

# Chapter 3

## The People Settled Around Podocarpus National Park

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### 3.1 Introduction

In southern Ecuador, a region of heterogenic ethnic, socio-cultural and socio-economic structures, profound knowledge of ethnic-specific human ecological parameters is crucial for the sustainable utilization and conservation of tropical mountain forests. In order to satisfy the objectives of environmental protection on the one hand and the utilization claims of the local population on the other hand, a detailed analysis of human ecological parameters is needed. This chapter aims to provide an introduction to the indigenous and local population of the area surrounding Podocarpus National Park in southern Ecuador. In the case of the indigenous Shuar (lowland Indians) and Saraguros (highland Indians) and the local mestizos, fundamental differences occur not only in the attitudes towards the tropical rainforest and the management of forest resources but also in wider economic and social activities, including all strategies for maintaining their livelihood. Besides differentiating the population in socio-economic terms, this chapter also deals with the regional (horizontal) distribution of ethnic groups, their traditional altitudinal stratification (vertical distribution) and recent migration trends.

### 3.2 The Provinces of Loja and Zamora Chinchipe

Southern Ecuador comprises the three provinces of El Oro, Loja and Zamora Chinchipe, and has a total population of more than one million people (1 007 199), 52% of whom live in the province of El Oro (525 763), 40% in the province of Loja (404 835) and 8% in the province of Zamora Chinchipe (76 601; INEC 2001). According to the census of 2001, about 86% of the population are mestizos, while indigenous Shuar and Saraguros constitute only 3% of the total population (INEC 2003). In the vertical distribution, the Shuar clearly occupy the lower altitudes, whereas the Saraguros are most prevalent in the higher altitudes, and the mestizos are strongly represented throughout the whole vertical range.

In the province of Loja, the intermediate altitudes with their temperate climate are the most densely settled and intensively cultivated areas in southern Ecuador. At altitudes where sufficient precipitation is available, intensive rain-fed farming predominates featuring a wide range of tropical and subtropical crops. In the drier valleys only irrigation-based agriculture (sugarcane, bananas) is possible. Farming is usually combined with animal husbandry; intensive ranching is also practiced. The Saraguros are the most prominent indigenous group in higher altitudes up to where agriculture is still possible.

The lower altitudes of Zamora Chinchipe province, the tropical rainforest areas, have traditionally been settled by the indigenous Shuar communities. In contrast to the ancient cultural landscape of Loja province, the province of Zamora Chinchipe represents an area of recent agricultural colonization, and exhibits the highest deforestation rates (cf. Chapter 4). The combination of a rugged mountain relief and extreme climatic conditions was for centuries a basic factor in the preservation of mountain forests in southern Ecuador – for instance, along the steep eastern mountain scarp of the Cordillera Real. But population pressure and improved technologies in road construction have opened even such ecologically unsuitable areas to agricultural colonization during the past 50 years.

### 3.3 The Indigenous Shuar Communities

The Shuar area of settlement traditionally lies below 1000 m a.s.l. and covers the valleys from the humid premontane forests down to the Amazonian lowland (Oriente) in the region bordering Peru. In the province of Zamora Chinchipe, the Shuar communities have settled along the Río Zamora, Río Nangaritzá and Río Numpatakaime and their tributaries (Fig. 3.1). The Shuar belong to the Jívaro linguistic group (Amazonian Indians). They are the only autochthonous group of the area ever to have resisted the Inca (1463 A.D.) and Spanish (1531 A.D.) conquests (Harner 1984). They used to have a reputation as fierce warriors and defenders of their land, and as a people who hunted heads of human enemies and then shrank them (*tsantsas*; Belote and Belote 1999). They were also known for their shamanistic practices, conducted by adult males using hallucinogenic drugs (*ayahuasca*). All these specific cultural traits raised the attention of anthropological researchers centuries ago and are now the subject of a comprehensive scientific literature (cf. the bibliography of Belote and Belote 1999). During the twentieth century the practice of taking heads was all but abandoned due to pressure from the national government (Steel 1999).

