to 5,000,000; in a **hypermarket** - up to **9 million** (!).

● Elaboration of a digital GUIDE for continuous protection, monitoring - of the health of the environment, in the context of COVID-19.

● "Pilot" project – "**smart mountain areas/smart mountain villages**".

Digitization of socio-economic activities in rural areas.

- New innovative renewable energy systems.

- Training a new generation of scientists, entrepreneurs, specialists, for the mountain area - involvement in the knowledge transfer.

● Strengthening the decision-making capacity of state authorities - through access to a geographical-medical database: an interactive, online ATLAS.

"Associated" CE-MONT factors.

● **Type II diabetes** - frequently associated with COVID-19 (**~2 million patients in Romania)**. Restoration of beta-pancreatic cells via active substances in **nature** (creatinine). **Patented drug (new)** – "INSUVEG" and INSUVEG-FORTE (O. Bojor).

● Environmentally friendly agricultural technologies. Specialized breeds for the mountain area: cattle, sheep, goats.

● The online market avoids "working in vain" (better prices for "mountain products").

● Organic crops: blueberries, raspberries, lavender, vegetables.

● The mountain household/family farm **is a holy, miraculous institution.**

● **Measures**: creation of **a program on the SME-Invest model - for 500,000 mountain households (starting capital - for "mountain products").**

- Tax facilities - associations, mountain cooperatives, which capitalize on "mountain products".

- "Border" agricultural roads and electrical networks, for the **new farms, outside the inhabited areas**.

- Models of **circular bioeconomy** (capitalization of all resources - grass, forest, water, stone, clay - jobs, stability, well-being).

- Scholarships and facilities for young people in villages.

- The "key" to local development = the mountain household/farm.

● "**Inter-ministerial group**" for managing the **food crisis** – that **will follow post-COVID** (UN).

● The mountain = **recognition as "national heritage"**. The mountain's resources are scattered **in "disarray" (MEWF), and NMAA is an "orphan" at MARD**.

● **Necessary:** a single Ministry of Mountains, Waters and Forests.

● Intelligent **habitable** infrastructures.

● Long-term **storage and preservation network**.

● **Air mobility** facilities.

● **The state - co-partner**.

● **State tax relief: closed circuit**.

● **Research proposals**: "Treatment and profitability of **wastewater** from **households/farms in the mountain area**."

● Adapted agricultural machinery - **subsidized**.

- Strengthening the concept of MOUNTAIN "**GLOCALIZATION**"; **"Mountain product" brand**;

● Creation of **financial support programs for family farms in the mountain area** (eg 50,000 euro/farm, according to EC decisions - 2020) and their organization into **cooperative associations**.

● **Development of the "Investment Fund for Mountain Farms" initiative**.

● **State guarantees** and financial support from the European Investment Bank.

● Allocation, from the National Environmental Fund (AFM), of 20% for investments in the mountain area with an impact on the environment.

PART II:

INTRODUCTION to the ISSUES of the MOUNTAIN AREAS. The MOUNTAINS - in EUROPE and the WORLD

Globally, the mountains cover more than 25% of the earth's surface, inhabited by more than 12% of the world's population (about 720 million inhabitants, of which 270 million, mostly rural, are vulnerable to food insecurity, and about 135 million are in conditions of chronic starvation).

Mountain ecosystems are reservoirs of biodiversity, an essential source that provides the **water** necessary for life, most minerals, wood and building materials, high quality agri-food products obtained through intense human physical effort, a source of recyclable energy, vegetation being a great filter for carbon dioxide, and a major food source, as well as an exceptional cultural diversity and a remarkable capacity for innovation for the - essentially rural - local population.

At the same time, the mountain regions have geo-climatic-economic, traditional-cultural conditions, etc. of great diversity, and are among the most exposed to climate change, erosion and other forms of environmental degradation, and the populations produce their food with difficulty, on poorly fertile lands, being often engaged in conflicts.

● The United Nations Conference on Environment and Development in Rio de Janeiro (June 1992) addressed **sustainable mountain development,**

for the first time in human history, in a distinct way, on a global scale (Agenda 21. Chapter 13 - Mountains). It was agreed that by the year 2000, plans would be drawn up for land use and the management of mountain basins, **creating opportunities for mountain dwellers** to **ensure their livelihoods** using local resources, and **governments** were going to take on responsibilities: to provide mountain people with **incentives** for resource conservation and the use of environmentally friendly technologies, to help them understand the phenomena of sustainable mountain development through involvement in resource management, especially renewable ones (forests, grass, animals, human food producers - farmers); to provide information on ways to earn a living through plant resources, animal husbandry, beekeeping, fruit growing, tourism, rural industries, etc; to create training and information centers on mountain ecosystems - generating **skills** on viable agro-animal husbandry; to create protected areas, etc.

One consequence was the creation of the **first World Mountain Forum**, organized under the auspices of the UN-UNESCO-FAO-UNDP-World Bank-European Commission, with over 800 representatives, **including from Romania**.

The inaugural speech of the President of the French Republic, **Jaques Chirac**, had the theme "**The international community and the mountain**", and was aimed at **mobilizing the means for the profit of mountain countries and territories, the Forum being meant to prevent and combat the marginalization of the mountain:**

- **politically**, recognizing the **difficulties** endured by mountain populations and highlighting the **advantages** of the mountains;

- **economically**, to take into account the **particularities of the mountains** and the harmonization of a **type of liberalism** that **does not generate destructive effects**;

- culturally and humanely - to **preserve cultures** and allow mountain communities to express themselves;

- regarding the **environment** - **mandatory protection** for **flora, fauna, water, correlated with the needs of mountain populations**.

Mountain farming and shepherding are indispensable for all other economic developments in the mountains.

In Europe, in places where agriculture has disappeared, NOTHING else developed.

● **Scientific research** has discovered in the mountains a new place to focus on and develop. Productivity in mountain agro-animal husbandry represents **approx. 30% compared to the plains**, and **mountain farmers cannot be held responsible for the difficulties they have to endure**.

● Mountain areas need to **have control over their environment and natural resource management**, remaining aware of the need for management not only for their own needs, but on behalf of the national and global community.

The World Mountain Forum marked **the start of a global movement in favor of mountains and mountain populations, with clear messages to governments**, the final goal being **a "mountain policy" at the global, continental and state levels**.

● At the **World Summit on Sustainable Development, Johannesburg - 2002** - **the policy framework for the mountains** was recognized **through the Implementation Plan (Chapter 13, Agenda 21 – "Sustainable Mountain Development").**

● **Quinto 2002 – World Association of Mountain People** (WAMP): a global reflection on the future of the mountain - the adoption of the **World Charter of Mountain People.**

● **In the EU**, the non-governmental organizations "**Euromontana**" and the **European Association of Elected Representatives from Mountain Regions**, have worked hard for the people and the mountain environment.

The UN initiative, through the **International Year of the Mountain - 2002**, **intensely celebrated in Romania too**, was completed by the creation of the "**Mountain Partnership**" -international, with the secretariat at FAO-Rome. Romania became the 33rd member country in the MP. The Council of Europe/CLRAE, initiated the "**European Charter of Mountains**", and **Romania** (NMAA) was **selected** to **carry out a sustainable mountain development project** for the **Carpathian Mountains chain** (awarded - author R. Rey), a support for the "**Carpathian Convention**".

The **European Parliament** generated the "**Ebner Report**" on mountain areas in the EU and the **Jitova Report** (2016) - now the **EP Resolution, calling on the EU Council** and the European Commission - **to start a separate EU mountain policy with an implementation Agenda**. **Decisive** is the **interruption of the exodus of young mountain farmers**, an **extremely serious** phenomenon **in the East**, where it is necessary to create **specific institutions and laws**, through which to make a "**mountain policy**" at **national** level together with the **mountain farmers** (Joseph Präll - Federal Minister for Agriculture - Austria).

Vigilance is needed **especially in the new Eastern countries**, which have poor economic and infrastructure development" (**Herwig Van Staa, Governor of Tyrol and President of the CLRAE**).

● "The need for the **continuation of mountain farming** and the existence of mountain populations is **indisputable**".

● "**In order to not destroy what we have**, we need **flexibility** and **a lot of respect**" (President of the Farmers' Association of Vorlberg - Austria, **E. Schwarlzer**).

A successful initiative of "Euromontana" is the "**European Charter for Quality Mountain Food Products**", to which **Romania has contributed (NMAA/RMF)**.

The Charter specifies the need for viable mountain economic activities to be based on a **VIABLE MODEL** of MOUNTAIN AGRICULTURE.

Mountain areas in Europe[2]

● **Brief analysis (in comparable terms):** Austria, Belgium, Bulgaria, Czech Republic, Switzerland, France, Finland, Germany, Greece, Italy, United Kingdom, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Ukraine;

The following were taken into account, comparatively: spatial size, proportions of mountain areas, some national findings, the mountain population and its proportion in each country as a whole, and aspects that reflect the importance of mountain areas.

Map with the main European mountain ranges

[2] 2008

Table no. 1: Mountain population in some European countries (ranking by proportion of mountain population)

No. crt.	Country	Total population (no. of inhabitants)	Mountain population (no. of inhabitants)	Proportion of mountain population to total (%)
1	Italy	56,095,135	18,267,183	**32.6**
2	Spain	40,738,016	15,684,136	**38.5**
3	Germany	81,944,737	8,254,700	10.1
4	France[xx]	58,255,213	7,633,595	13.1
5	Switzerland	7,287,145	6,132,208	**84.2**
6	**Romania**[xxx]	22,236,918	5,535,706[xx]	24.9[xx]
7	Greece	10,817,789	5,365,931	**49.6**
8	Austria	8,024,449	3,993,337	**49.8**
9	Bulgaria	7,973,671	3,637,787	**45.6**
10	Norway	4,503,436	2,854,051	**63.4**
11	Portugal	10,356,116	2,741,590	26.5
12	Slovakia	5,401,316	2,624,492	**48.6**
13	United Kingdom (UK)	58,051,191	2,475,935	4.3
14	Czech Republic	10,215,299	2,385,905	23.4
15	Poland	38,632,453	2,255,261	5.84
16	Ukraine	49,588,000	1,980,000	4.0
17	Slovenia	1,992,035	1,293,298	**64.9**
18	Hungary	10,246,939	709,239	6.9
19	Finland	5,194,902	624,184	12.0
20	Sweden	8,901,038	615,343	6.9
21	Ireland	3,917,203	101,903	2.6
22	Cyprus	690,253	98,995	14.3
23	Belgium	10,263,414	83,256	0.8
24	Luxembourg	439,539	6,787	1.5
TOTAL POPULATION – including Switzerland		**511.678.207**	**94,049,746**	**Average: 18.5**

(Source: EUROSTAT NewCronos data 2000)

Table no. 2: Area of EU mountain areas, including Switzerland (ranking by mountain size)

No.crt.	Country	Mountain area surface (thousand km²)	Proportion of the total area of the country (%)
1.	Norway	295.86	91.3
2.	Spain	281.61	55.7
3.	Sweden	227.70	50.6
4.	Italy	180.78	60.1
5.	Finland	166.08	50.8
6.	France*	138.64	27.0
7.	Greece	102.98	77.9

[xx] Exclusively DOM

[xxx] After the official delimitation of the mountain area, in acc. with EC criteria – Rez.1257/99, rev., Romania has 3.6 mil. mountain inhabitants – representing 15.4% of the total population (2004).

