Migrants as *cash crop*-"pioneers"? – Socio-cultural change and land use in Central Sulawesi

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Introduction

The region around the Lore Lindu National Park in Central Sulawesi is subject to considerable socio-cultural change since the recent past. An ongoing strong immigration to the region and also intraregional shifts of populace cause an increasing heterogeneity in the individual villages. The distribution of poverty is also significantly changing.

This regional dynamic is not limited to the socio-culture, but can be extended to land use: The traditional cultivation of wet rice gives way more and more to *cash crop* production of cacao, accompanied by the advance into so far unused parts of the forest inside the boundaries of the Lore Lindu National Park. A "cacao boom" can be observed to this day. Cacao has become the "new golden crop" in the Lore Lindu region (Abdulkadir-Sunito/Sitorus 2007: 174).

Previous studies (i.e. Faust et al.2003; Weber et al. 2007) have shown that the origin of the head of household, meaning the ethnic affiliation and the migrational history, in addition to the educational level of the members of household have a major influence on the cultural dimension of human behaviour in this rural region.

This study has the aim to clarify how the regional processes of socio-cultural shifts and land use dynamics are linked. Hereby a particular focus will be put on the question whether certain **migrant groups** act as "**pioneers**" in regard to forcing an export oriented **cacao production**.
A quantative analysis, based on a household census in three sample villages is used as a basis for this study.

The most important result of the analysis is that it is **not** possible to make universally valid statements for the entire region. Fundamentally the immigration and the coherent ethnic dynamic have an influence on land use. However every type of village has to be examined individually. The more static the populace of a village is structured, the less important is land use change.

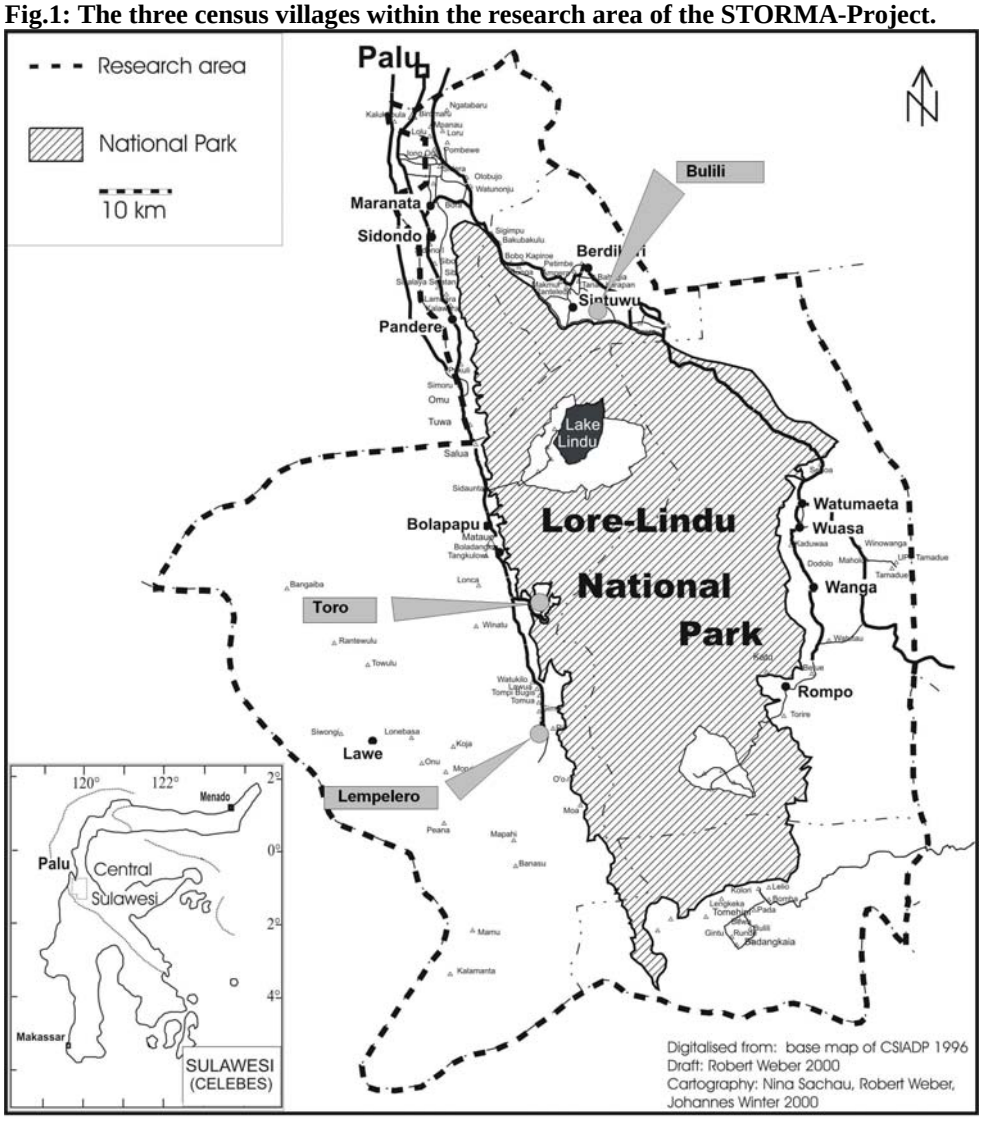
After an introduction to the region, the data base and the methodology follows the description of the socio-cultural situation in the three sample villages. This section is followed by the specifics of land use in the villages. Subsequently the influence of the factors of origin, ethnicity

