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Conference Paper

Small Islands and Large Scale Spatial Development Patterns - Story of the Croatian Island of Unije

46th Congress of the European Regional Science Association: "Enlargement, Southern Europe and the Mediterranean", August 30th - September 3rd, 2006, Volos, Greece

Provided in Cooperation with:

European Regional Science Association (ERSA)

Suggested Citation: Starc, Nenad (2006) : Small Islands and Large Scale Spatial Development Patterns - Story of the Croatian Island of Unije, 46th Congress of the European Regional Science Association: "Enlargement, Southern Europe and the Mediterranean", August 30th - September 3rd, 2006, Volos, Greece, European Regional Science Association (ERSA), Louvain-la-Neuve

This Version is available at:

<https://hdl.handle.net/10419/118270>

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Zagreb, June 12, 2006

46th Congress of the European Regional Science Association
Paper number: 244

Small Islands and Large Scale Spatial Development Patterns – Story of the Croatian Island of Unije¹

1. The Small Island

It is not easy to define a small island. Writers of fiction consider that an island is small if it can be taken in at a glance from the highest peak or if it can be covered on foot from morning to lunchtime. UNESCO experts propose that every island that does not exceed 10,000 km² and does not have more than 50,000 inhabitants should be considered a small island (HESS, 1986). For the Croatian Adriatic islands, the first, less technical definition is, no doubt, more appropriate. They cover 3,110 km², and as the 2001 census showed that there are no more than 120,000 inhabitants living on them. Even the large Croatian islands (only Cres and Krk exceed 400 km²) are nowhere near UNESCO's limit. None of the small ones exceeds 20 km², and in the past some used to have up to 2,000 inhabitants. Today there are no more than 10,000 people living on small islands. Most of them have less than 100 inhabitants, many even less than 10, while some are totally deserted.

One of the smallest, the island of Unije is to be found in the Northern Adriatic between 44°14'36" and 44°14'41" N and between 14°17'24" and 14°17'41" E, between the peninsula of Istria and the island of Lošinj. With its unpretentious 16.77 km² and 36.6 km of coastline it is the third largest island of the Cres-Lošinj archipelago (Projekt Cres-Lošinj, 1989). Unije has the shape of a crescent, stretching from the northwest towards the southeast in the direction of the Dinaric Alps. A circle with the same surface area would have a 2.5 times smaller circumference, which defines its indentedness coefficient. The village of Unije, the only settlement on the island, is located in the bay on the west side of the island. It has 300 houses. The sea there reaches a depth of 25 metres, while the harbour, which opens

¹ Special thanks to Miro Kučić, the director of one of the last canneries in the Adriatic and to Paul Stubbs the first sociologist at the Institute of Economics Zagreb

towards the sea, is shallow. The bay is open to the northwesterly and westerly winds, so that storms coming from that direction regularly cause damage.

The western side of the island is steep and quite inaccessible along the cliffs as high as 60 meters, projecting northwest. The main range of hills on the island do not exceed 138 metres above sea level. The land projecting into the sea in the southwest is a large, flat plain, known as "the Field", covering 3 km² and no higher than 10 m above sea level. On the eastern shores, opening towards the 2.5 to 3 Nm Unije Channel and the island of Lošinj, there are several deep coves (Projekt Cres-Lošinj 1989).

The climate is of a Mediterranean-Adriatic type. The temperature and winds have never been measured, so that the only available data is the amount of precipitation. During the period from 1928 to 1940, and then from 1956 to 1971 (no one has been measuring anything since then) the average annual rainfall (no snow falls on Unije) was 910 mm. The driest month is July (30 mm), and the wettest November (114 mm). The winds and temperatures, appear similar to those on the nearby island of Lošinj (Projekt Cres-Lošinj, 1989). The climate can, therefore, be said to be quite pleasant all the year round, except for a few days in winter when the northeasterly wind Bora begins to blow.

There is more water on Unije than on other Croatian islands of the same size. Water springs, of which there are four according to the islanders, have not been properly researched. In 1984, groundwater was discovered along the northern side of the Field, under the slopes of the main ridge. In the past, the inhabitants of Unije collected rain water in cisterns and in the two ponds in the Field.

Like all the other Croatian islands Unije is also made of limestone. At the time of the Pleistocene cold spell, when the Adriatic Sea was half the size of today, Unije was part of the northern Adriatic mainland. Drifts of loess were deposited on this mainland plateau by the winds blowing from the Alps. After the climate became warmer the sea rose so that parts of the loess deposits on the Unije plain and some of the surrounding islands, remained above the sea level. Since then Unije has had the Field: some 300 ha. of brown loess Mediterranean soils. The thickness of these soils ranges from several centimetres to two metres. Owing to the soil's structure which favours the development of microorganisms, and its moderate water and air capacity, 150 ha. of the Field is fertile farmland. The fertility is also due to the compressed, porous, subsoils, affected over the years by human tillage. In addition to the plain, there are another 20 ha. of farmland on the island. The salt which the northeasterly wind carries over to the plain can damage the crops but not the soil, since it dissolves rapidly and trickles down

into the deeper strata. 10% of the island's territory is thus covered with fertile land, which by far exceeds the standards of the Adriatic islands. In this respect, Unije is a special case.