The Shuar are typical forest dwellers who practice shifting cultivation, mainly within a subsistence economy (Fig. 3.2a). Their staple crop is manioc, which they plant together with taro and plantains on small rotating plots in forest gardens. In addition, they fish, hunt and gather forest products. Fishing is done with *barbasco*, a fish poison. Meat is hunted mainly with shotguns, yet many still use the blowgun

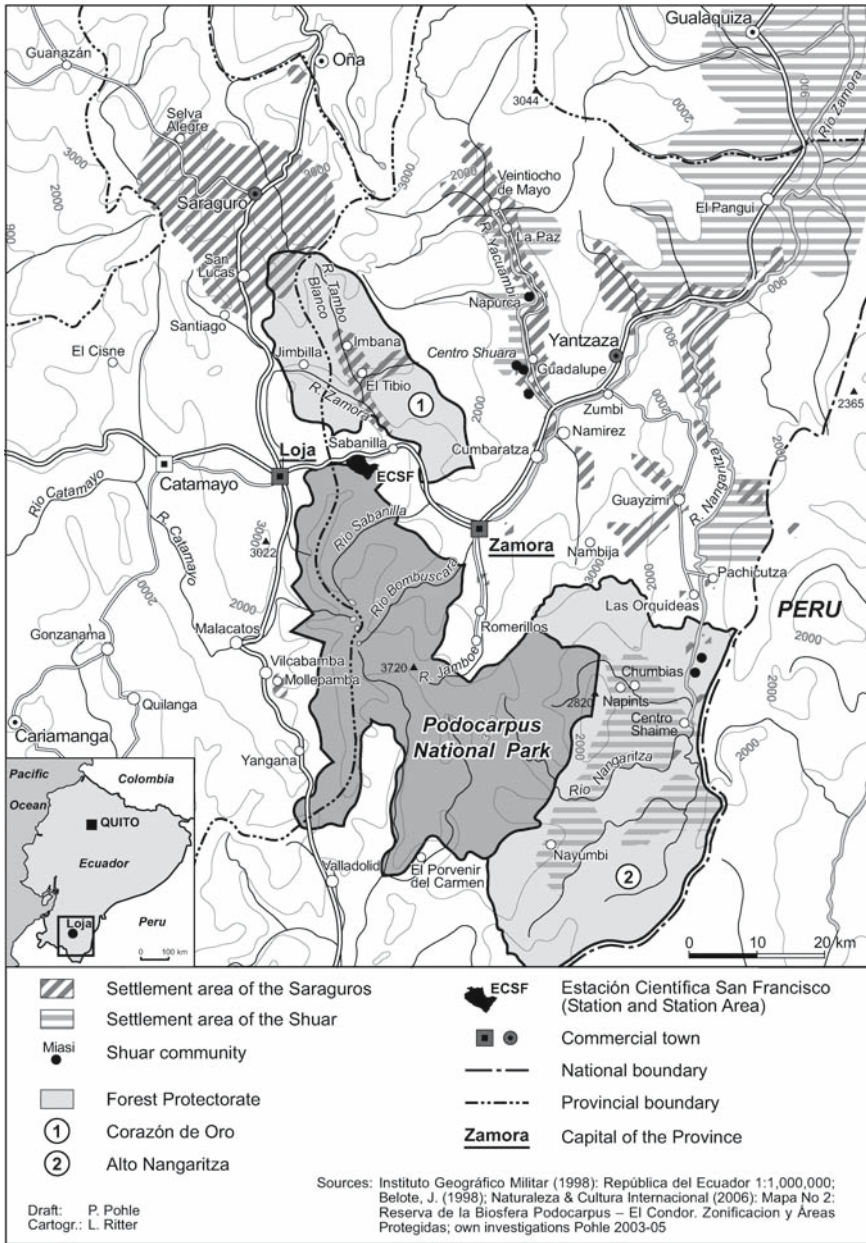


Fig. 3.1 The settlement areas of indigenous groups around Podocarpus National Park

to bring down small prey. The Shuar make extensive use of forest products, which they collect to supplement their diet or use as medicine and construction material (cf. Chapter 25). During recent decades some Shuar have also begun to raise cattle, and still others are engaged in timber extraction.



a

**Fig. 3.2 a** The people settled around Podocarpus National Park. Shuar women from Shaime taking a rest in their forest garden. Photo by A. Gerique.

