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Agrarian Change in Estonia: Historical Context and Contemporary Restructuring*

On the 16th November 1988 the Supreme Soviet of the Estonian SSR passed a declaration of sovereignty, thus setting in motion the chain of political events which were to lead to Estonia's declaration of independence on 20th August 1991. This break with the Soviet Union, however, represented much more than a desire for political independence; it heralded the beginning of the rapid drive to transform the economic basis of the state from that of a command economy of a market-oriented one. Moreover, the removal of the constraining centralized hand of Moscow has meant that there is very great fluidity in the political and economic arena: while politicians and policy makers are seeking to formulate strategy for the survival of the state, thousands of individual people are likewise seeking to carve out new survival strategies for themselves and their households. One result of this has been a heavy emphasis by the new leaders of the state on macro-economic policy, in a desire to create the context within which a market economy can flourish. The effects of such policy at the level of the household, and the responses of individuals to such change have, however, generally been insufficiently addressed. The rapidity of change, and the necessity to create new and workable macro-economic policy instruments, has meant that all too often readily available models and policies have been adopted from the capitalist states of Western Europe and North America, and the potential opportunity to create new economic and political structures is being missed.

This paper examines the implications of these changes through an analysis of the reorganization of Estonian agriculture between 1989 and 1993. Building on an overview of Estonian agriculture in the 1930s and the subsequent changes introduced during the Soviet era, the paper analyses the

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changes in production that have taken place since 1989, and explores some of the possible future directions which the state's rural economy might take.

ESTONIAN AGRICULTURE IN THE 1920s AND 1930s

During the early nineteenth century, although the state of Estonia formed part of the Russian empire, most of the countryside was owned by German barons, who cultivated the land through the exploitation of a serf labour force (Raun, 1987). Much of the landscape was forest or marsh, with the best agricultural land being situated on the mineral-rich tills of the higher ground in the vicinity of the Pandivere, Sakala and Otepää uplands. Despite the abolition of serfdom between 1816 and 1819 (Sepp, 1991; Van Arkadie and Karlsson, 1992), and the peasant laws of 1849, 1856 and 1860 (Raud, 1953; Aunap and Mander, 1991), it was not until the end of the First World War that an independent peasant agriculture emerged. With the collapse of the Russian and German empires, Estonia declared itself independent on the 24th February 1918, and two years later in 1920, following a violent war of independence, this was eventually acknowledged by Russia in the Treaty of Tartu. In 1918, 58 per cent of the total area of the country had been in the hands of large landed estates, with an average size of 2,113 ha, whereas the remaining 42 per cent of the land was divided up into some 51,640 small freehold farms averaging only 34.1 ha in size (Pullerits, 1937). Just under the third of the area of the large estates was leased to 23,023 smallholders, most of whom were obliged to work for a specified number of days each year on the estate from which they leased their land. On the large landed estates and the consequent redistribution of some 2,346,494 ha of land (Pullerits, 1937; Aunap and Mander, 1991). The overall effect of this was to create 83,514 new independent holdings, which provided the landholding structure within which a relatively successful agrarian economy was able to develop (Pullerits, 1937).

The 1920s and 1930s saw the rapid development of agriculture, and in particular of dairy farming. In part this was enabled by the establishment of agricultural schools and research stations developed in association with Tartu University and the Ministry of Agriculture. The aftermath of the First World War created a need for considerable reconstruction, and government-sponsored reclamation and improvement schemes led to a substantial expansion in the amount of land suitable for cultivation. Table 1 thus indicates that arable land increased from 675,000 ha in 1919 to 873,000 ha in 1935, with much of the expansion being onto the lower lying, former marshy parts of the country.