The naturally grown island flora is Mediterranean, and unlike the other resources, it has been well researched. During the periods when it was not cultivated, the Field had become overgrown with Mediterranean maquis, mostly composed of juniper, day nettle and reeds, weeds and several types of grass. While under cultivation, the Field produced various types of crops. Reeds were planted along the edges of the plain to prevent soil erosion. On the southern slopes of the hills surrounding the Field, remnants of extensive olive-groves can be observed. The islanders estimate that there are still some 7,000 trees. Dense and impenetrable maquis covers most of the island today. Most of it has no value as pastureland, but parts of it which have reached their ecosystem climax are particularly valuable from the point of view of natural science. From an agricultural point of view the territory of Unije can be divided into arable land (170 ha), old olive groves (20 ha), pastureland (222 ha), maquis and tufted hair grass (800 ha), and holm oak community woods (370 ha). Infertile soil takes some 95 ha (DUMANČIĆ, 1990).

Unije has a very rich Mediterranean fauna, one that is particularly interesting for ornithologists. The island is small and jugged out so that several species of migratory birds from the mainland gather there before flying south in autumn. It is also their first stop when they come back in spring. Several species which do not exist on any of the other Adriatic islands build their nests there, and bee eaters come from the closest neighbouring island. The two ponds on the Field are inhabited by the rare birds of the marshes - stilts, while in the grassy regions of the northern part of the island gulls and white swifts nest. There are no poisonous snakes, however there are some non-poisonous kinds, as well as rats and also various kinds of lizzards. Of the domestic animals there are sheep, goats, some cattle and poultry. In 1970 pheasants were brought over to the island, in 1972 rabbits, and in 1986 the Greek partridge. The 180 ha. of land in the northern part of the island has been declared a geomorphological and ornithological reserve.

The former name of Unije, which can still be found in old documents, is Nia coming from the Greek word *heneios* meaning field. This toponym is frequently found on the Croatian islands, but nowhere does it better define the main natural resource; the main natural asset of Unije is its Field. This resource becomes even more valuable in view of the fact that Unije is geographically so out of the way that it becomes possible to successfully grow even those plant and animal species which, for various breeding reasons, must not be crossed with others. An important natural resource, available in relatively large quantities, is stone, which can be crushed and turned into sand and gravel. Another natural resource of the island is no

doubt its Mediterranean climate, which is particularly suitable both for agriculture and all kinds of tourism. One other point needs to be stressed: geographically, Unije lies in the middle of Europe. In its entire history² it has always been attractive. First settlers were attracted primarily by the Field, those who followed them by the recreational potential, those after them by the cheap work force and fish and so on.

2. The Islanders

The last names of the people born on Unije, which are to be found more often in the cemetery near the Field than at the home addresses, confirm that the islanders are descendents of Croats, who came from the south-eastern part of the mainland, and settled on the island. The number of inhabitants was mentioned for the first time in the 16th century, and was first recorded in 1869. Since then the following demographic trends have been recorded:

Table 1. Population of the island of Unije

year	inhabitants	year	inhabitants	year	inhabitants
1869	520	1921	783	1961	273
1880	630	1931	717	1971	113
1890	678	1945	639	1981	85
1900	696	1948	457	1991	81
1910	758	1953	402	2001	98

sources: Statistical Yearbooks 1992 and 2002 and KORENČIĆ, 1979

In the last 20 years the number of people living on the island has always been somewhat higher than the census count because of the weekenders and the emigrant islanders who keep coming and going throughout the year. During the off-season there are 100 to 120 people on the island daily. In July and August, tourists arrive and the weekenders bring their families and guests. The number of people on the island at least triples then, but it is unwise to make more accurate estimates; the daily fluctuations are not measured, and quite a few tourists sojourning on the island are not registered.

According to demographic criteria the negative rates for the period from 1948 to 1961 put Unije among the most highly depopulated settlements. During the period from 1961 to 1981, the population of Unije was dying out. In the period from 1971 to 1981, in view of the existing

² Unlike general historians, the island researchers do not have a problem of blurred, undetectable beginning of their subjects. The Adriatic as well as Baltic and some other islands are ex-hills that found themselves surrounded by the sea some 12.000 years ago. Geologists find it even simpler. From their perspective 12.000 years is just a blimp in the geologic history so that the hills in question are just temporarily detached parts of the continent. This perspective appears to be taken by today's policy makers. They do not seem to have noticed small islands.

trends, the population should have decreased from 113 to 89. However, in 1981 there were only 85 people on Unije, which gives a migrational balance of -4. During this same period, the migrational balance for the Cres-Lošinj archipelago was 515, for the Kvarner islands 871, and for the Croatian islands taken together -12 082 islanders. Between 1981 and 2001 immigration took place on Unije and the demographical decay was halted.

Among the islanders included in a survey done in 1990, 76% were not born on Unije: 4% came from the Cres-Lošinj municipality, 42% from the Croatian mainland, 29% from the other ex Yugoslav republics, and 1% from abroad (STARC, 1990). In such a small community the demographic consequences of such trends are highly significant. The average age of the inhabitants of Unije in 1971 was 58.3, up to the end of 1981 it dropped to 54.1, and today it is 44.3.

The five indicators used in the survey show dramatic changes in the population of Unije since 1971. They also show how usual demographic analysis can be inadequate when applied to small islands communities:

i) In 1971. the age index (ratio between the number of inhabitants aged 60 and over and the number of inhabitants up to the age of 20) was 1266.7%. In 1981 it dropped to 600.0%, and in 1990 to 148.0%. When this index is over 40% the population is said to be aging. The extremely high value of the age index for 1971 was, of course, due to the very small number of young people on the island.