Traditionally, the Shuar live in isolated houses along rivers navigable by dugout canoes. After about 8 years, houses would be moved to new locations, usually to be closer to better fish and game resources, following their decline in the previous area of settlement (Belote and Belote 1999). Nowadays most Shuar stay in one of the permanent villages (*centros*) established with the help of missionaries who entered Shuar territory during the twentieth century. Only then did the Shuar start coming into frequent contact with missionaries and colonists. In areas where competition for land use increased with the arrival of more colonists from the Sierra, some Shuar moved to more remote areas, while others adopted economic strategies of the newcomers – cattle raising and the like. With the infrastructural opening of several traditional Shuar territories (e.g. inside the Yacuambi valley), the way of life and the livelihood of many Shuar have dramatically changed during the past decades. By the 1960s, with increasing pressure on their territory coming from the colonists, the Shuar, with the help of the Salesian (Catholic) missions to the north of the Yacuambi area, began to organize to better defend their interests (Belote and Belote 1999). One result was the creation of the Shuar Federation, the first powerful indigenous organization in Ecuador (Harner 1984), and a model followed by other native groups in the country, including the Saraguros.

### 3.4 The Indigenous Saraguro Communities

The Saraguros, highland Indians who speak Quichua, live as agro-pastoralists for the most part in the temperate mid-altitudes (1800–2800 m a.s.l.) of the Andes (Sierra) of southern Ecuador (Fig. 3.1; Fig. 3.2b). It is assumed that they originally came from the Titicaca region in Bolivia and were resettled as workers and vassals in the Andean highlands by the Incas during their almost 70-year rule (1463–1531 A.D.) in southern Ecuador. Though they today form a single ethnic group, their ancestry is probably mixed (Belote and Belote 1997/1999). As early as the nineteenth century the Saraguros kept cattle to supplement their traditional “system of mixed cultivation”, featuring maize, beans, potatoes and other tubers. By now stockbreeding has developed into the main branch of their economy (Gräf 1990). A shortage of pasture land arose at the beginning of the twentieth century, forcing the Saraguros to expand their pasturage not only into the mist forest and Páramo levels, but also particularly far into the tropical forests of the Oriente, which soon became their permanent area of settlement. In the province of Zamora Chinchipe, Saraguros are settling today along the Río Yacuambi, Río Zamora and Río Nangaritza (Fig. 3.1).



b

**Fig. 3.2 b** Saraguro family from El Tibio. Photo by P. Pohle.

Like other indigenous groups of Ecuador, the Saraguros have undergone cultural change: most Saraguros are now Catholic Christians who hardly speak any Quichua outside their main area of settlement (Saraguro town), but only Spanish, and increasingly seek out job opportunities away from agriculture. By the 1970s, when the Ecuadorian educational and occupational structures began to be more open to people

who retained distinctive ethnic identities, the Saraguos took advantage of the changes in Ecuadorian society (Belote and Belote 1997/1999). Today they participate widely in the national educational system and have access to a wider range of occupations in different branches of the economy, whether commerce, handicrafts, business, politics, teaching, government administration, health care, justice or music entertainment. As a consequence of the economic crises in Ecuador starting in the mid-1980s, a number of Saraguos left Ecuador to seek work elsewhere, especially in Spain and the United States. Yet at least to some extent most Saraguos are still engaged in agro-pastoral activities, and raising cattle is still a major means of sustenance. Up to the present most Saraguos have maintained their distinctive ethnic identity and their pride in it.