* Exclusively DOM

No.crt.	Country	Mountain area surface (thousand km²)	Proportion of the total area of the country (%)
8.	Romania**	90.24	37.9
	Romania***	74.00	32.7
9.	United Kingdom	62.56	25.5
10.	Austria	61.51	73.4
11.	Bulgaria	54.80	53.3
12.	Germany	52.59	14.7
13.	Switzerland	37.46	90.7
14.	Portugal	36.14	39.1
15.	Slovakia	30.37	62.0
16.	Czech Republic	25.41	32.3
17.	Ukraine	22.10	3.7
18.	Poland	16.18	5.2
19.	Slovenia	15.81	78.0
20.	Ireland	7.44	10.6
21.	Cyprus	4.40	47.6
22.	Hungary	4.37	4.7
23.	Belgium	1.29	4.2
24.	Luxembourg	0.11	4.4

Table no. 3: Areas and mountain populations in the countries newly acceded to the European Union (EU-27)[3]

No. crt.	New EU member state	AREA			POPULAŢIE		
		Total area (thousand km²)	Mountain area (thousand km²)	Proportion of the mountain area to total (%)	Total population (no. of inhabitants)	Total mountain population (no. of inhabitants)	Proportion of mountain population to total (%)
1	Romania*	238.40	90.24	37,9	22,236,918	5,535,706	24.9
2	Bulgaria	101.74	54.80	53,3	7,973,671	3,637,787	45.6
3	Slovakia	48.99	30.37	62,0	5,401,316	2,624,492	48.6
4	Czech Republic	78.79	25.40	32,3	10,215,299	2,385,905	23.4
5	Poland	311.44	16.80	5,2	38,632,453	2,255,261	5.8
6	Slovenia	20.27	15.81	78,0	1,992,035	1,293,298	64.9
7	Cyprus	9.23	4.40	47,6	690,253	98,995	14.3
8	Hungary	92.48	4.37	4,7	10,246,939	706,239	6.9
9	Estonia	0	0	0	0	0	0
10	Letonia	0	0	0	0	0	0
11	Lithuania	0	0	0	0	0	0
12	Malta	0	0	0	0	0	0
TOTAL		**901.24**	**142.09**	**36.11**	**97.388.884**	**18,537,683**	**19.03**

** According to the official delimitation of the mountain area – EC criteria – 1257/99, rev. (2004).

*** According to the study of the European Commission/NordRegio

[3] Source: Radu Rey – The book "The mountains and the 21st Century. Comparative study of European strategies on mountain areas, with special reference to the area of the Romanian Carpathians. M1-SEE plan", "Electra" Press – 2014.

There are common elements that give the mountain specificity in general, but which fragment into multiple forms of local specificity.

For exemple:

Austria - with 73% mountain territory, it has developed its own national policy, with the regional policies of the Länder having a lot of autonomy and in addition a good subregional organization of district type (bezirkuri/ districts) which facilitated, including at political level, the **expression of local specificity** - the results being recognized in the exceptional evolution in cattle breeding and agrotourism/rural-mountain tourism, in the mountain demographic and agricultural stability.

France (with about 33% mountain areas, similar to Romania) - has evolved in the mountains along the lines of **professional organizations**, **cooperatives** and **small** processing **industries** (cheese, sausages, fruits) depending on areas and traditions, under the protection and encouragement a **Mountain Law** (1985), but also by **adapting to local mountain conditions**, very different in the Maritime Alps, the Central Massif, Ceveni, Pyrenees, Vosges or Jura. **Special** programs have been implemented in areas with special difficulties, e.g. in Morvan. **The National Mountain Council** - led by the **Prime Minister and regional councils** - ensured the much-needed **authority and continuity**, and **a "mountain massif" regional policy** made an important contribution.

● **Knowledge of and taking into consideration the elements of mountain specificity** is **an absolute necessity** for establishing local realities that make permanent and consolidate viable economic and social systems. Thus, **it becomes extremely important especially for the countries with mountains in South-Eastern Europe** that, firstly, **the scientific montanological research studies and decides on viable solutions**, which take into account regional or local particularities and which can generate **decisions with added value**.

● **A policy in which decisions for the mountains are made outside the mountains becomes risky**, especially in EU countries with insufficiently consolidated economies.

● **Economic development** is another component of intermountain **differentiation**.

A first differentiation of the level of economic development in the mountains is found **among the Western European countries much more advanced than the visibly left behind Central and Eastern European ones**, especially in the field of **agriculture and basic infrastructures**. In mountain agriculture - the democratic West has built for half a century the **consolidation of peasant households** while the totalitarian East practiced policies to **systematically weaken** them, with historical consequences.

● **Romania** - with **the largest mountain range in Europe found inside a country** - **did not support collectivization in the mountains**, **but** was left with **a very low level of technology** in peasant households. **Post-1990** economic phenomena, including **excessive liberalism, with ridiculous prices for mountain products**, milk and meat, raw materials, the collapse of the price of wool, **outside the protective control of the state and intensely polarized economic interests**, other **conjunctural** elements (focus exclusively on the large-scale agricultural area, **ecological exagerrations** accompanied by unrestricted and uncompensated restrictive measures for livestock farmers, industrial and job dissolution, or **objectives** (ignorance, lack of expertise in the field, lack of specialists, of research, of specific institutions, **the lack of organization of farmers**, their distrust, **the absence of models**, as well as **the size of the mountain territory** and the financial austerity of the moment, the weak awareness and **insufficient political will**, etc.). All these and many others have **amplified the state of poverty**, caused **the discouragement of the young generation** and, once borders were open for free travel, **a phenomenon of rural mountain exodus** was installed, **accentuated after Romania's accession to the European Union**.

The efforts that have been made, however, in the fields of **specific institutional creation**, of **training** the young mountain farmers and agricultural specialists, of scientific research, as well as the creation of the **specific legal framework**, the realization of **pilot stations** and some **weak** measures of **differentiated mountain policy** in agro-animal husbandry and environmental protection measures, etc., a **favorable** evolution in **agrotourism**, are to be taken into account, but they **were punctual**, **completely insufficient** for counteracting or at least **slowing down the exodus of rural mountain youth**.

● **Multiple interests have intervened brutally, discouraging fragile development initiatives.**

● The differences **in technological equipment in mountain agriculture are especially evident between the EU15 and the East (left far behind).**

● **After 1990** - some efforts to modernize and adapt to the specifics of the mountains began - but inconsistently and unevenly.

The Phare and SAPARD programs of the World Bank, bilateral support initiatives (Germany, France, Switzerland, etc.) have created **pilot stations** and some forms with **reproducible value** but the **tendency to marginalize mountain agriculture remains strong** (at the Ministry of Agriculture and in general) and the multiplication of good models **is delayed**.

● **Newly joined** countries with mountains **and with a low and very low level of mountain development** have **primary stage requirements** of the mountain development process, in many ways: **basic infrastructure,**

modernization of agri-food structures, specific education; the creation/ consolidation of specific institutional and non-governmental organizational structures, of a favorable legal framework, awareness of the political and civil society potential, etc. Romania, with a vast mountain area and agricultural traditions, is facing **a massive and growing exodus of mountain rural youth and agricultural abandonment**, simultaneously with the **aging** of the active agricultural population, the requirements being targeted at **safeguarding interventions** that are not possible without **targeted and consistent community support**.

EU-27 and the mountains

The accession of the 12 countries to the EU-15 meant **an increase of approx. 18.5 million people** in **mountain areas**, **with unavoidable impacts**.

Undoubtedly, from this mountain area came ne**w values and opportunities, as well as new challenges**.

For mountain populations, with priority for the ones rurally and agriculturally active, the changes generated by the "transition" period and after EU accession were both beneficial and dramatic, with great socio-economic complications.

A common trend for EU-27 countries is **the more and more insistent demands** from the EC for the development of a **strategy on mountain areas in the European Union** and the pursuit of a **common mountain policy**, focused on **financial support and compensation** in an active growth process, agricultural policies playing a major role in this.

A EUROPEAN MOUNTAIN STRATEGY / Other aspects of interest

A flexible community mountain strategy, adaptable to diversity, on the principle of subsidiarity and with adaptations to local contexts for socio-economic cohesion, with effective support for countries with emerging economies left too far behind, is what is being "awaited" during the coming decades (Horizon 2021 - 2040).

The foundation for the whole chain of mountain economic and social factors is represented by the **conditions of production and decent incomes** - which **target people's lives directly**.

● The harsh mountain conditions, with the slope, the low soil fertility, the climate - **condemned the inhabitants of the mountains to a modest, hard-earned existence**, but their daily work also **contributed to the conservation of a wide variety of landscapes**. Mountain **agriculture** not **only** plays **an economic role** but is also the **basis** for **many sectors** that use mountain resources, of vital importance, directly or indirectly.

Agriculture will remain the "**engine**" of rural mountain life, there being no need to separate traditions, and in the new CAP reform **financial compensation and assistance** for **high quality** products, as well as appropriate legislation, are required to be **included, amplified**.

*SOME TRENDS regarding the mountain area in Romania - with significance for other mountain areas in South-Eastern Europe**

The path of the last 20 years (1990-2010) to build a concept that would be the basis of a strategy for the sustainable development of the mountain area and concrete applied mountain policies - was faced with **unpredictable and often insurmountable difficulties** in conditions **specific to Romania** after the fall of communism.