(ii) In 1971, the age coefficient (ratio between the number of inhabitants aged 60 and over and the total number of inhabitants) was 68.5%. In 1981 it dropped to 63.5%, in 1990 to 38.1% and in the beginning of the third millenium to 29,4%. The critical value of this indicator is 12%. When this figure is exceeded then the population is said to have started aging. The high death rate on Unije and the positive migrational balance in the 80's have led to a rapid decrease in the age coefficient.

iii) The overall age dependency coefficient (sum of the population up to the age of 14 and that over 65 divided with the population aged between 15 and 64) was 101.8% in 1971. In 1981, it increased to 129.7%, dropped to 94.0% by 1990, and reached 84.0% by 2000. This coefficient shows the load imposed by the inactive population on the active one. The age structure of the population of Unije, which predominantly consists of elderly people, makes interpretation of this indicator quite difficult.

(iv) In 1971, the coefficient of the age dependency of the young, (ratio between the population up to the age of 14 and that aged between 15 and 64) was 3.6%. In 1981 it increased to 24.3%, and in 1990 to 40.0%. The coefficient reflects the influence of migrations on the age structure of the population of Unije, and it has increased because of the rising birth rate in recent years. The value of the coefficient clearly shows that the demographic situation on the island has been improving.

(v) The coefficient of the age dependence of the elderly (ratio between the population aged over 65 and that aged between 15 and 64) was 98.2% in 1971, while in 1981 it reached the alarming figure of 105.4%. In 1990, however, the coefficient dropped to 54.0%. These fluctuations were mainly due to a decrease in the number of elderly people (in 1971 there were 54 inhabitants over 65 living on the island, while in 1990 only 27). The drop in the figure for 1971 was due to post-war emigration, when most of the inhabitants who would be over 65 today left the island.

It is only lately that the national structure of the inhabitants of Unije has become more varied. For centuries the island had been inhabited by Croats, some of whom declared themselves as Italians at the time of Italian rule. The wavering was considerable:

Table 2. Unian Croats and Italians

population of Unije in chosen years		Croats		Italians	
year	population				
1880	630	607	96%	23	4%
1890	678	576	84%	102	16%
1900	696	250	36%	446	64%
1910	758	266	35%	492	65%
1945	639	421	65%	218	35%

sources: Statistical Yearbooks 1992 and 2002 and KORENČIĆ, 1979

Of course, dramatic changes in the national structure between 1910 and 1945 do not reflect departures and returns of Croats and Italians. They simply and directly indicate the pressures, disorientation, adaptation to new circumstances and also the pragmatism that marks the mentality of the population living on small islands. Moreover, it was not only a matter of the population having to declare themselves; there was also the Italian cultural influence.

According to the records, in 1913 there were two elementary schools on Unije. The Italian school, which had two teachers, was attended by 104 pupils, while the Croatian school, with one teacher, had only 39 pupils (Projekt Cres-Lošinj: Studija društvenih procesa). There have been many cases when people opted for one nationality or the other regardless of their origin.

On Unije, as well as on other North Adriatic islands and in Istria, there were Italians who could not speak Italian and Croats who did not know one word of Croatian.

In 1945 a census was carried out in Istria and in the northern Adriatic coastal region, in villages and towns which until 1943 had been under Italian rule. On that occasion the following 153 families were recorded on Unije: Karčić (59), Nikolić (43), Radoslović (18), Rerečić (15), Belanić (7), Šegota (6) and Nadalin (5). The only Italian surname was Nadalin, and there were only five families with this name, which means that many of the 218 people who declared themselves as Italian belonged to the other families. Surnames such as Nadalin are no longer to be found on Unije. After the departure of the population which opted for Italy after World War II, the question of national affiliation to Croatia or Italy seems to have disappeared.

3. Patterns and Disembarkations

Turnovers in the demographic history of Unije have never been caused by islanders and their propensity to change things but by something or someone that came from the sea. Indeed, the economic and social history of the small Croatian islands, and Unije is a good example rather than an exception, is the story of various noninvited but irresistible disembarkations.

3.1. Romans, Croats, Venetians

First to disembark and produce a significant influence were ancient Romans. Remnants of the villa rustica in the Field and of the road towards the northern part of the island as well as a couple of other sources point out that the island was serving retired legionnaires whose slaves planted up to 20 000 olive trees (IMAMOVIĆ). In the immediate vicinity of the peninsula of Istria where archeological sites clearly show that it served Roman nobles, the island of Unije stood close to the geographical center of the great Empire but remained on its margin in every other respect.

Huge and long lasting, the empire reached the island only to use it as a refugium for lower ranks. The pattern was very effective. Secured by the Pax romana the empire was ruled from Rome but the provinces had a high level of independence. The remnants are dated in the second century AD (IMAMOVIĆ) telling that Unije were noticed much later than Istria and the rest of the archipelago. The policy of retiring old soldiers had to gain wider proportions in order to reach the small islands. Not being invited and not meeting anyone to resist them Romans stayed as long as the empire was strong enough. There are no signs of barbarians' stay on the island, however. They conquered Rome but did not bother to reach every corner of it.