A measure of the achievement of Estonian agriculture during this period of independence is the observation that in 1920 the country had to import

Table 1

Estonian agriculture, 1919-1939

	1919	1925	1925-29	1930	1930-34	1936	1939
Area under tillage (ha)	675,000	795,000				873,000 ¹	
Number of farms							139,984
Rye area (ha)			143,000		147,000	136,600	
Rye yield/ha (kg)			1,052		1,361		
Field hay (ha)	145,000	168,000		164,500 ⁷		190,100	
Potato yield/ha (tons)			10.6		12.6		
Flax (ha)				31,900 ⁷		28,360	
Cattle (head)	465,000 ²			627,000		731,000	
Horses (head)	167,000 ²		230,000 ³				
Sheep (head)		710,000				600,00	
Hens (head)		404,000 ⁴				1,040,000	
<i>Exports</i>							
Butter (tons)		2,300 ⁵				15,000	
Eggs						43,700,000	
Flax (tons)						3,125	
Pigs (head)						48,529	
Bacon (tons)						2,679	
Potatoes (tons)			37,567 ⁶			17,100	

Notes: 1. Figures for 1935; 2. Figures for 1920; 3. Figures for 1927; 4. Figures for 1922; 5. Figures for 1923; 6. Figures for 1928; 7. Figures for 1929.

Source: Pullerits (1937); Raud (1953); Aunap and Mander (1991).

large quantities of food, whereas by 1939 Estonia had a surplus of the principal food crops, and was able to maintain a substantial level of agrarian exports. This productive system was based on a landholding structure in which farms under 20 ha were predominant.

In 1939 the population of Estonia was 1,333,917, but with the occupation of the state by the Russians in 1940, a period of repressions, emigration and deportation commenced (Raud, 1953; Kukk, 1991; Van Arkadie and Karlsson, 1992). On 22nd July 1940 the Estonian Soviet Socialist Republic was proclaimed, and this was accepted into the Soviet Union on 6th August, 1940. It is estimated that some 60,000 people died as a result of the repressions during the first year of Soviet rule, and that a similar number also died in the immediate post-war period (Van Arkadie and Karlsson, 1992). Land was nationalized and private property abolished under a decree of 23rd July, 1940, which led to the forced transfer of most farmland into state hands, with the maximum size of a farm holding being restricted to 30 ha (Leetsar, 1990). Within a year, 10,000 people were deported to

Siberia, and a further 30,000 young men were forced to join the Soviet army. From 1941 to 1944, Estonia was occupied by the Germans, who abolished the Soviet land reform and returned the land to those farmers, who had not been deported or killed. However, during the autumn of 1944 the Germans withdrew, and despite armed resistance, the Soviet army reconquered Estonia, capturing Tallin on 22nd September. It is difficult to estimate the precise number of people killed or taken prisoner during the war, but it has been suggested that approximately 150,000 men died (Leetsar, 1990, Taagepera, 1993), with the population in the new administrative boundaries of Estonia (45,215 km² as against the former 47,450 km²) in 1945 being only 854,000 (Kukk, 1991).

Following the reincorporation of Estonia into the Soviet Union, the 1940 land reform was reimposed, and then in 1947 a decision was made to introduce collective farms. This was initially opposed by most farmers, but with increasing taxes on profits from private farms, and then the deportation of 20,702 people to Siberia in March 1949, farmers were left with no other choice but to join the collectives (Leetsar, 1990; Aunap and Mander, 1991). Under Soviet rule, agricultural production was organized through two main types of farm enterprise: the kolkhozes, or collectives in which the workers were theoretically the collective owners, and the sovkhoses, or state farms where the workers were state employees. By 1950 the balance between these in Estonia was heavily in favour of the collectives, with some 2,989 kolkhozes and 50 sovkhoses having been created (Leetsar, 1990; Van Arkadie and Karlsson, 1992), each with an average size of approximately 500 ha (Raud, 1953). In 1950, however, the Moscow authorities decided that the size of cooperatives throughout the Soviet Union was too small, and this led to a substantial reduction in the number of Estonian cooperatives which fell to some 1,000 by 1952 with an average size of over 2,000 ha (Raud, 1953). The immediate effects of such collectivization on agrarian production were devastating: by 1955 meat production was 15 per cent lower than the level pertaining in 1940, and milk output was down some 29 per cent.