and migration upon the type of land use will be analysed before the results of this analysis will be summarised and discussed.

Research area, data basis and methodology

This study is part of the research activities of the DFG-supported German-Indonesian research project STORMA ("STability Of Rainforest MArgins"). The research area is composed of the Lore Lindu region in the central rural part of the Indonesian island of Sulawesi. The region is situated south of Palu, the provincial capital of Central Sulawesi. The montane rainforest area of the Lore Lindu National Park represents the core of the research area. There are over 120 villages in the area of this park. Our research concentrates on three sample villages within the region: Toro, Bulili und Lempelero. Toro und Lempelero are located in the West of the research area, in *Kecamatan* Kulawi. Bulili, the third village is located in the North-East of the region, in *Kecamatan* Palolo (cf. Fig.1).

Fig.1: The three census villages within the research area of the STORMA-Project.



Source: Modified according to Weber (2006)

The empirical data basis for this study is a household census, which has been conducted in the three villages in 2004. This census offers many demographic, cultural and socio-economic data for a total of 898 households on location. Because the census has been designed as a comprehensive study, it is well capable of revealing the status quo in the three villages at the time of the assessment in 2004. This diversity in data allows for a precise identification of the socio-cultural background of the households in the three villages. This will be shown in the following chapter.

The census data can also be used to analyse the relative poverty of the households. In this article the analysis is conducted with the help of a poverty index developed by Zeller et al. (2006), which has been tested empirically several times. This poverty index aggregates the results of ten differently weighed census variables from the subject areas “human resources”, “food supply”, “condition of dwelling” and “ownership of (luxury-) goods”. The characteristics of these variables form the basis to determine the assignment of a certain index-value for each household. A low index-value points towards a low level of prosperity of that household, while a high index-value stands for a high level of prosperity. This value assignment allows for a relative inspection of the poverty situation of the households in the villages. For this, three equally sized groups of households are formed (terciles), which are distinguishable by their poverty index value. The first tercile contains the poorest third of households, the second tercile the less poor households and the third tercile the least poor households.

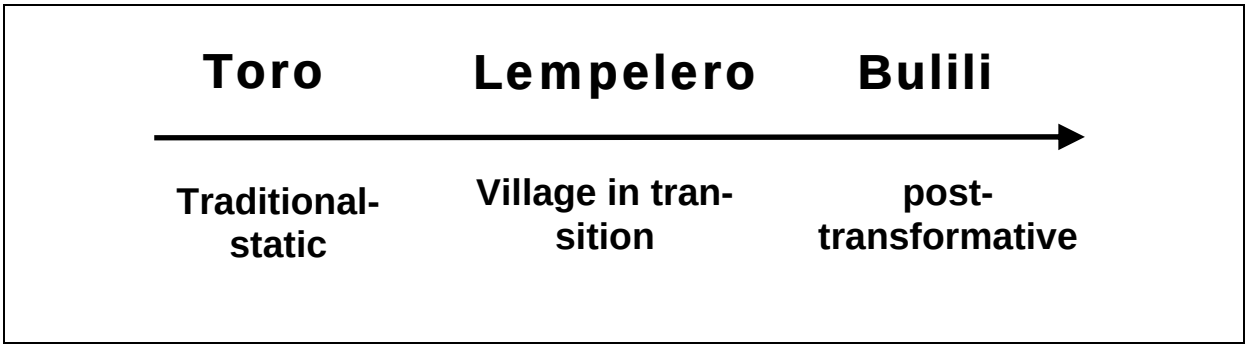
Alongside the socio-cultural factors and the poverty component, the third dimension of this analysis is land use. All three sample villages are dominated by agriculture (in each case over 90% of the households cultivate land; STORMA-A1 household census 2004). Cluster-analytical processes have been applied to analyse the status quo of land use and to typify the households in the three villages according to aspects of land use. Classification variables consist of field size and the area percentage of the type of cultivation of cacao, rice, coffee, maize and “other”, along with the level of diversification of the households. These variables also derive from the household census in 2004. The classification variables are integrated into a hierarchical-agglomerative cluster analysis with the utilisation of the WARD-fusion-algorithm and the squared Euclidian distance. For a detailed description of the procedure of household classification in Toro, Bulili und Lempelero see Schippers et al. (2007). The result of this approach is a clear and manageable data basis in regard to the land use of households in the form of a few land use types, which will be described in the chapter after next.