The **National Mountain Area Commission**, established in 1990 within the Ministry of Agriculture, represented not only a conquest of the "Revolution" of 1989 but a **pioneering structure**, unprecedented in the history of Romania. A specific structure, in a society devoid of any exercise in this field, avant-garde of private property (mountain areas being uncollectivized) thrown into the "wasp hive" of a ministry and a county network of agriculture full of technical specialists and politicians trained and practiced for the great socialist agriculture of the plain and hilly areas, collectivized, and for the state agricultural enterprises.

A capitalist-excessive practice, which continued even after Romania's accession to the European Union, was enhanced by its **monopolistic** character, with the **elimination of any competition** (e.g. it reached the price of 0.40 lei - 0.50 lei for a liter of milk - the equivalent of more than 10 l of milk for 1 Euro - in 2009/2010).

Also worth noting are t**he block towards the approach of the western associative-cooperative system as well as the absence of energetic protection measures from** the only entity that would have had the intervention levers - **the Romanian state**. This created **a cumulative situation** - whose **first victim became the animal breeding farmers**, from the mountain area, and **their response of great political significance** was not a mountain uprising but **the agricultural ABANDONMENT and the massive migration of young people from mountain villages to cities and abroad**.

● Since 1990, the value of the initiative in favor of the mountain areas in Romania has been understood in several European countries, thus the **Romanian Mountain Area Commission** has entered into **useful relationships**

* The author of this paper was the first President of the Romanian Mountain Area Commission and later the general director of the National Mountain Area Agency (1990-2002).

with governmental and non-governmental structures in Western Europe: **France, Switzerland, Germany, Austria**, etc. - but also with **international** bodies such as **the Council of Europe, the European Commission (Phare), the World Bank**, respectively with **large European mountain organizations** such as **Euromontana** and the European Association of Elected Representatives from Mountain Regions (**EAERMR**) or with national organizations (**SAB-Switzerland, UNCEM-Italy, FFEM- France, or with the French Ministry of Agriculture and Forests, the German Ministry of Economy (GTZ), the Council of Europe - CLRAE**, etc.), with which it cooperated, and with whose professional, moral and financial support, received and used with enthusiasm by the first specialists of the mountain rural economy, it implemented mountain development projects, with vocation of **pilot stations**, some storing **multiplication values**.

Both theoretically and practically, a real leap has been made in the construction of a system close to those in the countries with mountains of the European Union.

The multiple political changes that took place in Romania **were not favorable to the mountain**. In each **new government**, the new ministers or state secretaries of agriculture, without competences in the very specific and complex issue of the mountain, **continued to marginalize, especially the mountain agro-animal husbandry**, did not take into account the recommendations of non-governmental organizations and scientific structures - so there has been **a real crisis in the mountain agro-rural economy, including an institutional one** – the serious effects being **the radical reduction of cattle and sheep numbers and organic fertilizers, the degradation of mountain natural meadows and especially the massive exodus of the rural mountain population with the permanent abandonment of agricultural activities.**

THE MOUNTAINS AND THE 21ST CENTURY. Romanian Carpathians reflections and realities

At an increase in sea level, due to climate change, **approx. 600 million people will have to flee the waters - inland.** But where? In the cities already so crowded? In the plains undergoing an increasingly intense chemization race - for the production of cereals and other vegetables essential for feeding large masses of people? How long can industrial agricultural solutions be extended without directly impacting the environment? According to the existing reports, it is shown that in the last 7 of the last 8 years, cereal production has failed to cope with consumption and cereal reserves are about to reach an all-time low... At this point, a new connection is made with **A NEW**

ROLE OF THE MOUNTAINS, including **the great Carpathian mountain massif** characterized geoclimatically by **the ability to provide food and space for human habitat**.

But things are intrinsically linked **to the exponential demographic evolution, with 9 billion certain inhabitants at the horizon of the 2050s** - a fact that brings to the fore and above all, **the great problem of human food**. The current focus is on **renewable energies** and the mountains are a wellspring of such energies: **water** – by using gravity, **grass, wind, forests** - with their multiple role, but also the **human and animal energies** which are also renewable.

As new areas of human habitat, the mountains are a "**reserve**", but it must be understood that urban or rural populations in the plains **are not fit or have a weak capacity to practice a specific mountain agriculture based on extensive animal husbandry** - at the level that native mountain populations, which have a higher amount of hemoglobin in the blood due to the scarcity of oxygen with altitude, a **condition for resistance to prolonged exertion**, can have - as well as the ability to mentally resist the states of isolation impending in mountain life and, of course, a certain training and a certain development of muscle groups, etc.

Among other things, the indigenous mountain populations have high value traditional knowledge and practices, from the category that's called "**good practices**" nowadays - which ensures a balanced attitude towards the environment and the condition of sustainability.

It follows that **priority is given to preserving indigenous mountain populations and preserving good traditions**, with careful selection of the introduction of modernization elements and new achievements of science as well as accepting a certain slowness (**conservative and protective**) of their entry into practice, as an improvement factor for the secular traditions, a determining role returning here to **an adapted and pragmatized school and to the specialists - trainers**.

- Forests maintain their ecological, economic role as a carbon absorber (a role that meadows also play) and as a provider of money - but these benefits should not be exaggerated until they affect **the other large mountain economy** – producing food - **agro-animal husbandry**, in annual sustainable and recyclable technical solutions, with the most reasonable and bearable investments.

The imbalance that has been created between the **forest** and the **mountain agriculture** in the last 20 years, in the Romanian Carpathians - **will have to be restored**, through a complex of measures, including a certain type of tolerance, consciously bearable and accepted by both sectors.

In conclusion, mountain areas where there is still the natural capacity for sustainable human food production need to be preserved with great care, **governments having the responsibility to take a complex of measures to avoid/combat the exodus of young generations and the abandonment of the practice of mountain agriculture**. European practice (e.g. France, etc.) clearly shows that rural populations that have abandoned mountain agriculture/ animal husbandry **can no longer be brought back** to animal husbandry, so **the only effective measures are those that prevent the phenomenon**.

The capacity of zootechnical tolerability of the Carpathian mountain area in Romania can be appreciated according to the numbers of cattle and sheep existing in 1990 - when the mountains provided agri-food and adjacent products - which provided most of the food for approx. 4 million inhabitants, including from the 84 small mountain towns, with important availabilities for cities outside the mountains or even for export (animals, cheeses, fruits and berries, honey, as well as medicinal plants, etc.).

Every meter of mountain land that can produce food will have to be managed to produce food **sustainably** - a new "**grass civilization**" is expected to be built, using the vast and good traditional experience - where it has not yet disappeared. **Herbaceous vegetation is itself a CO_2 absorber, so that the role of green mountains, with forests and meadows - perennial** - becomes **a constant balanced both to mitigate global warming and climate change and to fight hunger on the planet.**

Worse, the MONOPOLIST system installed in mountain areas proved to have the most harmful effects, by the practicing of an excessive liberalism on the part of the new owners of the dairy and meat industries, who through large profit margins and **absolutely ridiculous prices for the main raw materials - milk and meat** – made animal husbandry profoundly unprofitable, a **vital existential occupation** of a large population **lacking economic alternatives** for which the only renewable resource is the **multifloral, good forage quality grass** of pastures and mountain meadows, a creation of a **millennial** economic collaboration between mountain people and mountain nature.

The effect was that of an "**economic tsunami**", generating **agro-zootechnical abandonment**, **the massive exodus of rural mountain youth** - deep processes of **degradation of excellent mountain meadows** with a selected and maintained fodder flora - through organic fertilizers and the titanic work of many generations of animal breeders - **a great wealth not only of Romania but also of the European Union and of humanity**.

This system of monopolistic capitalism, which has been installed with authority and through multiple "unorthodox" methods, **has systematically**

prevented and continues to prevent any initiative that could have led to the construction of a Western associative-cooperative system, like those in France, Italy, Switzerland, Norway, Sweden, Great Britain, etc. - a system in which more than **13 million agricultural producers** are integrated in Europe today and through which **the only viable alternative for the creation of the fair competitive factor could be reached, which would ensure an essential function of a European democracy** - even if the process itself would require 20-30 years of sustained effort.

In fact, the solution of the professional organizations of mountain farmers and cooperative associations, with the microindustrialization of mountain agri-food products in a cooperative economic system - opposable to the excessive capitalist one, given the reality of small, rarely medium and very rarely larger mountain farms - seems to be **the only alternative that can still save, at least in part, the mountain agro-rural economy from an irrecoverable dissolution**.

This accompanied by a **complex of attractive and guaranteed measures**, which **can no longer be palliative** (lacking credibility in front of a youth for whom better alternatives have become numerous) and a **vast educational process, adapted to the specificity and realities of mountain villages**.

In any - somewhat economically thought out – concept, **a mountain farmer, even part-time, becomes preferable to another urban unemployed person** exposed to an unproductive life and its psycho-social degradation.

A radical and urgent change of attitude in this large economic and social segment represented by the mountain areas of Romania imposes itself as an objective, priority and urgent necessity aiming at a state of normality, of stable and sustainable economic-social balance. The COVID pandemic, the intense need to **prevent/mitigate the effects of the economic crisis, especially the food and health** crisis**,** brings mountain areas in **a position of great interest, as a safeguarding opportunity.**

CE-MONT/INCE RESEARCH (summary)
AN UPDATED ANALYSIS OF THE MOUNTAIN AREA IN ROMANIA
ACTIVITIES WITHIN THE "CE-MONT"
CENTRE FOR MOUNTAIN ECONOMY

Scientific research entity **NEWLY CREATED** by the Romanian Academy within the National Institute for Economic Research "Costin C. Kiritescu"/INCE/RA

● POSCCE project (structural funds) - won through competition (6.8 million euros / 17% Romanian government).

Stage I: Construction and technical-administrative endowment of the new headquarters of CE-MONT in the mountain municipality - Vatra Dornei, Suceava County. **Completion, on time and official inauguration on 5 December, 2015.**

- SYNTHESIS – SCIENTIFIC, ADVERTISING and NATIONAL and INTERNATIONAL VISIBILITY ACTIVITIES (2016-2019)

● Scientific papers/ISI Articles/Thomson = 33. ● Scientific articles BDI = 40. ● Published books = 7+3 chapters. ● Reports of great national interest = 5.

● National cooperation agreements = 14 (12 universities, 2 R&D institutes – National Mountain Area Agency/Gov./MARD, Romanian Mountain Forum/member of the International Mountain Partnership (UN) and "Euromontana".

● International collaboration protocols: Eastern Norway Research Institute, Mountain European research initiative, NEMOR.