Under the Soviet system, the milk, butter and livestock emphasis that had been developed during the period of independence was maintained, and during the 1950s and 1960s there was some recovery in levels of production, particularly in locations near to the main urban centres of demand, Tallin and Tartu. The inefficiency of grain and livestock production elsewhere in the Soviet Union, and the high levels of demand for food in Russia, provided a ready market for the relatively more efficient Estonian agrarian economy.

The organizational structure of Estonian farming also changed substantially over the period of Soviet rule, with the number of collective and state farms declining during the 1960s and 1970s. In 1970 the number of kolkhozes had thus been reduced to 317, with there also being 171

sovkhozes, and by 1985 these numbers had fallen to only 150 and 152 respectively, with an average size 4,500 ha (Aunap and Mander, 1991), and an average labour force of about 300 people each (Van Arkadie and Karlsson, 1992).

The private sector always contributed a substantial amount to the production figures of the kolkhozes and sovkhozes (Hedlund, 1989), even though private holdings were theoretically limited to only 0.6 ha, Abrahams (1992) thus cites figures of 30.8 per cent of total milk production and 22.7 per cent of total meat production in the Võru region of Estonia in 1984 being produced in the 'individual sector'. Equally importantly, substantial amounts of vegetables and fruit were produced on allotments in the vicinity of major towns, and in the gardens of so-called summer cottages. These provided for a significant proportion of the dietary requirements of the population, and although official statistics are unavailable, it is possible that they accounted for as much as 25 per cent of the food consumption for a substantial proportion of the population.

Such agricultural changes were also associated with a decline in rural population. Aunap and Mander (1991) thus note that the war losses and the early phase of settlement restructuring led to a decline of 177,000 in the rural population between 1940 and 1955. Furthermore, the percentage of the actively engaged population in agriculture and forestry also declined from 26.5 per cent in 1960 to 13.9 per cent in 1980 (Kukk, 1991).

LAND PRIVATIZATION AND AGRARIAN CHANGE, 1989–1993

Land Privatization

The legal position in the autumn of 1993 concerning farm privatization is extremely complex, and its effects very varied. Moreover, any analysis of privatization must distinguish clearly between land reform and agrarian or farm reform. During 1987 and 1988 some liberalization at the individual collective or state farm level was allowed, apparently with the blessing of Moscow (Abrahams, 1992), and this permitted the establishment of a small number of private farms. However, it was associated with considerable tensions and variability, with many cooperative managers actively seeking to prevent the emergence of individual farm (Leetsar, 1990). In 1989 an Estonian Farm Law was passed, permitting 'owners of farm houses and house sites to apply to farm the land previously attached to these farmsteads' (Abrahams, 1992, p. 139), and by the end of 1990 this had led to the creation of an estimated 4,000 private farms (Leetsar, 1990).

These early developments preceded the main Land Reform Law of October 1991, which has laid the basis for subsequent regulations and policies

designed to implement the privatization of land. The fundamental principle underlying such land reform is that those who can show that they or their families had legal ownership of a piece of land before 1939 have the right to have this land restored. Those who do not wish to receive their land back are to be given compensation, but the level at which this is to be set is clearly critical and by September 1993 had not yet been agreed. Those whose land is no longer available as a result of urban development and other changes such as the construction of Soviet military bases, are also to be permitted to receive replacement land, but the full regulations concerning the procedures for this have also not been finalized.