The Croats that started to colonize the area in the VII century, reached Unije and founded the community that was to stay. Like Romans before them they hardly met any resistance. The real masters of the island came a century or two after, however: Franks, Germans and then the city state of Venice which started to spread its influence over the Adriatic in XI century. Venetian disembarkation was uninvited and irresistible like the previous ones but the rule lasted longer. Interrupted for a while by Hungarians whose kingdom reached the Adriatic in XII century, Venetians established themselves as the rulers of Adriatic in XV century and introduced the form of feudal relations known in the Mediterranean as the colonat. Unians became colons and worked for the landlords from Venice, Lošinj and Istria. For centuries they took care of the Field and the olive grows, raised sheep and goats and gave the toll in kind. At a later stage they were allowed to sell their cheese and olive oil on the market and pay the landlords money.

3.2. Capitalism

After a short reign of the French who just touched the island but put an end to the Venetian rule, Austrians took over in the beginning of the XIX century. They disembarked around 1820 and stayed for next hundred years. It was Austrians who introduced capitalism to the island, whereas the location pattern that reached the island was that which is typical for the fishing industry. Austria, later to become Austria-Hungary, was an empire too and it secured the market for the fish. At the time, fish was much more in demand in Europe than today and the only problem was how to keep it edible on its way from the fishing ports to big cities deep in the interior. It was solved gradually. In 1800 the first can was designed and in 1804 Nicolas Appert introduced the technology of warm sterilisation. The two were put together in the first fish cannery ever that was built in France in 1822 announcing changes in the location pattern of the European fishing industry (BASIOLI).

57 years later, in 1879 first cannery was built on the Croatian coast. It was located in a port of Izola on the Istrian peninsula. The next one was built on the Dalmatian island of Hvar and by the year of 1911 the pattern established itself as an array of 38 canneries with Austrian, Hungarian and to a lesser extent Croatian capital, located wherever there were catching grounds for sardines and similar fish. The cans were produced in factories near Trieste and sent to canneries. The final product, cans that could stand long transport were shipped back to Trieste and on to large cities of the Austro-Hungarian empire able to absorb any quantity coming from the Adriatic.

The canneries simply had to be numerous, rather small and scattered over the coast and the islands. The fish was caught all over the Adriatic by local fishermen and it had to be processed the very first morning after the night of catch. Canneries thus had to be built in ports where the fishermen sailed to and where there was another input: labour. At the time agricultural surplus of labour could to be found on islands so that islanders, mainly women, could work in canneries in half a day shifts at no expence for their work in the field and about house. Otherwise unfavourable, scattered inputs did not pose too much of a problem to the fishing industry. High transport costs were well covered by revenues coming from the big and unsaturated market.

The World War I put an end to the empire and cut the can routes throughout middle and eastern Europe. Yet another change of rulers in the history of Adriatic and its islands brought another market, however. Italy whose turn was to rule for next couple of decades appeared as a market for fish able to absorb even more than the former Austrian one. In the period of 1920 - 1943 nine additional canneries were built in the northern Adriatic which was under the Italian rule (BASIOLI). The technology and the location pattern did not change much. Due to the low capacity of small fishing boats and equipment, fresh fish still could be gathered only on a small scale and in a large number of ports. Since the larger ports and their labour markets were already taken, new investors turned to small ones reaching even the smallest inhabited islands. The transport costs were somewhat higher but the market was big enough to readily absorb any amount of canned and salted fish coming from the Adriatic.

Meanwhile, back on Unije, colons still took care of the Field and the olives and went fishing for the landlords. Thread nets, wood fire lighting which was gradually replaced with gas lamps, rowing boats that were slowly replaced with motor ones and fishermen crews consisting of 5-6 people were a common scene in the harbour. There were enough women on the island who had extra time and capacity to work more than they actually had to and thus raise their marginal productivity above zero. Unians who sailed to Istria and Lošinj appeared on the vegetable market occasionally, only to sell what remained after their own consumption. The Italian investor who disembarked in 1920 found enough reasons to build a factory. First cans were shipped to Italy two years later (BASIOLI).

It is not easy to determine when the capitalism appeared on the world scene. On Unije it happened in winter 1922, uninvited and irresistible. For the first time in the island history something was produced to be sold across the sea, and the islanders earned money doing something that someone else organised and controlled. 783 inhabitants who could only watch the disembarkation accepted the new state of affairs and worked in the cannery whenever the

factory drummer would go around the village drumming and announcing that the fish arrived and that hands were needed in the factory. They also went fishing more than before.

The fishing itself remained untouched by capitalism. The owner of the factory knew how to organize canning and salting but did not have a way to interfere in the catch. The secret knowledge of finding best places and times to throw a net and traditional organisation of work on the boat remained with the fishermen and the factory owner could only organise frame conditions and wait for the good catch.

The cannery was in operation till the World War II. It had ups and downs caused by fluctuations in sardine stock in the Adriatic so that quite often months would pass with little or no work. In spite of work that it secured in such a insecure way the cannery also appeared as an emigration factor. Old Unians that went overseas and came back with American pensions claim today that they had left the island because factory work was better payed elsewhere. It is pretty clear that the colons would not leave the island and approach capitalism had it not approached them first.