● Creation of a **CE-MONT magazine, "Revista de Montanologie/ Journal of Montanology"**, vol. I-XII (Romanian+English). ● Published scientific papers = ~150. ● Researchers' citations (2018-2019) = 184. ● National scientific conferences (Vatra Dornei and Bucharest/INCE, RA, ASAS), CE-MONT/INCE = **organizer** and co-organizer = 20.

● International conferences (V. Dornei) = 4. ● Participation of researchers in conferences (2018-2019) = 12. ● CE-MONT/INCE national projects = 12. ● Projects won through competition (CE-MONT 2019) = 4. ● Visitors from abroad = 14 (World Bank, Euromontana, Carpathian Convention, University – Holland, Norway Research Institute, Mountain Peasants' Association – Switzerland). ● National awards (books) = 3. ● CE-MONT scientific caravans (in collaboration with NMAA şi RMF) = 14.

ACHIEVEMENTS of EXCELLENCE

1. "Sustainable mountain development strategy" (MDRAP/2017).

2. **Major** contributions to the elaboration of the draft for "**Mountain Law**" no. 197/2018.

3. Contributions to the elaboration of the **"National Strategic Guidelines for the Sustainable Development of the Carpathians" Memorandum** (2014-2020/Government).

4. **Contributions for the elaboration of GDs** regarding t**he organization and functioning of the National Mountain Area Agency (MARD), the creation of the Massif Committees and the National Mountain Council** and a (partial) contribution to the elaboration of **5 laws subsequent to the "Mountain Law"**, regarding **investments in the rural mountain area** and lobbying activity for the **adaptation of the educational system in the rural mountain area to the mountain economic-social and environmental specificity**.

● On 12 December, 2019 - **the General Assembly of the Romanian Academy** approved the transformation of CE-MONT (without legal personality) into a scientific entity "**with legal personality**", organized in 2020.

● From CE-MONT/INCE, researchers were requested in positions of "Advisers to Ministers" (2/MARD - 2014-16) and at the Government's GCS (1).

● CE-MONT **frequently collaborated with state authorities and** national and local **non-governmental organizations** (MARD, MDRAP, MMAP, MEN, NMAA, Prefectures and County Councils, universities, town halls, LAGs, schools and NGOs) from the mountain area.

"POSSIBILITIES TO INCREASE THE INCOMES OF SMALL AND MEDIUM FAMILY FARMS THROUGH THE HIGH CAPITALIZATION OF "MOUNTAIN PRODUCTS", IN AN ASSOCIATIVE-COOPERATIVE AND PRIVATE SYSTEM. EXAMPLES OF "GOOD PRACTICES" AND OPTIMISTIC RESULTS IN THE ROMANIAN MOUNTAINS IN 2019.

● A VISION OF PERSPECTIVE."[4]

● Some CE-MONT RESEARCH RESULTS - with multiplication value;

The research took place in 2016-2019 in the mountain area of the Northern Carpathians of Romania, in the counties of Bistrița-Năsăud and Suceava, and focused on creating, selecting, assisting and encouraging forms of organization of mountain agricultural producers to achieve and capitalize on authentic "**mountain products**" and obtain satisfactory benefits, able to ensure the condition of improving the family incomes of mountain farmers, and

[4] Prof.univ.dr., CS 1, Radu Rey and colab. – Centre for Mountain economy/"Costin C. Kirițescu" National Institute for Economic Research/Romanian Academy

the conservation of the valuable biodiversity of mountain meadows. There were multiple discussions with farmers, entrepreneurs, specialists of the National Mountain Area Agency/MARD, local officials, consulting upon request.

WORK METHODOLOGY

It was based on the study of research results in the mountain area and multiple direct contacts with agricultural producers, entrepreneurs, specialists, practitioners and researchers, local officials. Observation and selection of initiatives, analyzes and guidance and encouragement efforts, in different forms of specific activities.

● **4 categories of successful "good practice" situations** with multiplication value were selected:

I. A first **mountain agricultural cooperative (Sângiorz-Băi)**, focused on capitalizing on the "mountain product" by applying Regulation no. 665/2014 of the EC and the Decision of the Romanian Government no. 506/2016, (intense involvement of CE-MONT for the orientation and encouragement of the transition to the organization activity (statute, conferences with farmers, encouragement, participation in exhibitions promoting "mountain products", collaborations with NMAA and RMF Bistriţa-Năsăud Branch, etc.).

II. **An association/group of medium mountain farmers, and an entrepreneur with agrotourism activity, all successful.**

III. **An individual entrepreneur (II)**, with a **small industry** focused on "mountain product" **superior cheeses**, **in collaboration with a group of small farmers**.

IV. **Mountain family farms (IF)**:

1. **A farmer with a medium farm** and an authorized workshop for milk processing and agrotourism.

2. **A small farmer**, in **isolated** conditions, focused on a type of **superior cheese**.

3. Mountain family farm, specializing in **beef cattle, with slaughterhouse and butchery point**.

Description of "successful" solutions based on capitalizing on "mountain products":

I. Mountain agricultural cooperative – Sângiorz-Băi, Bistriţa-Năsăud county.

Preparatory phase:

It included overcoming the intense resistance of mountain farmers to the idea of a cooperative (reminiscent of the communist regime). Since 2016,

through the collaboration between the CE-MONT Centre for Mountain Economy (Romanian Academy/INCE), the Romanian Mountain Forum and the RMF Bistrița-Năsăud Branch, SC Silvania Internațional - Lunca Ilvei, (civil society) and the National Mountain Area Agency/Ministry of Agriculture and Rural Development. Several information and encouragement meetings were organized, where the main element was the clarification that the idea of cooperative aims to capitalize on "mountain products" and supply, without interference in private property. **The second step** was the careful selection of **leaders** who showed the **courage to take on the implicit responsibilities**. After this (strictly necessary) preliminary training, from the first steps **380 small farmers** joined the cooperative, with a total of **940 cows** owned, including **132 cows** belonging to the cooperative. Participation with "merchandise milk" is variable, depending on the potential of the farm. In 2008, the cooperative created **a small industry** to transform milk into **8 varieties of finished products**: hard cheese, caș, telemea, urdă, butter, kneaded cheese, sour cream, and the resulting whey is used in pig feed. **The capitalization** of these "mountain products" is done **directly** by the cooperative, without intermediaries, using the "**short chain**" system, through its own store in the town of Sângiorz-Băi and participation in fairs.

Under these conditions, **the price of "raw material" milk gradually increased from 0.80 lei/l to 1.30 lei/l in 2018, and in 2019 (Oct.) to 1.50 lei/l**, with the objective to **reach 2 lei/l in 2020**, a part of the benefit being subsequently **reinvested** for the development of the cooperative.

● For the **summer**, the animals are moved for grazing at approx. 1500 m. alt., at the **traditional sheepfold** on Mount Putredu/Rodna Mountains (20 May - 14 September).

Through local support and its own efforts, the **agro-tourist arrangement of the sheepfold** with an **educational** role for students was succeeded, as a "**pedagogical sheepfold**" (accommodation capacity, 30-40 young people).

● The dairy products obtained in guaranteed mountain conditions met the condition for **registration in the "Mountain Product Registry"** managed by the National Mountain Area Agency, a general directorate within the Ministry of Agriculture and Rural Development. The cooperative was invited to participate in the agri-food exhibitions in Cluj and Bucharest and in the food fair organized at MARD (with exceptional success).

● **Conclusions:** The organization of small and medium farmers in the solution of **the mountain agricultural cooperative focused and organized for the capitalization of the "mountain product"** is given a **special significance** by the fact that it **generates the increase of the incomes of a large mass of small farmers**.

The optimistic experience of this "**pilot**" mountain agricultural cooperative gives it **multiplication value** in other mountain areas, in similar conditions (other attempts to organize several small cooperatives in the same localities did not evolve favorably).

II. An association/group of medium mountain farmers and a successful entrepreneur with initiatives in meat processing and mountain agrotourism.

The association of 30 medium mountain farmers and a private entrepreneur from Fundu Moldovei commune, Suceava county, which owns a small slaughterhouse, 3 own shops in 3 cities and an excellent agrotourism pension, with the official name "**Association of small producers of traditional peasant products from Bucovina**", has started.

The farmers own, on average, **10 dairy cows each**, for a total of **approx. 300 cows**, as well as a small **workshop**, **authorized**, for transforming milk, **on the farm**, into traditional, **finished** dairy products (hard cheese, caș, urdă, telemea, cream, butter; the resulting whey is used in pig feed).

The entrepreneur **takes over weekly**, on a fixed day, the entire cheese production made by the **30 farmers** and ensures the **supply of stores** in the cities of Vatra Dornei, Câmpulung Moldovenesc and Bucharest. All farmers pay close attention to the **quality** of the cheeses, which are **authentic "mountain products"**, obtained by feeding animals with grass and mountain hay, in the absence of chemicalization. The entrepreneur also participates in national and international fairs and exhibitions, including with "**mountain**" meat products.

The results, obtained for **3 consecutive years**: farmers constantly obtain **approx. 3-3.5 lei/liter of milk (compared to 0.80 lei/l until the organization**, the demand exceeding the supply; **the entrepreneur** makes a **profit**, and **the informed consumers are constantly growing**. In this way, **all "actors" – the farmers, the entrepreneur and the consumers** - declare themselves "**satisfied**" and **interested in this system evolving**.

Conclusions: the **production** segment (associated farmers) must obtain **finished, marketable "mountain products"**, with s**trict observance of the quality and the sanitary-veterinary rules of food hygiene**;

- The "**distribution**" segment takes over all the tasks and risks of marketing the "mountain products" provided by the farmers;
- The two segments **work together** in strict compliance with the rules;
- It is **an optimal solution to separate the two segments**: "**production**" and "**capitalization**", with strict observance of statutory and contractual provisions on the prices of "mountain products" at the level of farmers and taking over the distribution tasks by the entrepreneur, to the constant advantage of both parties and of urban consumers.

III. Individual entrepreneur: **small family industry**, specializing in **superior cheeses**: **Cristi Țăranu** –Șarul Dornei parish (in the "Dorna basin", Suceava/Bucovina county).

History: after approx. 10 years since the construction of a modern farm with 30 dairy cows, fully equipped (stable with hygiene and comfort for animals, mechanical milking, complete equipment with mechanization for technology for the collection and use of organic fertilizers and obtaining a quality hay, various annexes, in the conditions of a **discouraging** price offer/l. milk, of about 0.80 lei, without alternatives (local monopoly), in 2019 - the farm can no longer find to hire two workers, necessary for the exploitation of cattle. The result is **the bankruptcy of a farm considered as a "gold standard" for the Dornelor basin** and **the sale of cows**, etc.