### 3.5 The Saraguro Concept of Verticality

The Saraguos' traditional concept of verticality, which is quite similar to that of other high altitude populations of the world (Allan 1986), is noteworthy: To counterbalance the limited economic capacity of a single location in the mountains, they have developed an economic system in which they use various altitudinal belts, each with its own economic preconditions. Thus, the Saraguos have traditionally practiced a combined economic system comprising subsistence farming close to their villages or individual houses in the mid-altitudes of the Sierra, animal husbandry on the high altitude pastures up to the Páramo belt, and the trading of animals and animal products down in the commercial centres of the inner-Andean basins, or even as far as the Costa area. Their circular migration patterns covered a vertical range of well over 3000m (from Páramo to coastal elevations), not to mention horizontal ranges of over 150km (Belote 2000). Hence their traditional concept of verticality (use of natural resources in different altitudinal belts) enabled them to maintain a livelihood in a severe tropical mountain environment, where steep relief, high amounts of precipitation and poorly developed soils limit agricultural production. Today, due to the improvement in infrastructure, and especially due to the construction of the Panamericana and other more minor roads, the Saraguos' commercial centers are nowadays the towns of Saraguro and Loja. Instead of using the Páramo belt for grazing cattle, some have extended their pastures down to the Oriente – for example, the Saraguos of El Tibio, who maintain pastures in the valley of the Río Jamboe close to Zamora. Although the horizontal and vertical distances covered by the Saraguos have shrunk, their traditional combined economic system (subsistence farming, cattle rising and the selling of animal products in nearby markets) still prevails up to today.

Even though the traditional forms of life and livelihood, both of the Shuar and the Saraguos, have greatly changed under the pressure of external influences (missionary activities, agrarian colonization, etc.), both indigenous groups have been able to preserve core areas of their traditional culture, including an extensive specialized knowledge of their environment, along with numerous life-support strategies (cf. Chapter 25). Recent migration trends, however, are reversing the traditional vertical control of natural resources by the specific ethnic groups, since nowadays

Saraguros are expanding their territory far into the Oriente, while the Shuar are expanding their territory into the lower belt of the mountain rainforests of the Sierra, an area they formerly used exclusively for hunting purposes.

### 3.6 The Mestizos and Mestizo-Colonos

In Latin America, the term mestizo is generally used to indicate people of mixed Spanish and indigenous descent. In southern Ecuador, the term refers to the population descending from Spanish colonizers and indigenous peoples like the Saraguros, the Shuar and the pre-Incan peoples (Cañaris, Paltas, Malacatos).

Today the population of Loja and Zamora Chinchipe provinces is mainly mestizo (Fig. 3.2c). Mestizos share to a large extent a common set of values and a general cultural orientation towards the whites (*blancos*), who place considerable emphasis on their Spanish ancestry and still represent the most privileged ethnic group of Ecuador's social pyramid (US Library of Congress 2006). In the Andean highlands of Loja province, the mestizos are for the most part small-scale agro-pastoral farmers practicing subsistence agriculture. Alongside subsistence crops, small amounts of cash crops are grown, such as sugarcane, maize, peanuts and coffee (Van den Eynden 2004). In general, highland mestizos have little tendency to identify themselves as a distinct ethnic group of regional culture, except in the case of those living in the larger cities – for



c

Fig. 3.2 c Mestizos on their pasture in the Río Zamora valley. Photo by E. Tapia

example, the Lojanos, who have more distinctive ways of life and have been especially active in colonizing the Oriente and the Costa (Encyclopedia Britannica 2006).