3.3. So called socialist accumulation of capital

The next ruler was the socialist Yugoslavia. First to disembark after the state militia were planners who brought the idea of concentrating the canning industry on the nearby island of Lošinj and thus providing for economies of scale. The Unian factory was dismantled and transported across the sea in view of Unians who, again, could only watch. The idea proved unsuccessful mainly due to the lack of fish and the factory was brought back in 1954. This proved equally successful. Quite a few Unians had already left the island and consumers on the continent no longer waited for cans from the Adriatic that much. The canning was halted in 1963, and a couple of remaining machines were transported from the island never to come back again. At the time fishing was still being carried out with some 50 gill nets.

In the meantime, the location pattern of the fishing industry changed rapidly. Gas and electric lamps, big motor boats that could fish in the southern Adriatic all night and appear in a northern port in the morning and lesser but more productive crews who use echo sonars rather than knowledge of the grandfathers, allowed for bigger quantities of fresh fish to be concentrated in a smaller number of ports. The canning machines that waited there became faster and more productive, whereas the technology of freezing finally put an end to rush to supply the fish before it rots. All these called for a smaller number of bigger factories and the small island canneries were to close first in spite of the socialist planning. Capitalism disembarked on small islands, embarked again and left no compensation.

Socialist planners introduced another large scale pattern that heavily affected all that played marginal roles in socio-economic development or did not have a role at all. It came out from the urge of fast development, from the requirement to catch up with capitalism and from search for the development model that would secure and even reinforce those in power. The basic idea was simple: labour surplus that existed in agricultural sector had to be transferred to industrial sector that lacked workers. This would allow for fast industrialisation, secure warranted rapid economic growth, enlarge the working class and thus improve the class structure of the society. The way to achieve this was also simple (or looked simple on central planners' desks) but painful: a compulsory purchase of agriculture products was introduced so that peasants had to sell food to the state at prices that were way below those obtained on the food market. The food was then sold in the stores that belonged to the state retail network. It was, of course, cheap which meant that the industrial wages did not have to be high and that a rather big portion of revenues generated by the industrial sector could be used for further industrial investments. This was referred to as "the socialist accumulation of capital", an extension of famous Marx's "primary accumulation" and a tribute to Evgeniy Alekseyevich Preobrazensky who formulated the model in the Soviet Union in the 1930-ies. It did work in Yugoslavia. Deprived from the means of survival peasants went to work in industry, the class structure did improve as requested and the annual growth rates were amongst the highest in the post war socialist countries (STIPETIĆ, 1968). Foreign loans played their role too, but it was rarely put forward in the Federal Planning Committee reports.

The socialist accumulation slowed down in the early 1950-ies when the barrier of compulsory purchase was lifted. The damage to those on the margin was done, however. The planners seemed not to care that transfer from agricultural to industrial sector inevitably triggered massive departure of peasants who stormed the would be industrial cities and that requirement to have factories of large capacity meant that machines often had to be transported from various places and concentrated in urban areas. Decomposition and transport of Unije factory to the nearby island was just one of many such moves made without any considerations about local economic effects on local economy (social effects were considered even less; the final goal, perfect communist society was valuable enough to sacrifice a local community or two). No one even bothered to explain what was going on and Unians could only wonder from their small island perspective why the same people who preach industrialisation on local peasants' gatherings, are taking the factory away. De-industrialised in the name of industrialisation and deprived from their income from agriculture, they could only leave the island. Some for Italy, some for America, very few to other places in their newly established socialist homeland. In the 1980-is the island reached its historical population minimum: some 80 people lived there.

3.4. Tourism, local socialism and FAO

In the course of the 60-ies the socialist development pace definitely slowed down and the growth continued without genuine socialist incentives. What really triggered the development of the Adriatic islands was not heavy industry, however. It was tourists that started visiting the coast and its beauties in the 1960-ies. They were bringing highly valued foreign currency and demanded simple lodging and food that was not too difficult to offer. They initiated catering, accomodation business and retail trade which in turn triggered foreign loans that were used for building the basic infrastructure and for massive hotel construction. The location pattern that resulted from that was denser and more intensive than canneries could ever have made. In the late 60's every larger island had a hotel, in the early 70's it had two or three or four. This sort of growth soon resulted in overburdened road infrastructure, overloaded ferry lines, shortages in water supply etc, so that in early 80's the congestions of all kinds became proverbial. In this, Adriatic tourism did not differ much from tourism in other Mediterranean countries in the 1960' and 70'. What made it different was a socialist approach to its organisation and ownership and, above all, the development policy. Every larger island established a hotel firm that also cover the wholesale and retail trade and soon became the leading development subject employing up to a half the existing active island population and generating much more than a half of the island's GDP. Such firms generated the island development policy as well. Their development decisions aimed at the firm's prosperity only, had sub-regional or even regional effects and often initiated minor migrations of new employees that had to be recruited from the continent. Resembling what in both Americas is called a company town, islands acquired a far too simple economic structure which also meant that the days of island's economic autarchy were gone. Tourism brought dependency on the continent and made islands very fragile in terms of economic development.

The nearby island of Lošinj was no exception. Its firm was established in the late 60's and soon controlled half of the tourist sector. In the 1980's it had some 1400 employees which amounted to 60% of overall employment and to 20% of the overall island's population (Projekt Cres-Lošinj: Studija privrednih djelatnosti). In the late 70's the management created a strategy that was to diminish the firm's dependency on food suppliers from the continent. First that came to mind was a more exhaustive usage of the archipelago' agricultural potential and the eyes were soon set on Unije and its nearly abandoned Field and olive groves. The initial investment project was soon formulated and its cash-flow was convincing enough to the bank. A favourable loan was obtained in 1978 and the firm's boat bought for the occasion sailed out for Unije one morning in winter 1979.