The innovative idea that saved the economic situation of the Țăranu family was an investment in **a workshop for transforming milk into superior cheeses**. Initially into **Emmenthal** cheese, employing a knowledgeable cheesemonger, "Țara Dornelor" being the only place in Romania where Emmenthal cheese was produced **for over 100 years, an economy abandoned after 2000.** The family, made up of the farmer, his wife and his son (with studies in Denmark), also **tries and succeeds** to produce the famous, superior **Raclette and Gruer** cheeses.

A "**niche**" production for **"niche" consumers** with prices that ensure a **return on investment**. The daily quantity of milk, raw material, is on average **500 l**, coming from **a group of approx. 20 small farmers** – located nearby, based on affinity between neighbors.

The motivation of the farmers came from **the "jump" from 0.80 lei/l milk to 1.50 lei/l**, an encouraging starting price, with the **tendency to increase towards 2 lei/l milk** while providing a niche market with constantly interested consumers.

The results of 2019 are **encouraging, both for the entrepreneur and for the dairy farmers**, as the demand has exceeded the supply. The cheeses listed are guaranteed "mountain products".

IV. Family farm, profile: dairy cows

Farmer David Gliga, Fundul Moldovei commune: **40 dairy cows**, modern stable, mechanization, small workshop for transforming milk into cheese and other traditional products, sanitary-veterinary authorization (hard cheese, caș, telemea, melted cheese, urdă, cream, butter - guaranteed "mountain products").

Workforce: the farmer and his wife (4 children) and **2-3 employees** (a cheesemaker and 1-2 farmhands for the animals and specific works).

Capitalization: **at the farm gate** and online orders. The clientele is assured by the fact that the city of Câmpulung Moldovenesc (Suceava/ Bucovina county) is only 5 km away.

For periods of milk overproduction, the farmer cooperates with the "Association of small producers of peasant products in Bucovina" from the neighborhood. The price/l of milk, through processing and direct sale in a "short chain" system, is covers expenses and brings profit. The farm also developed through the necessary arrangements for agro-tourism (12 accommodation spots and a small restaurant, with 50 seats, for family events), with excellent conditions.

Under these conditions, the continuity (sustainability) of the farm is ensured, both the family and the loyal consumers declaring themselves very satisfied.

For the environment: the farm ensures the conservation of valuable biodiversity, avoids affecting the groundwater, does not generate pollution and maintains a valuable tradition, producing high quality protein food (manure platform, manure collection basin, specific mechanization for uniform spreading on the hayfield).

V. Mountain farmer, Mihai Cornişag (family farm), **beef cow** breeder (a novelty in Romania), with **slaughterhouse and butchery point on the farm**, sanitary-veterinary authorized (Pojorâta, Suceava county).

Altitude: approx. 1000 m.

The family consists of the farmer and his wife with their 3 children (two sons, agricultural engineers and a daughter - an economist).

He owns >30 ha. hayfield + pasture, sloping ~15% and 60 Charolais beef cattle (imported from a mountainous area in France), which have adapted satisfactorily to the conditions of cold and humid climate and feeding in the area. Automated slaughter point.

The farmer and his wife specialize in meat processing and make traditional, highly sought-after "mountain products". Occasionally he performs services, for example for the preparation of a pig for the Christmas holidays, to order.

The farm has a modern stable, with the necessary hygiene and comfort for animals and humans, with a platform for manure and a pool for collecting purine.

Organic fertilizers are used in full, on hayfields and pasture, the farmer having the necessary mechanization. He does not use chemical fertilizers or pesticides. Meat and meat preparations fulfill the conditions for inclusion in "mountain products", with the use of only natural, traditional ingredients and salt, without preservatives, dyes, etc.

The capitalization is made "at the farm gate" and through orders, the demand far exceeding the supply, as the interest for a healthy diet is obviously increasing.

The farm's income is encouraging and at least one of the family's youth is determined to stay on the farm with their parents and develop **an agro-tourist boarding house**, the location of the farm also benefiting from an exceptional landscape.

VI. Small mountain family farmer – isolated:

The family of farmer Țarcă Simion (husband + wife), who own a small, traditional farm of their own, in an isolated setting in the Călimani Mountain Massif, at over 1000 m altitude, with **6 dairy cows** for milk and calves, and with a hayfield and pasture surface satisfying for the needs of the farm (20 ha.). The hamlet "Gura Haiti" is a group of approx. 10 small farms, in advanced danger of depopulation due to the departure of young people and adults abroad. On the farms (houses, haylofts, stables, hayfields, abandoned) remained the elderly, who no longer raise animals to their full potential – being left with 1-2 cows and small animals.

A factor of great discouragement was the price of only 0.80 lei/l milk, offered by the dairy industry that appeared in the area after 1990, under "monopoly" conditions.

The Țarcă Simion farm was almost **the only one in the hamlet that did not give up** and looked for solutions to break the deadlock, given that it has its own new, well organized house, the old house, there is a reasonable car access road, electricity, etc.

The innovative idea was found in the giving up of handing over the milk to the industrial collector and making the transition to the processing of milk on the farm into a type of superior cheese, "**Raclette**", which also falls into the "mountain product" category, obtained under authorized sanitary-veterinary conditions. A small production of cream and butter is also obtained, which is occasionally sold, with the whey being used in pig feed.

The advantageous capitalization of this assortment of superior cheese, in round form, of 2.4 kg/piece and with a maturation period of approx. 100 days, is made "at the farm gate" and through orders, the demand exceeding the supply.

The essential thing is that, through this economic solution, **the price of a liter of milk** increased from **0.80 lei** (industry offer) **to 4 lei**, which made the breeding of cows profitable and encouraged the family to continue the traditional activity of raising cows for milk, **a multiplier effect** being expected. In the same commune, Șaru Dornei, in 2019, was established **the first mountain agricultural cooperative, "CAȘCA-ȘAR"**, with approx. 200 members, with over 1000 owned cows, with a launch price of 1.40-1.50 lei/l milk and growth prospect **after the completion of the investment** in a small dairy industry, approved project - under implementation. The farmer also lookst toward agro-tourism.

● Concrete achievements - with multiplication value (with CE-MONT involvement - 2017-2019)

AGRICULTURAL MOUNTAIN COOPERATIVE ("PILOT") SÂNGIORZ-BĂI (BISTRIȚA-NĂSĂUD county) – AUGUST 2019

CHEESEMAKING WORKSHOP – CRISTI ȚĂRANU, ȘARU DORNEI (EMENTHAL – SWISS CHEESE) (PRIVATE) – AUGUST 2019

BUCOVINA (SV): AGRO-TOURISM BORDING HOUSE IOAN BACIU, FUNDU MOLDOVEI, 2019.

David Gliga – Agrotourism farm (Fundu Moldovei)

Family farm: Mihai Cornișag; slaughterhouse + meat processing point (Pojorâta, SV)

Țarcă Simion Isolated farm, Călimani Mountains Șaru Dornei (SV)

Stage conclusions

In this ensemble of worrying phenomena for the Romanian society, but also for the EU, to the EU/EC initiatives regarding the "mountain product" and the national, legislative and organizational efforts was added the constructive, **optimistic** attitude of some **farmers and entrepreneurs** from the mountain areas, which br**ing concrete answers to the classic question "what to do?"**, in order not to lose a large economic activity that produces healthy food for millions of people.

The producers concerned ("mountain" peasants/households/farmers with small and medium properties, characteristic of the Romanian Carpathians), benefiting from competent guidance, were encouraged to act **to overcome mentalities and use opportunities, capitalizing on tangible and intangible assets**, respecting the technical-sanitary and commercial exigencies, learning "on the go" and managing to obtain "mountain products" and to enter "market niches", **overcoming the existing reluctance towards associative forms**. The "**key**" segment where efforts are required is **that of promoting "mountain products" and capitalizing on cost-effective prices and obtaining attractive benefits**, aspects dependent on **good guidance and organization**, on ensuring quality conditions that create a segment of "niche" consumers **willing to pay a higher price for healthy, high quality products**, following the commercial rules: significant **volume**, **continuity** all year round, **quality assurance and health guarantees**. These conditions are imposed for accepting entry into the network of large stores.

ON THE "STATE OF THE MOUNTAIN" – in 2019

In the last 29 years (1990-2019), in the great Romanian Carpathian mountain area, at the same time as some important positive phenomena (infrastructures, tourism, subsidies, etc.), phenomena of significant degradation have also appeared, such as the unbalanced exploitation of forests, a general phenomenon of discouraging young agricultural producers, in particular by making livestock farming less profitable, **caused mainly by the ridiculous prices charged by the external or internal "processors" and intermediaries for the most significant products, milk and meat - raw materials (0.6 - 0.8 lei/l milk; 5-6 lei/kg live beef, etc.).**

● **The accession to the European Union in 2007** opened for young people the possibilities for a better life abroad and **the first to choose this solution** were those who lived in the most difficult conditions: **mountain farmers, youth, a quality workforce, healthy and physically and mentally fit for change, also attracted by the mirage of the West.**

● **Two different worlds coexist** in Romanian agriculture: **the "large-scale agriculture" in the plain/hill areas**, based on crops, chemicalization and **intensive** agro-zootechnical systems, in conditions of high soil fertility, and the "**small mountain agriculture**" based on the "**grass civilization**" and **extensive systems for raising and exploiting ruminants**.

The mountain produces, out of the country total: approx. 30% of milk; 20% of meat; 25% of fruit, and the inhabitants of mountain villages have a significant role in caring for landscapes, protecting the environment and perpetuating extremely valuable cultural traditions and agro-economic "good practices".

MAJOR RISKS

Accentuated depopulation of mountain villages, growing disinterest and agricultural abandonment by young generations, with the risk of losing the continuity of a traditional multisecular economic activity.

● **Cattle herds - down 40-60%**, especially for **dairy cows**;

Sheep herds (on small and medium farms) - **a decrease of 80-90% compared to 1994**, accelerating after 2007 when MARD established subsidies for sheep **only from 50 heads upwards, eliminating the support for small farms** that traditionally owned **10-20 sheep** and provided **approx. 40-50% of the need for organic fertilizers, irreplaceable in the mountains, with a fundamental role in maintaining the qualitative structure of the natural flora of the mountain meadows**[5];

1. Current population (active farmers)

It is **mostly aged, with a marked weakening of work capacity**, in a hostile environment **where physical effort is a condition for survival**. Statistics for measuring economic and social indicators in the mountain area based on "surveys" are no longer relevant enough or even missing. **Every year,**

[5] Eg.: in the Dornelor basin (12 ATUs), **famous for the production of milk and superior cheeses** (emmenthal), **in 1994** there were approx. **31,000 cattle and approx. 30,000 sheep** left.