In Zamora Chinchipe province mestizo-colonos are the most dominant ethnic group in terms of numbers. They are colonizers of mestizo ethnicity, said to have come from poor Spanish-speaking peasant families of the Sierra of southern Ecuador (Rudel et al. 2002). Their culture represents a blend of indigenous and Spanish colonial cultures. According to Palacios (1996), mestizo-colonos have been arriving in the Nangaritza valley since the beginning of the 1960s. Most of them originally came from highland areas (2000–3000 m) in neighboring Loja province. The colonists usually make a living as farmers who cultivate subsistence and cash crops and, to varying degrees, engage in cattle farming and timber extraction. In contrast to the subsistence-oriented Shuar, the colonists engage more prominently in cash-oriented activities.

With the immigration of colonos since the 1960s, the population of the Oriente in Zamora Chinchipe province has risen sharply. The construction of new roads connecting the Andean and Amazonian areas (the Loja-Zamora road was opened in 1962), a severe drought in 1968 in Loja province (Van den Eynden 2004), and especially the national land reforms that encouraged colonization of the rainforest areas brought in ever more mestizo colonizers (Harner 1984). According to Harner, this caused serious territorial conflicts between colonizers who claimed private ownership of the land and the Shuar, who have a communal concept of land utilization and ownership. Wherever the colonists claimed land, they secured their claim by clearing it, planting pasture and establishing small herds of cattle (Rudel and Horowitz 1993). By promoting colonization, the laws also gave legal backing to a patriotic sentiment among colonists, politicians and the military that colonization would contribute to the defence of the country by establishing “a living frontier” along the disputed border with Peru (cited by Rudel et al. 2002).

### 3.7 Population Figures and Migration Trends

Given the differences in natural setting, the history of colonization and recent migration trends, the population figures vary significantly between the two provinces Loja and Zamora Chinchipe.

Loja province has a significantly larger total population (404 835 according to the 2001 census) and, in terms of the area of the province, a significantly higher population density (36.8 inhabitants/km<sup>2</sup>) than the province of Zamora Chinchipe, which has a population of 76 601 and a population density of only 7.3 inhabitants/km<sup>2</sup> (2001 census; Table 3.1). The data clearly reflect the settlement history of both provinces, with Loja province representing an ancient cultural landscape and Zamora Chinchipe province being an area of recent agricultural colonization. The population density of Loja province has not changed dramatically during the past 39 years of population records: from 31 inhabitants/km<sup>2</sup> in 1962 to almost 37 inhabitants/km<sup>2</sup> in 2001 (INEC 1962, 2001). Sizing up the prevailing land use practices and land tenure systems, Temme (1972, p. 71) noted that the agrarian carrying



**Table 3.1** Total population and population density of Loja province, Zamora Chinchipe province and Ecuador, 1990 and 2001 (INEC 1990, 2001)

	Loja province		Zamora Chinchipe province		Ecuador	
	1990	2001	1990	2001	1990	2001
Total population	384 698	404 835	66 167	76 601	9 697 979	12 156 608
Area (km <sup>2</sup> ) <sup>a</sup>	11 027	10 995	23 111	10 456	272 045	256 370
Population density	34.9	36.8	2.9	7.3	35.6	47.4

<sup>a</sup>The change in surface area between the census of 1990 and 2001 is due to the agreement signed between Peru and Ecuador concerning the borderline in the Cordillera del Cóndor

capacity of Loja province had already reached its limit in 1962 since no new land was available for agriculture development. Accordingly, it is mainly the urban population growth that has been responsible for the total population growth of Loja province from 1962 (48 751) to 2001 (183 313), while the rural population in total numbers has even decreased during these 39 years (from 236 697 to 221 522; INEC 1962, 2001). In contrast, in Zamora Chinchipe province both the urban and rural populations have increased considerably during the same time.

Further, the two provinces differ in the ethnic composition of their populations (Table 3.2). In each case, mestizos represent the major population group, at more than 80%, but Zamora Chinchipe province has a significantly larger portion of indigenous inhabitants (over 12%) than Loja province (3%). In Loja province, the resident indigenous communities are for the most part Saragueros, while in Zamora Chinchipe the dominant indigenous communities are the Shuar. There is obviously a big discrepancy between the numbers of indigenous people in the two provinces according to estimates by different authors and according to the official census. Following Van den Eynden (2004), the Shuar probably total about 20 000 people. According to Belote and Belote (1997/1999) the Saragueros number around 22 000 people. However, the official population census of Ecuador only mentions 21 725 *indígenas* of both provinces in total. It remains unclear whether the estimates were too high or whether the indigenous people changed their self-designation during the census to the mestizo majority.