Meanwhile, the Unians that were not planning to leave continued to dig in the Field, sell tomatoes and lettuce in Lošinj at market prices and fish mainly for their own consumption. Some worked in Lošinj and spent weekends at home. Some relied on dollars that started to trickle down from their overseas relatives. Whoever had a room to rent did so in summer but the tourists did not grow in number and their vacations were ever shorter. In 1976 the Yugoslav tourists spent on the average 17.5 days, and in 1985, 13.5 days on the island. The average sojourn of foreign tourists in 1976 was 12.5 days, and in 1985, 10.7 days. (Project Cres-Lošinj: Study on Tourism Development). In the peak of the season, for a week or two, there would be some 800 people there demonstrating how the island must have looked like at its historical population maximum from 1921. The Lošinj firm disembarked off season, however, seen only by some dozen old people who spent their days on benches in the harbour.

The firm's men went to the Field the very first day and took charge of it. A branch office was set up and an extensive programme started. Owing to the initial shortage of labour, vegetable farming was not revived and the pastureland, overgrown with shrub, did not allow for the renewal of the former sheep breeding. The programme thus started with cereal and forage crops in order to secure food for the sheep. Machines were brought over to the island as well as 400 sheep. Along with the sheep, 500 goats were also brought over and they began to browse the shrubs on the overgrown pastures.

The Lošinj crew did not consist only of people from Lošinj. The firm engaged a couple of experts from the Agricultural Faculty of the Zagreb University who directed the initial investments. They soon grew in number since the professors from the capital were attracted by the island enough to look for wider support. Eventually, they reached FAO of the United Nations, and some US funds and found enough officials who were interested. Co-operation was established in 1983 and the expert team, now international, formulated a project that was to bring back the island's agricultural pride (RAGUZIN). The project appeared attractive and convincing indeed. The starting point was the prevailing plant associations of maquis that could be found in various successions all over the island. They rarely exceeded two metres, but were very dense so that the grass vegetation was left without light and could no longer grow. It was observed that the pastureland could soon be reclaimed by thinning out the maquis, and that these areas had a considerable potential. The thinning was done with help of goats. They were fed on maquis which soon resulted in thinned land and in an enlarged number of goats. Different grass seeds were brought from FAO reserves and a nice pastoretum was planted in 1983 in order to determine the structure of grass that would suite the purpose best. It worked out well and soon some parcels of land in the Field could host the first sheep (DUMANČIĆ, 1989). Of the 800 ha. of maquis and shrubs, 400 ha. were partially

cleared till the end of the 80's. Some 130 ha. of the Field was also cleared and crop rotation of alfalfa, barley and maize introduced. The foundation stocks also grew. Towards the end of the 80's there were some 1,600 sheep and 800 goats on the island and all kinds of machinery piled up (DUMANČIĆ, 1990). After 13 centuries of mattocks and donkeys Unians had a chance to see sheep breeding equipment, well-equipped farm houses and sheds, electric pumps, motor-driven cultivators and tractors, pendent ploughs, combine harvesters, disk harrows, spike-tooth harrows, spraying machines, seeders, hammer mills, fertilizer spreaders, hay turners, electric shepherds, shearing machines, sheep pens etc. They also observed opening of the firm's restaurant, the grocery store and the baker's shop. The firm also built the part of the electric network, and even the local waterworks.

The initial shortage of labour continued and the international experts solved it the way they thought of as the most suitable. In 1983, 35 workers were recruited in Bosnia and eastern Croatia, brought to Unije and given deserted houses to settle in. It appeared that no one on the island was informed let alone asked or consulted about the whole thing. It also appeared that the firm knew well that the Field was predominantly in the private ownership but did not bother to ask anyone for any kind of permission or offer any kind of compensation. The explanation that was usually given was that the Field had not been cultivated anyway. The owners that were already in America and Australia could only read about this in letters from home. Those that stayed could only watch.

The project thus appeared not as an agricultural experiment only. The parallel social experiment which was inadvertently conducted by increasing the population by 40% was anything but successful. The frictions between newcomers and islanders started the very first day and culminated when the time came for one of the most important investments: building of access tracks and putting up of wired fences, which made possible the introduction of rotation pasture. In 1986 the pastureland on the island was divided into six parts without any previous notice to owners. From the ecological point of view a win-win solution was in sight. The social perspective was hardly ever addressed, however. What Unians had in sight was just another uninvited disembarkation they could do nothing about.

The economic side was not successful either. First products to feed the tourists in the firm's hotels on the Lošinj island did not come right away, and since the demand was rapidly increasing the firm made some long run arrangements with continental food suppliers. The prices offered on the continent were far lower than those calculated on Unije and the firm lost interest in the activities of its own branch office. Following the socialist habit of maintaining employment even if it does not make any economic sense, the firm stopped investing but did not shut down the operation. It could not endanger the overall firm's performance, anyway.

In 1989, barely 1% of the firm's capital assets were on Unije. They were managed by 2.4% (34 people) of the total number of its employees (STARC, 1990).