In 2011, there were approx. **15,000 cattle** and only **6,700 sheep** left, and the herd declining process continued.

In 2016, the production of superior Emmenthal cheese **is abolished**, due to the detrimental influence of a newly formed food industry, of multinational type and the "support" of some local, interested and thoughtless factors. In July 2020, the multinational Lactaris withdrew from Țara Dornelor, abruptly closing the only dairy factory, leaving behind 158 skilled workers without jobs and, very dire, approx. 7,000 medium and smaller mountain farms with no secure prospects, in an area with no chances for agricultural crops and fruit growing, economically dependent on grass and raising dairy cattle. A clear demonstration of a compromise system that needs to be replaced by associative-cooperative solutions.

households, hamlets and even entire villages disappear, due to the lack of a replacement generation, with economic insidious consequences. The tendencies of the mountain youth are **to "leave", not to "stay"** in the villages and continue the agro-zootechnical activities. **What does the perspective of the mountain agricultural economy become in the next 20-30 years and beyond?**

2. Environment and biodiversity

Organic fertilizers, without which an efficient and sustainable mountain agriculture can not exist, due to the decrease in the number of animals, are **less and less, manure platforms and purine collection pools are missing in the stables** and thus **a large resource of organic nitrogen is lost, also polluting groundwater** and thus maintaining a poor state of hygiene, which affects the health of animals and farmers and thus the milk and meat production. Hay collected in traditional haystacks is exposed to **mold**, with the **risk of aflatoxins appearing in milk**. **Haylofts on hayfields** as a good solution exist only in a few counties (Neamţ, Suceava, Maramureş, rarely in other counties);

● The **absence/reduction** of organic fertilizers generates **a phenomenon specific to the mountain, of the highest gravity: the "return to the wild" of the no. 1 value of mountain meadows – the natural polyflora,** with **a valuable fodder structure** (biodiversity of high social value) – **a multisecular creation of the mountain man**, in cooperation with nature - thanks to organic fertilizers from ruminants (sheep, goats, cattle), with considerable efforts in over 1,000 years of shepherding - **without annual interruptions**;

● It is **scientifically proven** that within **only 7-8 years of lack of continuity** in the **administration of organic fertilizers - valuable plants** (eg white and red clover, guide, etc.) **disappear** and the meadows are **invaded by species without economic value**, or of very poor quality (forest moss, nardets, thorns, weeds).

● It is a **risky phenomenon, which increases annually, insidiously,** which has been thoughtlessly ignored both by mountain farmers (deprived of agricultural schooling), and by the central and local professional sphere and, largely, by the political one, which does not notice the magnitude and irreversibility of the phenomenon - due to the same **lack of knowledge of the specificity of the agro-mountain economy**, an inherited and deeply damaging general situation.

It is the worst economic phenomenon in the last 25 years, because in the conditions of the 21st century it becomes historically irreversible. European and world experience has made it clear that mountain youth, once they have left mountain farming, can no longer be recovered and replaced except very rarely.

The result is the major risk for Romania of gradual but definitive loss of a large agri-food economy, which still feeds approx. 4 million people with quality protein food - based on renewable energy, this in the increasingly obvious conditions of the global food crisis (the jump from 7.6 billion inhabitants in 2017 to 9.5 billion in 2050...)

● In the "mountain agricultural policy" there are **4 fundamental factors directly related and mutually dependent**:

1. Man (the mountain farmer, the direct producer, as an essential **irreplaceable** factor);

2. Ruminants (cattle, sheep, goats/"mountain type" breeds);

3. Organic fertilizers (manure, urine) – **strictly necessary**;

4. Polymorphic natural flora - fodder (grass – with **valuable biodiversity**);

If Romania is left **without people in the mountains** (active agricultural producers, animal breeders) - **the other 3 factors collapse**. The consequence of **mountain depopulation** is the **endangerment of the food security** of a large segment of the population, **a strategic element which also includes national security, being at the same time a great loss for the European Union and even for humanity.** There are accumulations of research and knowledge, but **the specialists of the mountain agricultural economy are in very small numbers.** There **are** positive exceptions. There **are** farms and other "**pilot**" initiatives exist, representing the results of efforts over the past 28 years.

● An aspect of **great negative impact** is found in **the general state of low or even lack of competence** on the problems spe**cific to the "mountain-type" agro-zootechnical economy, at the level of decision makers from MARD and at other central and local levels.** The knowledge limits of mountain farmers, who are **not agriculturally educated**, are also known, based only on the traditional experience which is valuable, but which **is no longer sufficient for the competitive framework of the 21st century**.

During the last regime focused on the collectivist system in the plain/hill areas, the **education system** in the mountain areas **was not adapted** to the specificity and realities of the **mountain-private type** life. **The main cause was political, in order to not generate the development of mountain agriculture, respectively that of private property.**

UNCOMFORTABLE REALITIES

The graduates of the agricultural universities in Romania were and **continue** to be, after 1990, professionally trained **for the large-scale**

agriculture based on chemicalization, mechanization, industrial systems of breeding and exploitation of animals. Graduates reach management positions at central level or in counties, but d**o not have knowledge of the type of mountain agriculture**, based on grass, organic fertilizers, in conditions of poor soil fertility and short periods of vegetation, with great mechanization limits on slopes, etc. **Other rules, other yields, other possible incomes per hectare, much inferior to the plain/hilly areas. MARD leads a mountain giant, with poor skills, with errors and finally with the marginalization of mountain agriculture and the moral wear and tear of the very few specialists - who strive to avoid the state of marginalization of the mountain.**

At the level of the Ministry of Agriculture and Rural Development, who is mainly responsible for mountain agriculture as well, **a concentration of support has been perpetuated in the last 27 years especially for the large farms** in plain and hilly areas, representing (cumulatively) **approx. 80% of Romania's agriculture**.

In this situation, **the pressure exerted by the agriculture in the lowland areas is very high at the ministry level, to the detriment of small mountain agriculture - too little known and supported according to its specific needs by both decision makers and ministry officials, including for plain/hill areas.**

The risk arises from the fact that this proportion of approx. 80%-20% will be maintained permanently in Romania, the mountains will always be a large part of the country and inevitably, without vigorous protection measures, there is a risk of maintaining the state of marginalization of the mountain and creating a large economic and social decline, and, in addition - irrecoverable.

Institutional instability, with the severe staff fluctuations within the MARD, has amply demonstrated, with regard to the mountain area, that **a new institutional and strategic solution is needed, efficient and stable, through which it is possible to preserve values and to intervene reparatively, as well as ensure stability and methods of protection and economic growth.**

"The sleep of reason gives birth to monsters"

WHAT TO DO?

● For all political and central and local administration factors, it must become clear that, for a reasonable future, it is vital that the country's mountains are well populated, with well managed farmers and animals.

As **practice has proven** that prevention, stability and progress in the mountains are **much slower than in the plains, and more time and adapted methods are needed, a Sustainable Development Strategy for the mountain**

area, applied consistently and with results, **can not be very short term**, but must be **medium and long term**, multiannual, with **periodic correction**.

The strategy must be followed by a multi-annual PROGRAM for the economic and social development of mountain areas in Romania, approved by law (eg: Mountain Law no. 197/2018) and funded by Government decisions applied consistently.

The experience of the last 30 years has shown that the elaboration and implementation of a **coherent Multiannual Program** for a vast mountain territory, marked by accentuated specificity, **implies the prior existence of a firm political decision, based on a multiparty agreement that allows a continuity not influenced by the political cycles, in line with the Community guidelines.**

The "target" objective that stood out, in the medium and long term, is represented by **the "MOUNTAIN PRODUCT",** which **in Romania is based on:**

1. 1. Romanian Government Decision no. 506/2016 on the establishment of the institutional framework and measures for the implementation of Delegated Regulation (EU) no. 665/2014 of the Commission of 11 March 2014 supplementing Regulation (EU) no. 1,151/2012 (of the European Parliament and of the Council) regarding the conditions of use of the optional quality mention "mountain product";

2. Order of the Minister of Agriculture and Rural Development (no. 52 / 3.03.2017) regarding the verification procedure for granting the optional quality mention "mountain product".

● **Some essential continuity issues remain to be resolved,** which have been the subject of documented proposals aimed at consolidating the **organizational aspects,** among which:

- completing the staffing of the Regional Centers and Mountain Development Offices with specialists;

- the creation of **a permanent State Secretariat within MARD**, which would ensure the **avoidance of an artificial and unnatural conflict of interests between "large-scale agriculture"** in areas with high fertility (~80%) **and "small mountain agriculture"**, representing approx. 20% of Romania's agro-zootechnical production.

This balance must be carefully and permanently maintained. The mountain area needs **constant protection** and **compensatory** solutions for the direct producers **– the mountain farmers.**

● The complexity and **socio-economic, environmental and strategic importance** of the mountain area **can not be attributed only to the Ministry of Agriculture**, which has a significant, **but not exhaustive** role.

At least **9 ministries** operate independently in the mountain area, **with little or no cooperation, without creating a system capable of ensuring the development and implementation of strategies and coherent development programs in Romania's main mountain ranges. Coordinating** the actions of several ministries **can't possibly be done at the level of a single ministry** (there are some trends in this regard). **The only authority able to cope is the Government, with the authority of the Prime Minister (according to H.G. 332/2019).**

● An effective solution could be the creation, **at the level of the General Secretariat of the Government**, of a **Technical Department specialized in the mountain area**, as **a "working" tool for the Prime Minister** (who, according to the Mountain Law, **chairs the National Mountain Council**). There is a precedent in this regard, which gave appreciable results until 2016: **the Memorandum: "National strategic guidelines for the sustainable development of the Carpathians/2014-2020)".**

● For the mountain agri-food economy, with secure prospects, "**mountain products**" become a **safeguarding solution** (according to EU/EC Regulations and the national legislation in force).