Mainly the instrument of cross tabulation with the associated Chi-Square-Test-statistics have been utilised to link the individual nominal analytical dimensions socio-culture, poverty and land use.

The socio-cultural situation in the sample villages

The villages in the Lore Lindu region show up a high diversity in respect to their demographic and socio-cultural situations (Faust et al. 2003:°9).This circumstance provides the basis of the definition of three different types of villages in the region (cf. Weber et al. 2007:°421). These types each fill a certain position in the regional village continuum, which is mainly characterised by intra- and inter-regional migration processes in the Lore Lindu region. Toro stands for the traditional-static type of village in which migrational processes only have a small impact. Lempelero is a village in transition, and Bulili can be classified as a post-transformative type or typical migrant-village (Weber et al. 2007: 421; also see Fig. 2)

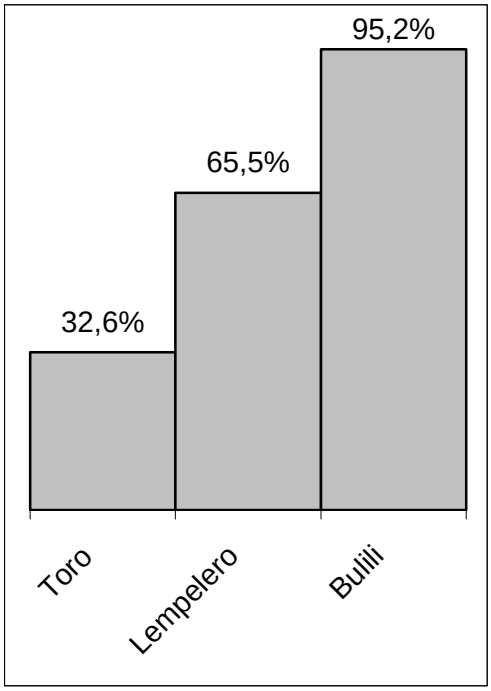
Fig.2: Schematic representation of the socio-cultural village continuum.



Source: Own graphic.

The characteristics of the individual village types of this continuum are shown well by the migrant proportions and the examination of the time of migration (cf. Fig. 3 and Tab.1).

Fig.3: Proportions of the heads of household with migrational background.



Data source: STORMA-A1 household census (2004) (N=898).

Tab.1: Proportions of heads of household in migrational phases in comparison to all heads of household with migrational background.

	Immigration before 1990	Immigration 1990-1999	Immigration since 2000
Toro	72.4%	18.8%	8.8%
Lempelero	36.1%	29.9%	34.0%
Bulili	41.3%	33.0%	25.7%

Data source: STORMA-A1 household census (2004) (N=485)

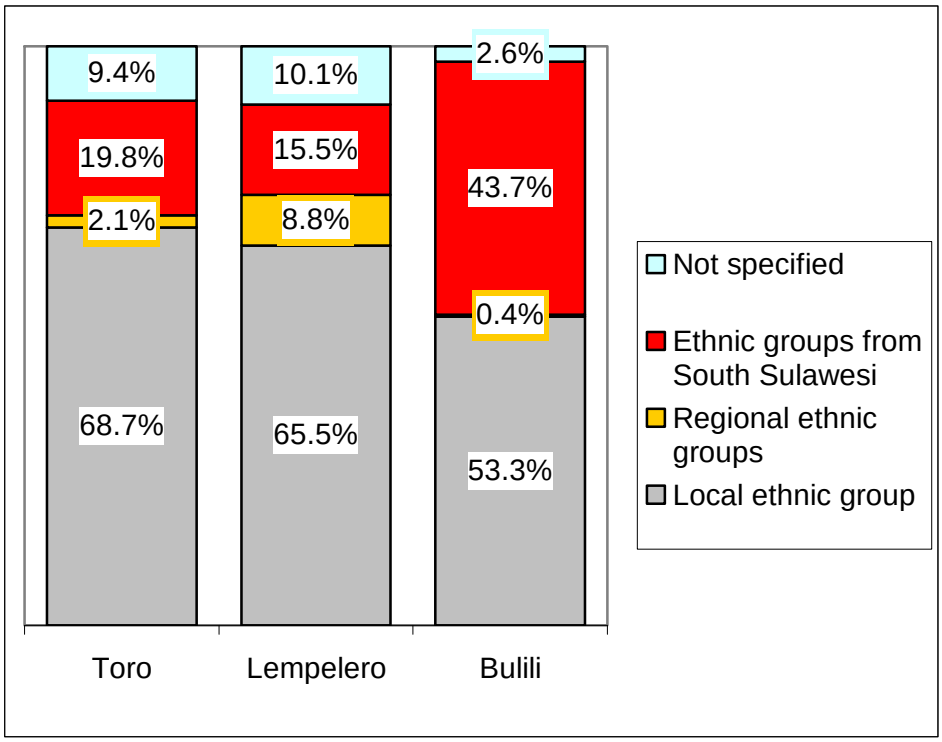
The traditional-static village Toro exhibits the smallest part of immigrated heads of household, whereby the term “Immigration“ is defined by the place of birth. Peak immigration in this village is before 1990, while the tendencies toward immigration after 1990 and especially since 2000 can be described as marginal.