**Table 3.2** Ethnicity based on self-identification (census 2001; INEC 2003)

	Loja province		Zamora Chinchipe province		Ecuador	
	Total	(%)	Total	(%)	Total	(%)
Mestizo	375 558	92.8	63 729	83.2	9 411 890	77.4
Indígena	12 377	3.0	9348	12.2	830 418	6.8
Blanco	13 641	3.4	2820	3.7	1 271 051	10.5
Mulato	1987	0.5	384	0.5	332 637	2.8
Negro	1063	0.2	196	0.3	271 372	2.2
Others	209	0.1	124	0.1	39 240	0.3
Total	404 835	100	76 601	100	12 156 608	100

The vital statistics of Loja and Zamora Chinchipe provinces manifest distinct features remarkably different from that of the country as a whole (Table 3.3)<sup>1</sup>. While the total population of Ecuador increased rapidly during the period 1962–2001, at an annual growth rate of 2.49%, the annual population growth in Loja province (0.87%) clearly lies below the countrywide average, whereas that of Zamora Chinchipe (4.7%) ranges far above it. Between 1962 and 2001 the absolute population increased in Loja province about 1.42 times (from 285 448 to 404 835 inhabitants). The growth in the total population in Zamora Chinchipe was enormous during that period: it increased 6.7 times from 11 464 to 76 601 inhabitants (in comparison, Ecuador's population increased 2.66 times between 1962 and 2001, Table 3.3). The highest population growth rates were recorded for Ecuador and for the provinces of Loja and Zamora Chinchipe between 1962 and 1974. In this period, the populations showed an annual growth rate of 3.1% (Ecuador), 1.58% (Loja) and 9.55% (Zamora Chinchipe).

**Table 3.3** Vital statistics of Loja province, Zamora Chinchipe province and Ecuador, 1962–2001 (INEC 1962, 1974, 1982, 1990, 2001)

Census (year)	Loja province		Zamora Chinchipe province		Ecuador	
	Total population	Annual population growth (%)	Total population	Annual population growth (%)	Total population	Annual population growth (%)
1962	285 448		11 464		4 564 080	
		1.58		9.55		3.10
1974	342 339		34 493		6 521 710	
		0.62		3.57		2.62
1982	360 767		46 691		8 138 974	
		0.80		4.36		2.19
1990	384 698		66 167		9 697 979	
		0.46		1.33		2.05
2001	404 835		76 601		12 156 608	

The huge increase in population in Zamora Chinchipe was due essentially to internal migration, particularly influxes from the neighboring province of Loja. In the years 1977–1982 alone, 14 306 immigrants from Loja were registered in Zamora Chinchipe (INEC 1982). Since then the gains and losses from migration have nearly balanced themselves out between the two provinces: from 1996 to 2001, Zamora Chinchipe recorded only 2853 immigrants from Loja, and Loja 2367 immigrants from Zamora Chinchipe (INEC 2001). Measured in terms of all migratory movement in all years on record during the period 1974–2001, Loja province showed a negative balance of migration, while Zamora Chinchipe province showed a positive one. The out-migration of Loja province was remarkably high in 1990: a total of 183 586 emigrants (INEC 1990). This means that in 1990 about 47.7% of

<sup>1</sup>The vital statistics in Table 3.3 need to be interpreted with caution, since the reference area changed between the census records of 1962 and 2001.

the total population left Loja province. The main destination of the emigrants from 1974 to 2001 was the province of Pichincha, containing the country's capital, Quito. The neighboring province of El Oro was another main destination of emigrants. Since the 1980s, and more so from the mid-1990s onwards, out-migration from Loja province to foreign countries has taken place. According to the *Plan Migración, Comunicación y Desarrollo* (2004), the destination of 86% of interviewed emigrants from Loja was Spain, followed by about 6% to the United States. After the introduction of visa regulations within the European Union in 2003, the foreign migratory movements have been reduced by 96%.