● Through **analysis and long practice, it has emerged that small and medium-sized households (farms)** characteristic of the Romanian mountains, **cannot and will not be able to cope with the pressure of large food industries that impose unfair, discouraging prices for milk, meat and other valuable mountain raw materials, with the effect of more and more accentuated agricultural abandonment.**

● Only the solution of **mountain agricultural cooperatives focused on capitalizing on "mountain products" can revive a hope for the great mass of mountain farmers through an attractive motivation for those who produce quality food for society. Associative forms and private initiatives are to be considered, but they are inevitably few in number.**

The experience of the 2013-2019 period showed that the existence of **more than one cooperative with the same profile** at the level of a settlement **is not viable**, bringing about phenomena of **unfair competition and discord in the community** (to use a local expression, "our Romanianism…").

Still, the emergence of **the first "pilot" cooperatives focused on capitalizing on the "mountain product" in Sângiorz-Băi, Bistrița-Năsăud County and Șarul Dornei, Suceava County, with wide involvement from the Centre for Mountain Economy/INCE/Romanian Academy, the Romanian Mountain Forum and the National Mountain Area Agency**, proves **that "it is possible"**.

Consideration should be thus given to **setting up a single ATU-level cooperative to collect raw materials, either to process** and **capitalize** them as "**mountain products**" (with the foreseeable difficulties in capitalization), or to **negotiate in a first phase** prices with the current transformers (offering large quantities), at least until the consolidation of their own processing and capitalization capacity.

As new INNOVATIVE ideas, what is aimed for is **an association of the communal cooperatives in Mountain Agricultural Intercooperative Associations (**in the traditional mountain "basins"**), focused on capitalizing on "mountain products", without interference in the property of farmers, with wide opening to export and advantageous prices,** which could even become **the relatively ideal solution** for breaking the deadlock**, with sustainability perspectives.** At this **intercooperative** level, **an investment policy (once only)** would be justified, one that would allow **capitalization at higher prices through export or in the country and create a reliable source of improving the income of producer families and the capitalization of medium and smaller mountain farms, fighting poverty, limiting, after a period of necessary investment, too burdensome compensatory efforts on the part of the state. Such a system is part of the mandatory trade rules, which require volume, continuity throughout the year, quality and health guarantees and could generate the effect of profitability and stability guarantees for a new generation of mountain farmers, a response to the need for sustainability.**

● **A supplement to the Law on agricultural cooperatives** with the inclusion of **mountain agricultural cooperatives focused on capitalizing on "mountain products"**, through which to grant "**start-up aid**", **special tax facilities**, gradual according to natural conditions (altitude, isolation, etc.) and "**quality premiums**", with a **compensatory role for the very difficult working conditions in the mountain animal husbandry, with possible production lower compared to the areas with high fertility lands.**

The fertile soil layer (10-15 cm)

Organic fertilizer – managed wrongly (90%)

Proper use of organic fertilizer (manure)

The valuable mountain natural polyflora

Solution for ensuring the quality of hay (HAYLOFT)

Cattle breeds – adapted to the mountain area (eg. Pinzgau) – Vatra Dornei

A "SCENARIO" FOR THE ORGANIZATION OF A MOUNTAIN "PILOT" MICROAREA – FOR THE CAPITALIZATION OF "MOUNTAIN PRODUCTS", IN AN ASSOCIATIVE-COOPERATIVE SYSTEM
- PRINCIPLES –

The preparatory phase includes: - **The willingness to approach a "pilot project" of sustainable mountain development** (at central and local level).

- **The existence of a concept** focused on knowledge and experience and setting the main objectives.

- **Financing a complex study** at the level of the **mountain micro-region considered** (Marketing, impact, technical - economic and social studies).

- The existence of legislative support and support mechanisms, at central, county and local level (Government/MARD, County and local administration).

- The assessment, through studies, **of the material and human costs and resources** that can guarantee at least moderate development.

- In the project budget it is necessary to provide a "safety margin" - for unpredictable issues that will require corrections along the way.

- The establishment of a **project management team** – which includes the **necessary experts in the fields**.

The "pilot" project also includes **the experimental research element**, which will highlight new aspects **that could not be foreseen in the design phase and that require corrections adapted** along the way and without affecting the background of the project.

The results to be obtained will be able to be m**ultiplied in other similar mountain micro-regions**, following the methodology used successfully in the experimental framework **while avoiding the repetition of some errors**.

● The project management team will create **contacts and exchanges of experience** with similar areas in advanced EU countries, with the "actors" directly involved in the project.

● The result of the **marketing study** will highlight the **progress direction**, regarding:

- **The types of "mountain products"** with real chances on the market (eg. hard cheeses, meat assortments, vegetable products) on both the external and internal markets (different policies) and **the best prices**;

- Reliable, assimilable elements of **technical know-how** (existing in the EU);

- **The specialization(s)** with a **sustainable perspective** necessary for the mountain microarea (basin) in question (training the qualified workforce during investments);

- **The rational sizing of investments**, correlated with **local reproducible resources**, related to the sustainable provision of food for ruminants and the **limits of a sustainable development**.

● The preparatory phase includes the **creation of agricultural cooperatives** in **two versions** to consider:

Option A: Grade I cooperatives (a single cooperative/ATU), with an (**incipient**) profile of collecting and **capitalizing** on raw material "**mountain products**" (through their own, limited possibilities), or through the current industrial "processors", with the possibility of negotiating **better prices** (eg. for milk and live animals, with supply in **larger quantities**); **either** by searching and **finding market "niches", with higher prices** than those offered by the industry, **the trend remaining a transition to the Grade II cooperative**, with its **own capacity to process** raw materials and **capitalize, with added value**. In this case, the key is still in ensuring a **constant "market niche"**. There is also **the option of setting up Grade II cooperatives "from the start"**, at the microregional level (traditional basin).

● The **general rules** of a successful and sustainable concept with market success are to be considered:

- significant merchandise **volume** (interesting enough for the trading system);
- **year round** merchandise;
- the **guaranteed quality** desired by consumers;
- **health guarantees.**

Starting from these reasonings, there is a **need to associate Grade II (or I) communal agricultural cooperatives at the level of mountain micro-regions (mountain basins) - in a "Mountain Agricultural Intercooperative Association" profiled on the superior capitalization of "mountain products"**, with local brand, able to carve out a **place on the foreign market and the domestic market.**

Only the achievement of this goal could be the complete solution for a sustainable mountain rural development, through which farmers will be able to obtain fair prices for raw material "mountain products", which would meet the real needs of mountain farmers, small and medium par excellence, to increase their income based on renewable resources and increasing farm capitalization and investment capacity.

● **The necessary (hypothetical) investments**:

The first category of investments: for Grade I or II mountain agricultural cooperatives (**a single cooperative/ATU**) - there is a need for a "**start-up aid**" (essential in the start-up phase, to avoid a **"blockage" of the initiative**), with "**Specifications**" to establish the **rational use of funds**. The size of the "aid" becomes **variable**, depending on the **size of the cooperative**.

● The **second category of investments** aims to **organize the collection centers for raw materials** (milk, fruit, berries) and small local bases for taking over **live animals** - through the **cooperative's collection and procurement system**. For **milk and fruit** there is a need for a **central warehouse**, with the possibility of **refrigeration**.

● In the variant of creating some **Grade II** cooperatives **from the beginning** (**one/ATU**), the investments target the raw material **collection centers**, **completed** with a processing unit to **turn them into semi-manufactured or even finished "mountain products", sellable, dependant on the communal agricultural cooperative providing a "niche market" (this objective being the most difficult one to achieve). The COVID pandemic** has generated **a new way of capitalization** through **online commerce**, with satisfactory prices for farmers and **favorable health effects for consumers**.

● From the experience of recent years, it appears that some current solutions, through **small cooperatives in mountain villages, can not be guaranteed sustainable, as it is difficult for them to penetrate and hold their own on markets capable of constantly ensuring a higher payment for high quality goods.**

● **Third INVESTMENT category**

It is the **final solution** for organizing a mountain micro-region **(mountain basin, ~8-20 ATUs)**, which involves the **association** of agricultural **cooperatives** from geographically close ATUs in the form of a **"Mountain Agricultural Intercooperative Association", with approx. 4 investment objectives:**

1. **Dairy factory** (mainly focused on hard cheeses) with finishing section;

2. Slaughterhouse with meat processing shop and by-products processing workshop;

3. **Mountain plant products factory;**

4. **Central warehouse for "mountain products"**, with transport and maintenance services.

Within a **Mountain Agricultural Intercooperative Association** would operate **the commercial service**, which will ensure **the prospecting of external and internal markets, the promotion of "mountain products" under its own brand, the signing of contracts and commercial organization and the Technical and Sustainable Development Service.**

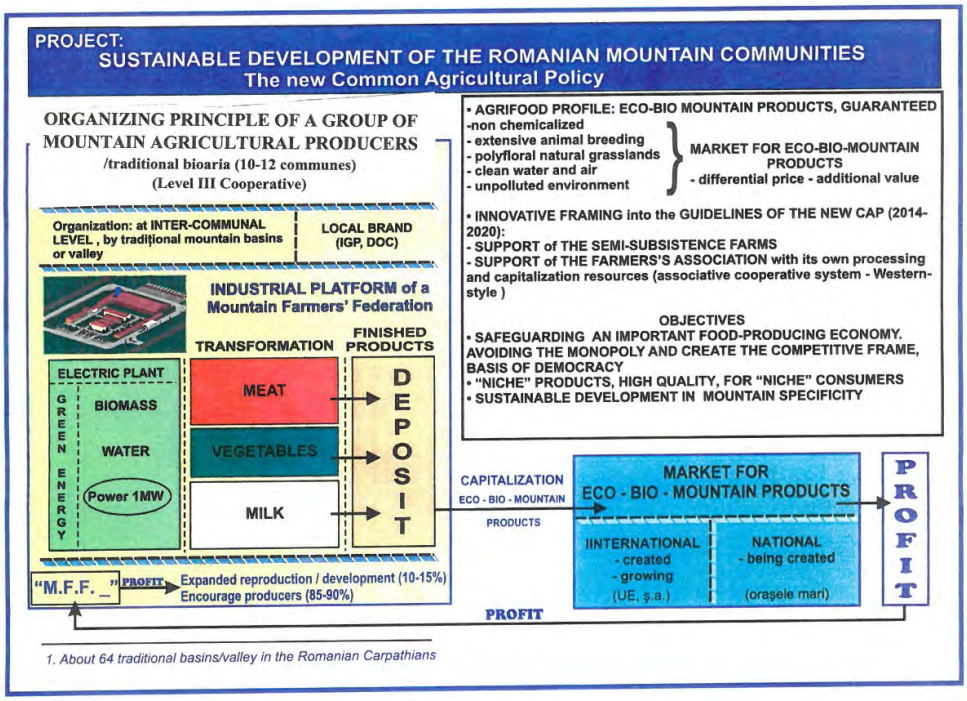
● For reasons of economic profitability and efficient administration, the 4 main objectives, mentioned would be the equivalent of a "**Mountain Eco-Industrial Park**".