Lempelero as a village in transition has a migrational quota of 65.5%. The majority of the households here have immigrated after 1990 and about a third has only immigrated in the time period between 2000 and the census in 2004. Therefore the strongest migrational dynamic in Lempelero has only occurred in recent times.

Nearly all heads of household (95.2%) in the post-transformative migrant village of Bulili have been born outside the village and are therefore immigrants according to our definition. Despite this the phase with the strongest immigration has already passed in Bulili. This is represented by the relatively small fraction of heads of households who have immigrated since 2000.

The observed migrational dynamic in recent times in Central Sulawesi has partly also resulted in the shifting of the ethnic composition in the individual villages. The immigration of members of ethnic groups who were initially not native in the region has resulted in individually differing losses of local ethnicities in the share of population. Apart from this the intraregional migration of members of the respective autochthonic ethnicity has an important role.

Fig.4: Ethnic structure of the sample villages.

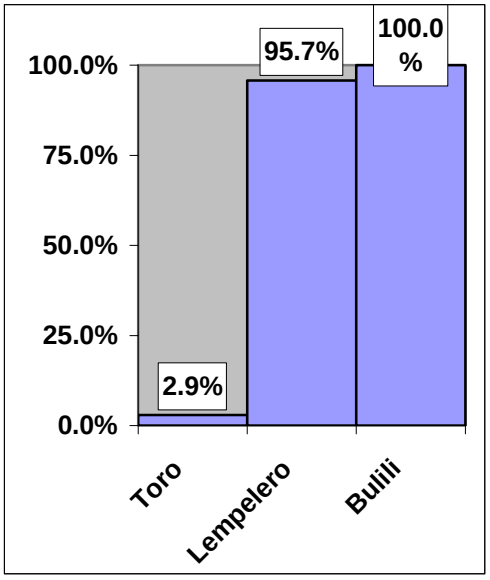


Data source: STORMA-A1 household census (2004) (N=898).

The majority of the population in all three sample villages belongs to the local ethnic group respectively, as shown in Fig.4. In Toro and Lempelero these ethnic groups are the Kulawi and in Bulili the Kaili. Allochthonous ethnic groups are represented by about a third of the population in Toro and Lempelero, while in Bulili nearly half of the heads of household belong to a non-local ethnic group. In Toro the relatively low total percentage of immigrants (cf. Fig.3) coincides just about with the percentage of the allochthonous population. The proportion of members of allochthonous ethnicities in Lempelero (34.5%) is clearly smaller than the

total migrant share (65.5%; cf. Fig.3). This can be explained with the relatively strong immigration of households of the autochthonous ethnicity from the closer region of the village.
In the post-transformative migrant village of Bulili 53.3% of all heads of household or 48.5% of the immigrated heads of household belong to the local ethnicity and are therefore local migrants from the closer region of the village. More than in the other two villages a considerable share of the heads of household belong to ethnic groups from the province of South Sulawesi (43.7%). Allochthonous ethnicities from other parts of the Lore Lindu region as well as the category "not further specified", which contains mainly immigrants from other parts of Indonesia in addition to the Chinese minority are not only marginally represented in Bulili, but also in the other two villages. Within the ethnic groups from South Sulawesi the ethnicity of the Bugis is dominant in Bulili and Lempelero (cf. Fig.5). In Toro however this ethnicity only has a minor position (cf. Fig.5). Here members of the ethnicity of the Rampi hold the majority of immigrants from South Sulawesi instead.

Fig. 5: Proportion of Bugis within the migrants from South Sulawesi.



Data source: STORMA-A1 household census (2004) (N=226)

It can be stated that the socio-cultural situation in the sample villages is influenced more or less by immigration and the ethnic composition – depending on the individual village type. Furthermore different phases of immigration can be ascertained for each village. The traditional-static village Toro has a relatively small proportion of migrants and peak immigration has past. Additionally the local ethnicity is dominant here. The latter is also the case in Lempelero, the village in transition. Despite this the proportion of migrants is distinctly higher and the village is currently experiencing the phase with the strongest immigration. The post-

transformative village of Bulili is already experiencing a decline in immigration. Nearly the entire population of the village is composed of immigrated households, which are mainly from the neighbouring province of South Sulawesi whereby these again are dominated by Bugis.