Farm Reform

Such a land reform policy is relatively straightforward since it can be regulated at the state level. In contrast the reform of the cooperative farming sector is very much more complex, in part because of the difficulty of distributing cooperative assets, such as buildings, machinery and livestock, and also as a result of the government decision that such reform should be subject to local agreements, with members of each cooperative deciding on their own future. In practice, farm reform has involved three stages. First, the assets of co-operatives have been theoretically apportioned among their members in amounts based on their length of service and salary levels. Secondly, the members have decided on what subsequent policy they wish to follow, and this has then, thirdly been submitted for approval by a local reform committee, consisting of representatives from the cooperative, local government, farmers and state authorities. In some instances the result has been complete subdivision of former cooperatives into private farms, but so far in the majority of cases the preferred decision has been to retain some form of cooperation, either through joint stock or shareholding ventures. While many such ventures appear from the outside to be very little different from slimmed down versions of the former cooperatives, the central contrast from the side is that most of their co-owners really do feel collective ownership and responsibility for their future success or failure. Precise details of the fates of all of the kolkhozes and sovkhoses have not yet been collected by the Ministry of Agriculture, but it seems that in the areas where strong collectives existed, such as on the better agricultural soil in the centre of the country around Paide, their members have chosen to retain a substantial element of cooperation in their activities, rather than opt for extensive privatization.

Options for Change

Land and farm privatization raise three key issues: the identification of those who have rights to the land; the need for a new land registration

and the formal surveying of farms; and the provision of employment for those former members of cooperatives who do not gain access to their own land. Virtually overnight it has provided the basis upon which a new class structure has been created in Estonia: on the one hand, those who can lay claim to land can become owners of the means of production, while on the other, those who are unable, or unwilling, to do so must seek to gain an alternative livelihood as tenants or wage labourers. By September, 1992, the number of private farms had in practice risen to 8,406 (Estonian Farmers Central Union, 1993a), but a year later, although the number of private farms had risen to 8,965, only just over 1,000 had received full legal recognition of their land. By January 1994, 2,167 properties had been legalized with an average area each of 20.3 ha. Moreover, it seems highly likely that many newly created private farms will prove to be uneconomic, resulting in their sale to more successful landowners, and thus forcing even more farmers onto the labour market.

Secondly, there is the problem of land allocation and registration. The task of formal land survey and registration of new farms is likely to be lengthy, and where rights to land are disputed it is important that someone actually farms the land in the interim. The survival of good land registration records from before the Soviet period is facilitating decision-making concerning claims to land ownership, but the lack of qualified and trained staff means that it is taking a considerable time to process such claims. For those who cannot claim land through hereditary rights, but who want to become independent farmers, there is also the very difficult issue of determining what land they should be allocated. It is likely that some land under the former control of collectives or state farms will be unclaimed by the families of its owners in the period before 1939, and in some instances this may provide the basis for the creation of a new kind of state farming or private enterprise. However, such land can also be used to establish new farms for members of cooperatives without any previous claim to the land. The difficulty here is in the allocation and distribution of such land, since it varies in quality and thus value, and until some definitive system of land valuation is agreed upon it will be extremely difficult to allocate such land equitably. Moreover, at the present, arguments are tending to favour a determination of land prices by market value, and given the highly volatile circumstances which currently pertain it will take several years before any kind of stability in land prices is achieved. Much, though, depends on the precise number of people wishing to create independent farms. For those members of former cooperatives unable or unwilling to obtain their own farms or to participate in new forms of cooperative or joint-stock venture, there is then the question of how they will obtain the living. Four options seem likely: first, there may well be an increase in rural to urban migration; second, the opportunity exists for the emergence

of rural craft industry, based on indigenous skills and the substantial forest resources of timber; third, there are considerable opportunities for the development of rural tourism; and fourth, and most likely, many will become farm labourers on the more successful and viable private farms.

Declining Levels of Production

The political separation of Estonia from the Soviet Union, the partial disintegration of the cooperative system, and the introduction of private farms have had a dramatic influence on the agrarian economy of the country (Kaubi, 1992). As Table 2 indicates, livestock numbers have, in particular, suffered a substantial decline since 1991. While all agricultural statistics must be treated with some caution, the overall trend seems unmistakable. Although the total agricultural land and the sown area of most crops had not changed much by 1991, milk yield, total milk production and livestock numbers were already showing signs of decline. Figures released in February