FINANCIAL RESOURCES
(Needed: Specialized study)

The financial sources for INVESTMENTS target **EU funds, state contributions** for the DISADVANTAGED mountain areas, **other sources**, essentially **non-reimbursable** and granted at the beginning, **a single time**. Post-1990 experience has shown that the method of using "co-financing" through "contributions" from farmers (generally poor, elderly, distrustful) **is not possible**.

Shorter version

Investments, from the beginning, in the 3 factories (milk, meat, vegetables) that become **LOCOMOTIVES** for the organization of the COOPERATIVE ASSOCIATION - at the microregion level ("mountain basin"). Mountain farmers today are more permissive toward accepting the idea of a cooperative. An intense training/persuasion activity, at the level of ATUs from the "mountain basin" (NMAA/MARD, RMF, CE-MONT, TV, press), will be able to mobilize farmers to join in this type of cooperative, which becomes **THEIR PROPERTY** (previous: in the "Dorna basin", in 1994, 2,300 farmers were registered as contributing members in the Federation of Mountain Farmers - Dorna (active 1992-2020), an association preceding a large cooperative (Romanian-French-German cooperation - MARD/CZMR, MAP - France and GTZ - Germany).



(Presented work – Aula Magna – Romanian Academy, December 2013. In "Thematic sub-program for the mountain area" – available to MARD/R.R.)

PROPOSALS of MEASURES

1. The creation, within MARD, of a **State Secretariat** for the mountain area, with the **status of organizational, obligatory permanence, a structure that would not be influenced by the political cycles.**

Breakdown of a separate budget for the mountain area.

2. Applying, **quickly**, the provisions of the **"Mountain Law" no. 197/2018** and subsequent laws.

The adoption of a **"National Strategy for the protection and sustainable development of the mountain area in Romania", through political consensus** and of an **implementation Program staggered in the short and medium term**.

The continuation and acceleration of the organization of the National Mountain Area Agency, through the Regional Centers and Mountain development offices, at the level of traditional basins (GD. 1036/2018).

3. The short-term implementation of the provisions of **GD no. 332/2019** on the **Massif Committees and the National Mountain Council** - chaired by the Prime Minister.

4. **The creation of a permanent Office (working group), specialized in the mountain area**, at **Government** level **(SCG)**, to ensure the cooperation of ministries, etc., with activities in the mountain area and preparation of an **annual report** on the "state of the mountain" for the Prime Minister (there is a precedent).

5. Ensuring the financial resources for the implementation of the provisions of the laws subsequent to Mountain Law no. 197/2018, for investments in the mountain countryside (laws no.: 296, 330, 331, 332, 333, 334/2018).

6. Intensifying the activity of the National Mountain Area Agency to increase the number of producers who make certified "mountain products".

7. Ensuring the **adaptation of rural education**, from mountain gymnasiums, to the specificity of the mountain agricultural economy and environment. Supporting the creation of **vocational schools for mountain agriculture**.

8. Creating a "**National Mountain Support Fund**" through the contributions of entities that use the resources of the mountain area and make a profit (wood, water, milk, meat, tourism, etc.).

9. **Insistent negotiations with the European Commission/DGAgri**, for the **motivating** support of **small and medium-sized farmers** in the mountain area and the **creation/development** of mountain agricultural **cooperatives** and **mountain agricultural inter-cooperative associations - at the level of traditional mountain basins/micro-regions**. Within the proposals for **PNS 2021-2027**, to present a **Mountain Agro-Rural Development Program** based on the **guidelines of the European Green Pact and the mountain legislation of Romania**. Inclusion in the **EU/EC "Vision" for "Agriculture and Rural Development" - Horizon 2040 - through the European Green Plan** for "mountain agriculture" - **distinctly** focused on **capitalizing on "mountain products".**

A "VISION" for Romania's mountain area - HORIZON 2040[6]. SUSTAINABLE EFFECTS

1. **Romania - an important "actor" in the field of "mountain products".**

2. Approx. 500 agricultural-mountain cooperatives and 50 mountain intercooperative associations (basins/microregions).

3. Approx. 1,000,000 stable jobs (full and part time)**. Stopping/attenuating the exodus of mountain agricultural youth.**

[6] R.R.

● **Reducing urban unemployment.**

4. Approx. 200,000 stable jobs in/for the mountain area.

5. Durable livelihoods for approx. **800,000** mountain **families** (~3,000,000 people). **Decent** standard of living.

6. Utilization of **new latent, renewable resources. Fighting poverty/ hunger.**

7. **Minimum consumption of conventional energy and oil. Renewable energies.**

8. Healthy food for approx. **6 million people** (in mountain and URBAN communities).

Economic and social cultural stability.

9. Sustainable development - with the protection of nature and biodiversity.

10. **THE MOUNTAIN AREA - an OASIS of PROTECTION against COVID-19 and NEW PANDEMIC and other FORMS OF HUMAN HEALTH AFFECTION.**

● The forestry sector – MA:

- European transport blockages for the export of wood products; seasonal forestry works (nurseries, afforestation) affected (day laborers).

● Demand for wood - declining: declining incomes.

● **Measures** (short term): Ensuring strictly necessary activities (guarding), windfalls, fire prevention. Avoidance of extreme measures (activity prohibitions). Building "early" stocks at processors: supporting economic agents (unemployment, technical unemployment), to stimulate the labor force.

Long term:

- support for private owners - works of regeneration and care of trees;
- promoting wooden products that can replace plastic, iron, concrete;
- stimulation of public and private wooden constructions (buildings, annexes).

Number of ATUs in the mountain area

According to the National Program for Rural Development - PNDR 2014-2020, a number of 658 ATUs are included in the mountain area, and according to the delimitation based on the Joint Order of the Minister of Agriculture and Rural Development no. 97/19.02.2019 and the Minister of Regional Development and Public Administration no. 1.332/14.03.2019 *on the approval of the delimitation criteria and the list of localities in the mountain area,* **in the mountain area are included a number of 948 localities, according to the following table and graph:**

Centralizator UAT-uri
(municipii, orașe, comune) din zona montană, repartizate pe județe

Nr.crt.	Județul	PNDR 2014 - 2020				Ordin comun al ministrului agriculturii și dezvoltării rurale nr. 97/19.02.2019 și ministrului dezvoltării regionale și administrației publice nr. 1.332/14.03.2019			
		Nr.UAT-uri	Municipii	Orașe	Comune	Nr.UAT-uri	Municipii	Orașe	Comune
1.	Alba	40	0	5	35	45	-	5	40
2.	Arad	8	0	0	8	25	-	-	25
3.	Argeș	24	1	0	23	41	2	-	39
4.	Bacău	16	0	4	12	23	1	4	18
5.	Bihor	19	0	3	16	36	-	4	32
6.	Bistrița-Năsăud	33	0	2	31	37	-	2	35
7.	Brașov	33	3	3	27	53	3	6	44
8.	Buzău	21	0	2	19	27	-	2	25
9.	Caraș-Severin	38	1	3	34	55	1	5	49
10.	Cluj	24	0	0	24	40	-	1	39
11.	Covasna	35	0	2	33	45	2	3	40
12.	Dâmbovița	13	0	0	13	24	-	2	22
13.	Gorj	12	0	3	9	12	-	3	9
14.	Harghita	61	4	4	53	65	4	4	57
15.	Hunedoara	45	4	4	37	69	7	7	55
16.	Maramureș	44	1	7	36	53	2	8	43
17.	Mehedinți	11	0	1	10	18	1	1	16
18.	Mureș	20	0	2	18	31	1	2	28
19.	Neamț	23	1	1	21	28	1	1	26
20.	Prahova	28	0	5	23	45	1	7	37
21.	Sălaj	2	0	0	2	21	1	-	20
22.	Satu Mare	1	0	0	1	13	-	1	12
23.	Sibiu	25	0	4	21	42	1	7	34
24.	Suceava	38	2	4	32	45	2	4	39
25.	Timiș	3	0	0	3	5	-	-	5
26	Tulcea	-	-	-	-	-	-	-	-
27.	Vâlcea	21	0	4	17	26	-	4	22
28.	Vrancea	20	0	0	20	24	-	-	24
TOTAL UAT-uri		658	17	63	578	948	30	83	835

The population of the mountain area:

1. According to PNDR 2014-2020, 15.01%
2. of the current population of Romania is registered in the mountain area:

Total population Romania - 2019	of which in the mountain area – 2019	
- number of people -	- number of people -	%
22,259,207	3,340,345	15.01

2. According to the Joint Order of the Minister of Agriculture and Rural Development no. 97/19.02.2019 and the Minister of Regional Development and Public Administration no. 1,332/14.03.2019 regarding the approval of the delimitation criteria and of the list of localities in the mountain area, in the mountain area there are **21.97%** of the total population of Romania:

Total population Romania - 2019	of which in the mountain area – 2019	
- number of people -	- number of people -	%
22,259,207	4,891,845	21.97

According to the PNDR 2014-2020 delimitation, the following situation exists regarding the livestock:

Livestock numbers at country/mountain level					
No.crt.		**Cattle**	**Sheep**	**Goats**	**Pigs**
0	**Source**	**ANSVSA - 2019**			
1	**Country total**	**1,993,321**	**11,697,600**	**1,658,270**	**1,901,725**
2	**Mountain area**	**614,303**	**2,587,345**	**211,992**	**254,509**
3	**%**	**30.82**	**22.12**	**12.78**	**13.38**

According to the delimitation from the Joint Order of the Minister of Agriculture and Rural Development no. 97/19.02.2019 and the Minister of Regional Development and Public Administration no. 1.332/14.03.2019 regarding the approval of the delimitation criteria and the list of settlements in the mountain area, there is the following situation:

Livestock numbers at country/mountain level					
No.crt.		**Cattle**	**Sheep**	**Goats**	**Pigs**
0	**Source**	**ANSVSA - 2019**			
1	**Country total**	**1,993,321**	**11,697,600**	**1,658,270**	**1,901,725**
2	**Mountain area**	**789,308**	**3,908,464**	**313,585**	**403,220**
3	**%**	**39.60**	**33.41**	**18.91**	**21.20**

Source: Data processing ANSVA – 2019

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