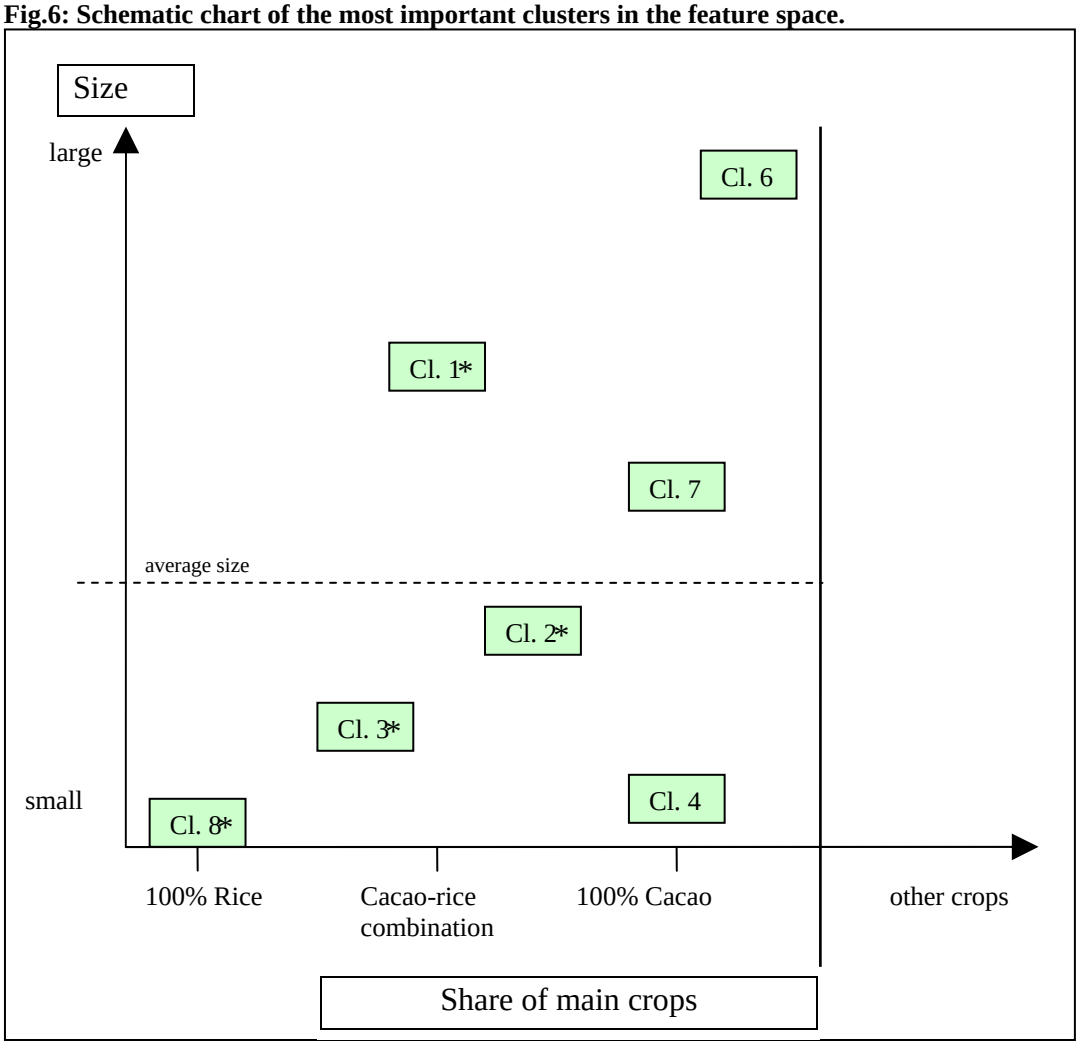
Delineation of land use in the three sample villages

The previous chapter has shown that the villages differ considerably in respect to their socio-cultural situations and dynamics. The same can be said about the dominant type of land use. This is shown by the cluster analysis, which is used to describe the land use of households in the form of land use classes (see above). The application of the cluster analysis according to aspects of land use results in 10 classes of households. These can be roughly structured in:

- solely rice farmers (cluster 8),
- solely cacao farmers with differentiating total cultivated area sizes (cluster 4, 6 and 7),
- rice-cacao-combiners with also differentiating total cultivated area sizes (cluster 1, 2 and 3), i.e. households who implement both land use types simultaneously,
- and furthermore in coffee farmers (cluster 5), maize farmers (cluster 10), producers of other field crops (cluster 9) and households without agricultural activity.