Remote, rather far from the sight even of the firm's book-keepers and hardly controlled by anyone, the branch continued with the agricultural revitalisation on its own way. The work discipline diminished, the fences got holes that destroyed the rotation pasture plans, the sales of products, mainly highly valued lambs, started to skip book keeping and the project rapidly decayed. Some 10 newcomers left disappointed, and the machinery in the Field started to rot. The war and the transition put an end to supremacy of the big island on the small one. The firm went through a painful process of privatisation, reduced its assets, got new owners and wrote down a new strategy. Unije project got lost in the process. The branch office was finally closed in 1992, and the newcomers of 1983 mainly left. Only three families remained on the island trying their luck in tourism, gardening, fishing and whatever services they could offer to the island. As for the international agriculture experts, they left in the late 80's in time to be able to write reports about a success story and its win-win solutions. None of them came back in the 90's to refresh the data.

3.5. Transition

Unije is still the most beautiful island of the Cres-Lošinj archipelago. Iron fossils of unsuccessful investments scattered around and wild sheep that hide in the maquis do not spoil the picture much and clear sea, gravel beaches and stillness of the village continue to attract summer visitors. The one and the only firm is now replaced by real estate firms, tourist guides, hunting operators, and small scale construction services. The foreigners offer higher prices than domestic buyers and the houses get sold at an ever increasing rate. This time disembarkation is all European and takes place step by step and does not make much noise. In the last 10 years the olds on the benches in the harbour witnessed the come back of private ownership, real estate transactions and brand new summer islanders speaking many languages. They could also hear that since 1995 the young state of Croatia has been earmarking 0,5% of the national budget for island development, that in 1997 the Croatian ministry in charge of the islands produced the National Island Development Programme and that two years later the Island Act was passed. Another win-win solution is in sight although the olds on the benches have not seen anyone disembarked yet. One thing remained the same, however: they can only watch.

4. What is to be done

The famous rethorical question has always had the same answer in socialism: quite a lot. In transition it appears still valid. First of all, the problem has to be acknowledged. The small

islands are not only interesting subjects of inquiry and suitable laboratories for testing development concepts and appropriate technologies. They are also relevant policy subjects that have to be approached with care. This was discussed and fully acknowledged already in the 80's (BROOKFIELD) but not in socialist countries that were soon to enter transition. In Yugoslavia, small islands were treated as any other undeveloped part of the country. Some 10 - 12 years later in Croatia, the problem appears to have remained more or less the same. The National Island Development Programme and the Island act did raise awareness of the problem and secured certain state investments in necessary infrastructure, but the implementation remained more or less socialist: inquire about urgent infrastructure needs and distribute the money. Unians and other small islanders are still waiting for something more than that: a disembarkation that will bring development chances equal to those on the continent and a top down policy that will allow for island specificities and leave enough room for bottom up initiatives. Such a policy has been clarified on the national programme level. It is to be implemented now, island by island.

However, implementation does not depend on political will and competence of state bureaucracy, only. Design of measures which may differ from island to island and corresponding monitoring and evaluation require analytical, simulation and evaluation methods that have not been successfully developed yet. Analysis of Unije population trends clearly shows inadequacy of usual demographic indicators and similar endeavours on other small islands have shown the same (Mali otoci, 1989). Usual statistical methods are confronted with small numbers and with too small a subject in general. Small islands are places where almost every microeconomic decision has sub-regional i.e. all island effects. Public expenditures are structured differently than on bigger islands or on the continent (public lighting, for instance, can take up to 30% of the island municipal budget) and usually can not be covered by the island's financial sources. The social services are specific too. A family decision to leave for the continent may cause the primary school to close because not enough kids have remained, someone's decision to settle on the island with three children may cause the school to reopen etc. Standard "continental" analytical methods and indicators obviously have to be adjusted or even abandoned in favour of newly designed island methods. This would make possible to propose suitable official social and physical infrastructure standards and ultimately lead to properly designed island policy measures. The experts who readily criticise the government for its bad performance should get to work here. Their contribution may not be sufficient but surely is necessary and they should do their part of the task properly.

5. Used books, articles, studies, project reports and development documents (translations of Croatian titles are in italics):

BASIOLO, J. (1984): Ribarstvo na Jadranu (*Fishing on the Adriatic*) Nakladni zavod Znanje, Zagreb

BOKO, R. - MIKULEC, S - KARADJOLE, V. (1985): Program ovčarstva i kozarstva na Unijama (*Programme of sheep and goat husbandry on Unije*), Agriculture Faculty of the Zagreb University, Zagreb

BROOKFIELD, H.C. (1986): An Approach to Islands, in: Beller, W. - d'Ayala, P. - Hein, P: Sustainable Development and Environmental Management of Small Islands, Man and Biosphere Series Volume 5, UNESCO, Paris

DUJMUŠIĆ, A. (2000): Hrvatsko ribarstvo ispod površine (*Croatian fishery under the surface*), Rabus media, Zagreb

DUMANČIĆ, D. (1989): The island of Unije - integrated agricultural development as a base for global revitalization of the island, Zagreb, November

DUMANČIĆ, D. (1990): Dugoročni program razvoja otoka Unije - prirodni resursi i kapaciteti proizvodnje (*Long-term development programme for the island of Unije - natural resources and production capacity*), Zagreb, March, 1990.

FUČIĆ, B. (1990): Apsyrtides, Narodno sveučilište, Mali Lošinj.