Table 2

Estonian agriculture, 1989–1992

	1970	1980	1985	1989	1990	1991	1992
Collective farms	317	151	150	200	221	274	
State farms	171	158	152	126	117	120	
Agricult. land ('000 ha)	1,425.0	1,372.5	1,328.8	1,312.2	1,367.7	1,386.6	
Total sown area ('000 ha)	798.3	956.8	931.2	925.9	919.5	944.3	
Barley ('000 ha)	208.5	268.8	256.6	284.6	263.7	284.8	
Fodder crops ('000 ha)	368.0	428.3	455.8	468.0	468.5	465.2	
Rye ('000 ha)	45.2	60.7	52.1	64.9	65.9	58.5	
Potatoes ('000 ha)	79.5	72.3	60.9	52.0	45.5	52.2	
Milk production ('000 t)	1,024.6	1,169.7	1,260.1	1,277.2	1,208.0	1,092.8	
Milk yield per cow (kg)	3,315	3,658	4,045	4,217	4,164	3,968	
Cattle ('000)	692.4	818.7	840.2	806.1	757.8	708.3	479
of which dairy cows ('000)	308.7	314.1	302.7	293.9	280.7	264.3	186
Pigs ('000)	688.0	1,085.5	1,073.6	1,080.4	959.9	798.6	470
Poultry ('000)	3,677.1	6,842.7	6,911.5	6,922.5	6,536.5	5,538.4	1,973
Productivity per person (kg)							
grain	532	644	473	613	605	600	390
potatoes	1,036	775	542	548	391	378	425
vegetables	101	84	82	91	66	77	48
meat	100	133	141	145	139	117	90
milk	751	791	820	810	763	698	590

Source: Ministry of Agriculture of Estonia (1992); Teinberg (1993).

1993, however, illustrated a catastrophic decline in livestock numbers over the next year between 1991 and 1992. The total number of cattle recorded in 1992, thus appears to have been only 68 per cent of those recorded for 1991, and there has been a 41 per cent decline in the number of pigs, and a 64 per cent decline in the number of poultry. Likewise, productivity per person has also declined appreciably in almost all forms of agrarian production apart from that potatoes (Table 2).

This decline can be attributed to three main factors. Firstly, much of Estonian's livestock production was previously destined for the Russian market, but this has been substantially curtailed, mainly as a result of the inability of Russia to pay for the produce in hard currency. Moreover, with a population of only just over 1.5 million (Statistical Office of Estonia, 1993), the internal demand for dairy products is substantially below the levels pertaining under the previous regime. Second, Estonian livestock production during the period of Soviet rule relied heavily on the import of fodder, but with the severance of political relations with Moscow and an inability to purchase large amounts of fodder on the international market between 1991 and 1992, livestock numbers have had to be reduced. Third, the dramatic rises in energy costs since independence have meant that intensive livestock production, relying on substantial energy inputs, has become less economically viable.

The Establishment of Institutional Structures for Private Farmers

As early as the spring of 1988 the Ministry of Agriculture began to provide courses for people considering becoming private farmers, and the foundations were being laid for the emergence of a body to represent the interests of this growing number of people. During 1989 this body formally emerged as the Estonian Farmers Central Union (*Estimaa Talupidajate Keskliit*), and since its inception it has played an important role in negotiations both with the Ministry of Agriculture and also with the foreign organizations prepared to assist with the development of private enterprise in Estonian farming. Although it is not the only private farmers' organization in the country, it is by far the largest and most important. By 1993 the Estonian Farmers Central Union had a total of 6,253 members, out of a total of 8,406 private farms (Estonian Farmers Central Union, 1993a), and consisted of four main Departments: Education and Training; Foreign Affairs and Tourism; Technical; and Advisory (Pöder, 1993).