In this study only such households will be analysed who cultivate rice and/ or cacao. The relevant land use types are charted in the feature space of the classification variables “total cultivated area size” and “area share of main crops” in Fig.6. The total cultivated area size is to be seen as an indicator for the extent of the agricultural activity of a household. The area share of main crops allows conclusions about the modality of the area cultivation of a household, i.e. which crops are produced.

Fig.6: Schematic chart of the most important clusters in the feature space.



Source: Own chart

The chart reveals that not only sole cacao cultivation but also the combined cultivation of cacao and rice are practiced by small, medium and large farmers alike. The sole rice cultivation however is usually practiced by small farmers. For a detailed description of the land use characteristics of the individual clusters see Schippers et al. (2007). Generally speaking it can be said that sole cacao farmers, that is the households of the clusters 4, 6 and 7 follow a *cash-first*-strategy, while sole rice farmers of the cluster 8 mainly follow a *food-first*-strategy. The combiners of rice and cacao cultivation (cluster 1, 2 and 3) however follow a strategy of diversification.

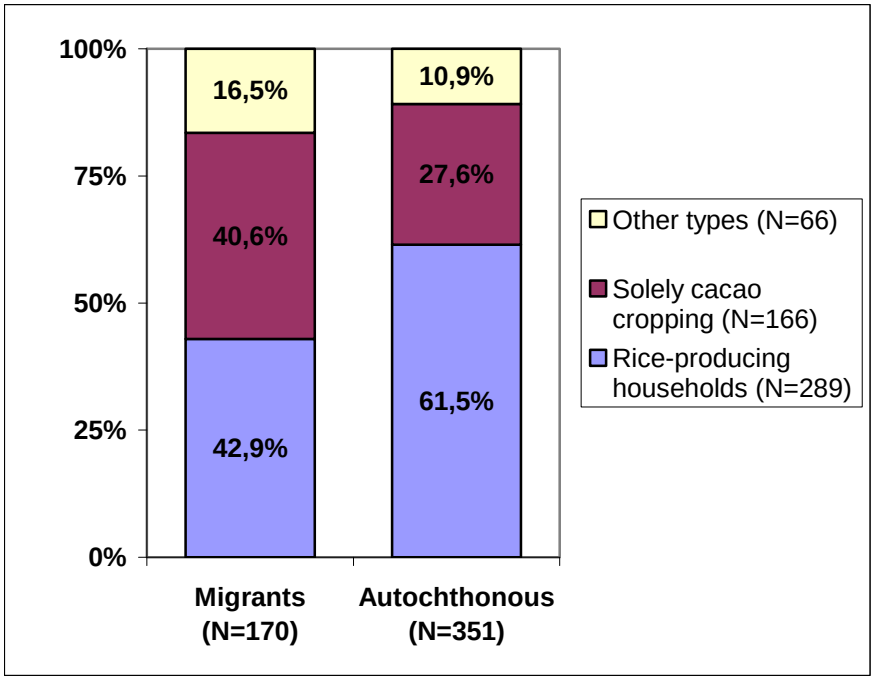
Fig. 6 also contains a spatial component: the clusters marked with a star (*) are exclusively found in Toro while the other clusters can be found in all three villages. Accordingly only households in Toro solely cultivate rice on a small scale (cluster 8). The combination of rice and cacao cultivation is also exclusively limited to farmers from Toro. On the other hand cacao cultivation of all sizes is represented in all three villages.

Impact of the socio-cultural situation in the sample villages on land use

The shown concentration of several land use types on only one of the three villages (Toro) indicates that the already described socio-cultural village continuum can also be found in the heterogeneity of rural land use. The traditional-static village Toro is the only one of the three villages in which the traditional wet rice is cultivated. This is done not only in its sole form of land use but also in combination with the cultivation of the *cash crop* cacao. However there is no cultivation of rice either in the migrant village of Bulili or in the village in transition, Lempelero. Instead the sales-oriented cultivation of cacao is just about the only production in these two villages. Therefore it seems likely to conclude that the differences in rural land use are linked to the socio-cultural structure of the villages. This hypothesis shall be tested in the following.

Fig.7 shows the distribution of land use types within the traditional-static village Toro upon the group of migrants on the one hand and the group of the autochthonous population on the other hand. Thereby all households which either exclusively cultivate rice (cluster 8) or combine rice and cacao cultivation (cluster 1, 2 and 3) are aggregated to the land use type of rice producing households. In Fig.7 these are compared to the aggregated group of all households exclusively producing cacao (cluster 4, 6 and 7).

Fig.7: Land use of migrants and the autochthonous population in Toro.