### 3.8 Factors Driving the Expansion of the Agricultural Frontier Zone

In southern Ecuador, agriculture is still the most important economic activity: In Loja province, 44% of the economically active population works in agriculture, and in Zamora Chinchipe as much as 57.9% of it is working in the primary sector (INEC 2001). Agricultural land occupies 994 854 ha in Loja province and 446903 ha in Zamora Chinchipe province, while the number of farming units total 65625 and 9 006 respectively (MAG, INEC, SICA 2002). It is obvious that Loja province has a high number of relatively small farms with an average size of about 15 ha, whereas Zamora Chinchipe province has a small number of farm units of a relatively large size, about 50 ha on average. However, given the structure of land tenure in Loja province, about 60% of the farms still have areas under 5 ha.

According to Van den Eynden (2004) internal migration within Ecuador only began after the country gained independence in the nineteenth century. During the colonial period the indigenous population, whether in the haciendas or in the cities, were kept in a state of dependency. They could not move around without the consent of their patrons. It was only after independence that they obtained the right to live where they wanted. Throughout the nineteenth and the first half of the twentieth century, a significant increase in the number of commercial haciendas (farms) and a continual accumulation of land by them, took place, especially in the Andean region – unlike the development in the rest of the country. In the south, the haciendas were the largest within the whole country. In 1954, for example, 0.3% of all farms occupied 50% of the land in Loja province (Van den Eynden 2004, p. 16). Apart from the haciendas, there were *minifundistas* (e.g. among the Saraguos) who owned their own small farms. From 1964 on, several land reforms attempted to redivide land by forcing landowners to sell part of their haciendas. In reality, only the most infertile and driest areas were sold, at exorbitant prices, and only very slowly (Van den Eynden 2004, p. 16). The problematic land reforms and masses of landless people caused huge migrations towards both the coastal and Amazonian areas. Today the division of land is still very irregular throughout southern Ecuador. In some areas, haciendas have been divided up, whereas in other areas landowners have maintained their large farms but reduced their size (e.g. in south-eastern Loja province).

Thus, in Loja province, the expansion of the agricultural frontier zone took place a long time ago, starting during the colonial period and reaching its limit in the first half of the twentieth century with the expansion of the hacienda system. Today there is hardly any land left to devote to agriculture. Instead, the small parcelling of land through prevailing inheritance systems (*Realerbteilung*) and the agricultural use of marginal land on steeply sloped terrain, which is disposed to erosion and increased soil depletion, have led to considerable emigration among peasant workers and their families. In contrast to the Sierra, which “suffers” from emigration, the Oriente has been registering an increased influx of persons since the 1960s. This is due to a couple of factors:

1. The agricultural land reforms, starting in the 1960s, have encouraged the exploitation of previously uncultivated areas. The colonization laws that accompanied the agrarian reforms in Ecuador have especially accelerated the colonization and expansion of the agricultural frontier in the Oriente.
2. The government has encouraged settlement by expanding the infrastructure, especially road construction, in order to secure the border with Peru.

Additionally, mining activities have enlarged the supply of jobs. At the same time, a surplus of peasant workers from neighboring Loja province began searching for new job opportunities.

Although the key driver for expansion of the agricultural frontier zone in general is still population growth, in particular cases such as those in the Oriente, other factors, including agrarian reforms, state policies, infrastructure, land tenure systems and farming strategies, may have an even higher impact. Despite the expansion of the agricultural frontier, population growth in Loja province, for one, has set in motion other processes: permanent emigration, increasing employment in non-farm activities, the fragmentation of property formerly occupied by haciendas and more.