From the inception, the Estonian Farmers Central Union has concerned itself primarily with negotiations designed to legitimate and enhance private farming, with the education of private farmers, and with the provision of the necessary equipment and inputs for the successful development of private farms and market-oriented economy. In June 1991 the Estonian

Farmers Central Union and the Ministry of Agriculture signed an agreement with the Danish Farmers Union to develop a proposal for the creation of a National Advisory and Training Centre at Janeda near Tapa. Recognizing the paucity of experience and the training in the fields of management, ownership, investment, production, purchase and sale of produce that will be required during the transition from a command economy to a market-orientated one, the resultant report recommended that the Centre should provide in-service training for the farmers, advisors, agricultural teachers and technicians, as well as acting as a focus for the production of advisory aids and the provision of specialist services to local centres (Danish Agricultural Advisory Centre, 1992). Nevertheless, if the number of private farmers increases to the figure of 40,000 by 1998 as estimated by the Danish Agricultural Advisory Centre (1992) or the much higher estimate of 60,000 by 2000 as anticipated by the Estonian Farmers Central Union (1993b), it is evident that only a small percentage of farmers will be able to reap the immediate benefits of this service. A third area in which the Estonian Farmers Central Union has been active has been in the development of links with overseas organizations, particularly in Finland, Denmark, Sweden, Germany and the Netherlands, willing to provide agricultural assistance in the form of equipment, subsidized inputs and advice.

THE FUTURE OF ESTONIAN AGRICULTURE

The problems facing all farmers in Estonia are substantial, and as Abrahams (1992) has stressed, 'the uncertainties of the contemporary situation make it very difficult to foresee how family farms will fare during the next few years'. He goes on to point out that the way in which privatization is taking place, based largely on claims to land ownership dating back to 1939, is in danger of recreating an anachronistic agrarian structure: while the imposed Soviet system of collectives destroyed that structure in Estonia, agriculture was nevertheless also dramatically transformed in the other capitalist states around the Baltic. By building its new agrarian structure on a system of landholding developed in the 1920s and 1930s, Estonia is in danger of creating an agricultural economy largely out of step with that existing elsewhere in capitalist Europe.

The environmental constraints on agriculture are certainly important (Merikalju et al., 1978), but they are not the only problems. The length of the growing season varies from between 170 to 195 days, with annual rainfall varying between 550 and 670 mm per year (Ministry of Agriculture of Estonia, 1992). Estonia is therefore well-situated to rye and grass production, and thus to livestock raising, but the real difficulty is in producing effectively at world prices, and in identifying appropriate markets. Much of

Estonia's milk and meat produce until 1989 was destined for the Russian market, but Russia's inability to pay for such produce in hard currency has caused great difficulties for Estonian dairy farmers. Given the heavily subsidized nature of farming in the EU and the comprehensive system of milk quotas to be found there, it seems highly unlikely that Estonia will in the short to medium term be able to export substantial amounts of her present agricultural produce to western Europe. One possible market currently being discussed in Estonia is that for dried milk and other milk products in Africa and the Middle East (Põder, 1993), but the relatively high costs of Estonian milk production in global terms mean that this is unlikely to prove to be a sound long-term prospect. If Estonia is to continue with its heavy emphasis on livestock production, it seems that the only possibility of maintaining such an economy would be restoration of trading links with Russia.

A second area of concern for the future of Estonian farming is in the balance between cooperation and individualism, and in the social tension that private land ownership is likely to generate. In 1993 the average private farm was 25.6 ha in size, with 11.1 ha of arable land, 8.1 ha of forest and 6.4 ha of other land, including pasture (Estonian Farmers Central Union, 1993b). Moreover, if the total amount of arable land in 1989 (1.4 million ha) were to be divided up equally among the number of private farms anticipated by organizations such as the Estonian Farmers Central Union by the end of this decade (40,000-60,000), the amount of arable land per farm would only be between 23 and 35 ha. It has been estimated that, at present, private farms in Estonia can on average be expected to produce 20 tons of grain and 25m³ of wood p.a., which would bring in an income of some US\$ 5,575 p.a. at world prices, enough to support only one person per farm (Estonian Farmers Central Union, 1993b). Such high estimates for the numbers of private farmers, however, seem increasingly unlikely to be realized, and the large number of joint-stock ventures established in 1993 suggest that despite the distrust of collectives and state farms under the Soviet regime, the majority of Estonian farmers are preferring to experiment with new forms of cooperation rather than suffer the economic hardship of trying to eke out an existence from inherently unprofitable small private farms.