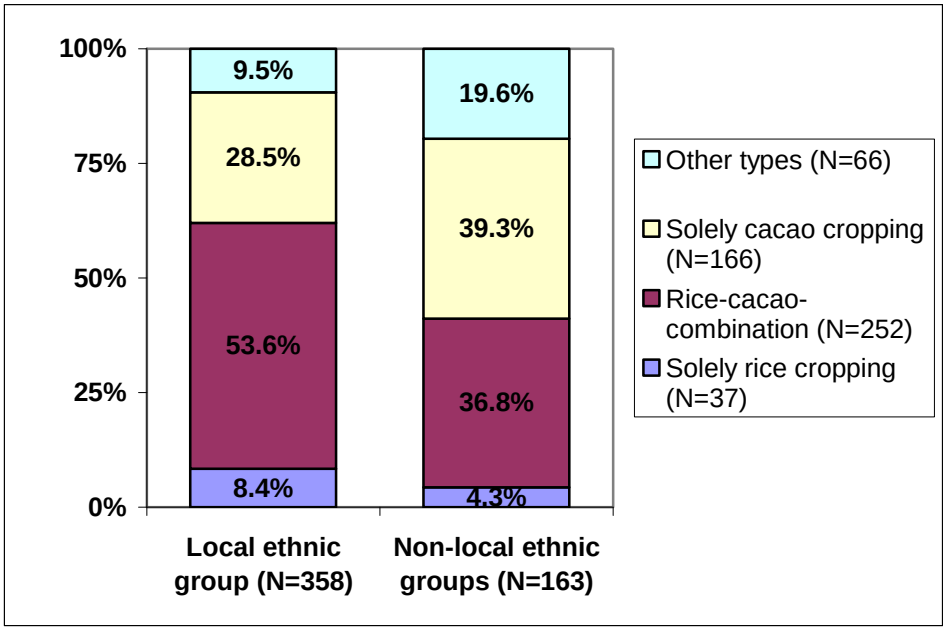


Chi-Square = 16.05; p<0.01; contingency coefficient = 0.173
Data source: STORMA-A1 household census (2004) (N=521)

Clearly more migrant farmers solely cultivate cacao in comparison to the indigenous population in Toro. In return, the migrants rarely cultivate rice. On the contrary nearly two thirds of the autochthonous population at least uses a part of their total cultivated area for the production of rice. However the differences between these two groups are not very distinctive (contingency coefficient = 0.173).

Fig.8 shows the interrelation of the ethnic composition of the population with land use for the traditional-static village Toro. Thereby clusters 1, 2 and 3 are aggregated to the group of rice-cacao combiners, while clusters 4, 6 and 7 are combined to form the group of solely cacao producers.

Fig.8: Land use and ethnic affiliation in Toro.



Chi-Square = 22.35; p<0.01: contingency coefficient = 0.203
Data source: STORMA-A1 household census (2004) (N=521)

Fig.8 shows that ethnic affiliation has an influence on the land use of households to a certain extent. There are slight but still identifiable differences between the local ethnicity Kulawi and the non-local other ethnicities. Members of the local ethnic group adhere to the production of the traditional staple food rice much more than members of non-local ethnicities. A shift to the sole production of the *cash crop* cacao only comes in to consideration for a relatively small faction of the local ethnicity.

The tradition of rice cultivation in Toro is surely one reason for the strong focus of the local ethnicity on this *food crop*. The local households partly have ownership of wet rice paddies since several generations and still cultivate these fields with this familiar land use form. Since the last few years the majority also produces cacao in addition to rice cultivation. This section of the population rarely totally substitutes the traditional rice cultivation with cacao, but usually just supplements their production. Therefore it is predominantly a matter of a diversification strategy with the parallel cultivation of both crops. Because some households of the local ethnicity have shifted to the exclusive *cash crop* production of cacao it can be assumed that this part of the population of Toro stands in the initial stage of a slow shifting process from wet rice cultivation to the sale-oriented production of the *cash crop* cacao. Despite this the basic staple food rice still plays an important role for the majority. Whether the combination