HESS, Alison L. (1986): Overview: Sustainable Development and Environmental Management of Small Islands in: Beller, W. - d'Ayala, P. - Hein, P: Sustainable Development and Environmental Management of Small Islands, Man and Biosphere Series Volume 5, UNESCO, Paris

IMAMOVIĆ, E. (1975): Antička naselja na otočnoj skupini Cres-Lošinj (*Settlements dating from Ancient times on the Cres-Lošinj archipelago*), Otočki ljetopis Cres-Lošinj 2, 1975. (Chronicle of the Cres-Lošinj archipelago 2, 1975).

KORENČIĆ, M. (1979): Naselja i stanovništvo SR Hrvatske od 1857. do 1971.godine, (*Settlements and population in the Socialist Republic of Croatia from 1857 to 1971*), JAZU, Zagreb.

LORINI, P. (1903): Ribanje i ribarske sprave pri istočnim obalama Jadranskog mora (*Fishing and fishing tools in the eastern Adriatic coastal waters*) C.K. Naklada školskih knjiga

RAGUZIN, I. (1989): Smjernice razvojnog programa za otok Unije iniciran od strane FAO, (*Guidelines for the development programme of the island of Unije drawn up by FAO*), Mali Lošinj

SKOK, P. (1951): Slavenstvo i romanstvo na jadranskim otocima (*Slavonic and Romanic imprints on the Adriatic islands*), JAZU, Zagreb.

STARC, N. (1990):, A Study of the Socio-economic Development of the Island of Unije, UNESCO - MAB Programme, Mali Lošinj - Zagreb

STARC, N. (editor) (2001): Human Development Report – Croatia 2001, UNDP, Zagreb

STIPETIĆ, V. (1968): Poljoprivreda kao izvor formiranja akumulacije potrebne privrednom razvoju (*Agriculture as a Source of Forming the Accumulation Needed for the Economic Development*), Naše teme No 11, Zagreb

STIPETIĆ, V. (1987): Poljoprivreda i privredni razvoj (*Agriculture and Economic Development*), Informator, Zagreb

STRAŽIČIĆ, N. (1975): Cresko-lošinjska otočna skupina, (*The Cres-Lošinj archipelago*), Otočki ljetopis Cres-Lošinj No 2, 1975. (*Chronicle of the Cres-Lošinj archipelago*).

TRINAESTIĆ, I. (1986): Vegetacijska karta otoka Unije, (*Map of the plant life on the island of Unije*), 1986. Agriculture Faculty of the Zagreb University, Zagreb

Ekistics, vol. 54, No. 323/324, March/April -May/June 1987.

Geodetski premjer poljoprivrednih površina otoka Unije (1986) (*Geodesic measurements of the farmland on the island of Unije*), Vupik, Vukovar

Proceedings of the International Seminar "Tourism and Life on Small Islands", Mali Lošinj - Unije, June 25 -July 2, 1989, (1989) June 29 -July 2

Mali otoci (*Small islands*) (1989), Urbanistički institut SRH, Zagreb, siječanj,

National Island Development Programme (1997) Ministry of Development and Reconstruction of the Republic of Croatia, Zagreb

Pedološka ispitivanja poljoprivrednih površina na otoku Unije, (1984) (*Pedological studies of the farmland on the island of Unije*), Zavod za pedologiju poljoprivrednog fakulteta u Zagrebu, Zagreb

Proceedings of the Interoceanic Workshop on Sustainable Development and Environmental Management of Small Islands, (1986) US MAB Program, November 3-7

Projekt ratarske proizvodnje i mehanizacije (1980), (*Project on agricultural production and machinery*), Poljoprivredni fakultet, Zagreb

Projekt Cres-Lošinj: Studija privrednih djelatnosti (1988) (*The Cres- Lošinj project: Study of economic activities*), Institute of Economics, Zagreb

Projekt Cres-Lošinj: Prostorni plan općine - osnovna koncepcija plana (1988), (*The Cres-Lošinj project: Physical plan of the municipality - the main concept of the plan*), Urbanistički institut SRH

Projekt Cres-Lošinj: Studija društvenih procesa (1988) (*The Cres-Lošinj project: Study of social processes*), Urbanistički institut SRH

Projekt Cres-Lošinj: Studija prostora i čovjekove okoline (1988), (*The Cres-Lošinj project: Study of the physical space and of the environment*), Urbanistički institut SRH

Projekt Cres-Lošinj: Studija prostornog aspekta korištenja i zaštite mora (1989), (*The Cres-Lošinj project; Study of the use and protection of the sea*), Centar za istraživanja mora Instituta Rudjer Bošković, Rovinj

Projekt Cres-Lošinj: Studija razvoja turizma (1988), (*The Cres-Lošinj project: Study on tourism development*), Centar za razvoj, SOUR Istra-Jadran, Pula

Projekt Cres-Lošinj: Studija tala i površina pogodnih za poljoprivredu i šumarstvo (1989), (*The*

Cres-Lošinj project: Study of the soils and areas suitable for agriculture and forestry), Poljoprivredni fakultet i šumarski fakultet Sveučilišta u Zagrebu

Projekt Cres-Lošinj: Konzervatorsko-urbanistička studija (1989) (*The Cres-Lošinj project: Study on conservation and town planning*), Republički zavod za zaštitu spomenika kulture SRH, Zagreb

Projekt Cres-Lošinj: Svodna Studija (1989), (*The Cres-Lošinj project: Compiled Study*), Island Development Center, Mali Lošinj

Vodoistražni radovi na otoku Unije (1982), (*Water exploration on the island of Unije*), Geofizika, Zagreb