Elsewhere in western Europe, where factors such as the size of farms and market conditions have caused difficulties for individual farmers, the emphasis of government policy has frequently been on the development of cooperative ventures (Unwin, 1988). These are usually seen as offering four main advantages: the provision of cheaper inputs, such as seeds, fertilizers and pesticides; the sharing of the costs of machinery and farm equipment, including such items as tractors and mechanical milking parlours; the creation of larger fields, offering savings in time and energy spent in ploughing, sowing and harvesting; and the improvement of marketing possibilities,

through the employment of specialist staff. If many small farmers are going to survive the next decade, considerable effort will have to be devoted in the very near future to the creation of such organizations.

The emergence of a new class structure in Estonia is intimately tied up with the issue of land and farm privatization. The percentage of Estonia's population living in rural areas fell from 35.3 per cent in 1970 (Ministry of Agriculture of Estonia, 1992) to 29.9 per cent in 1980, but since then it has stabilized as just over 28 per cent (Marksoo, 1992). Some 449,100 people out of a total population of 1,562,000 were thus classified as rural in 1992. Land privatization by definition is leading to an increase in the number of farm owners, which will mean that many rural people will have to gain a living by selling their labour power.

Finally, it is essential that agriculture be seen as only one part of the rural economy of Estonia, and that sound policies are introduced to balance economic, social and environmental objectives in rural areas. Already, agriculture's contribution to the state's GDP has fallen from 19.6 per cent in 1989 to 14.1 per cent in 1991 (Ministry of Agriculture of Estonia, 1992), and giving the difficulties facing farmers over the next decade it is important that other sources of rural income are explored. None are without their problems, but at least four main avenues of potential development seem possible: the exploitation of forest resources, particularly timber; the development of high quality handicrafts for export; the expansion of fur farming; and the development of environmental tourism.

Each of these alternatives has important spatial ramifications. During the 1970s and 1980s heavily subsidized energy and fuel costs meant that agriculture could be practised in most areas where suitable soils could be found, either on higher land or in areas of drained former marsh and bog. Since independence, greatly increased transport costs have meant that small-scale production destined for the main centres of population, and particularly the capital Tallinn, has become increasingly uneconomic in the more peripheral parts of the country. Moreover, although official statistics are absent, it seems that faced with growing costs of basic foodstuff, many people are increasing production on their allotments and around their summer cottages. Specialist horticultural and fruit production is therefore most likely to be successful for small farmers in close proximity to the major towns. Forestry production, by definition, is located in regions of woodland, and thus in most cases away from the areas where agriculture has traditionally dominated. Rural tourism will also most likely be associated with a spatial shift in the focus of activity, concentrating on the nature reserves, islands such as Saaremaa and Hiiumaa, coastal areas, and forests, where most of the wildlife is to be found, particularly in the upland regions of southern Estonia such as the Haanja Korgustik.

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In conclusion, while Estonia's agrarian economy is likely to undergo a substantial transformation over the next decade, it is important that this should be set within the context of a broader rural economic policy that is designed to integrate social, economic and environmental issues. A balance needs to be found between long-term and short-term economic interests, as well as between the political imperatives of the new state and the forces of individualism. Critical issues which will need to be addressed are the ways in which the newly-emerging class structure will be legitimated, the precise balance that will be achieved between private farms and cooperative structures, and the amount of control that the government will be able to have over the adverse influences of rampant capitalism on the state's physical environment and landscapes. The people of Estonia, like those of other countries in eastern Europe, have the rare opportunity to create a new economic order and political system. The danger is that in the few years that have passed since 1989, the chance to initiate such a system has disappeared, as capitalist relations of production have penetrated the economy at an alarming state.

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