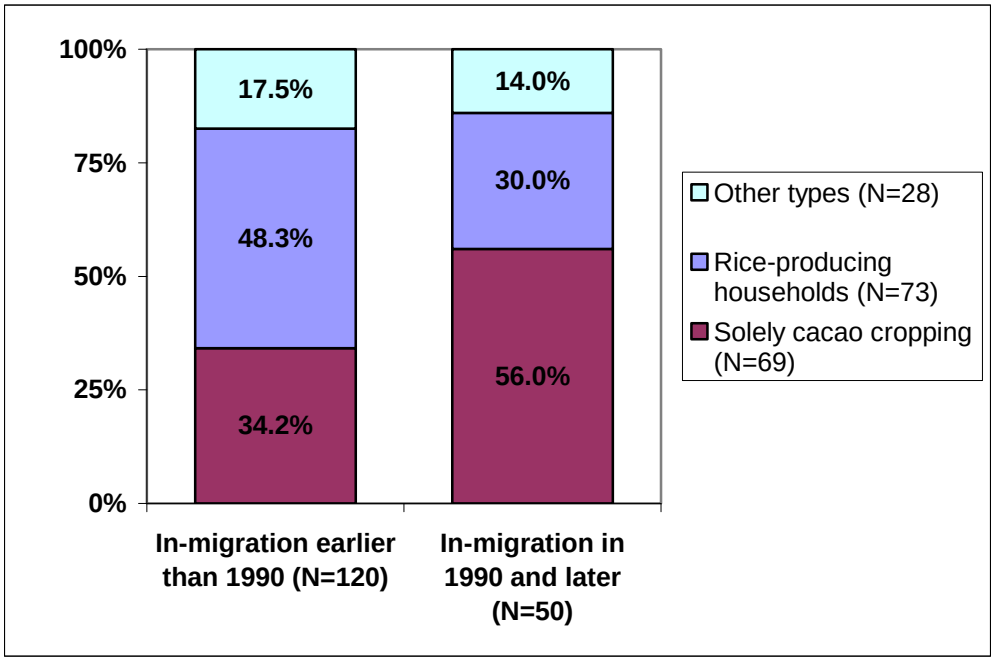
of both goods represents an intermediate step in a shifting agricultural process or if it will permanently stay can not be foreseen at present.

There are no significant differences between the land use type and ethnic affiliation when looking at members of the local ethnicity Kulawi, who have immigrated from the surrounding area of Toro, and those who have always lived in the village. Therefore it does not matter whether it is an immigrated or autochthonous household in respect to land use of the local ethnicity of Toro. Within this ethnic group the influencing component “same ethnic affiliation“ superimposes the component “immigration“.

These findings coincide with the results from other studies of the STORMA-project (Weber et al. 2007; Weber/Faust 2006) which also conclude that the ethnic composition of a village has a much higher impact on the characteristics of land use change from rice to cacao than the bare differentiation in migrants and autochthonous population. Furthermore this can be seen as indication for intra-ethnic or familial networks between migrants and the autochthonous population of the local ethnicity: familial connections and a consistent tradition bring forward a largely similar strategy of land use, which is based on the combination of the “modern” export good cacao and the traditional cultivation of rice for food supply.

The question remains open, which socio-cultural group is forcing the increasingly important cultivation of cacao in the village. A closer look at the connections between land use and the time of immigration of migrant households can provide an explanatory approach (cf. Fig.9). Here the households who have immigrated before 1990 are compared to households who have immigrated after the beginning of the first cacao boom, which has begun around 1990 in Central Sulawesi. In this chart the individual land use clusters are also aggregated to bigger groups as before (see also comment to fig.7).

Fig.9: Land use in Toro and time of immigration of migrant households.



Chi-Square = 7.17; p<0.05, contingency coefficient = 0.201
Data source: STORMA-A1 household census (2004) (N=170)

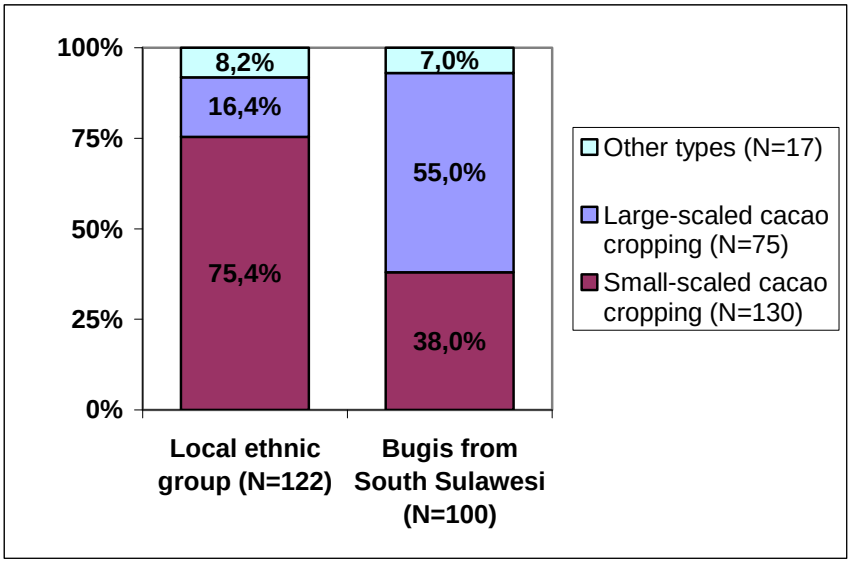
As can be seen in fig.9 especially those migrants solely cultivate cacao without parallel rice production who have immigrated to the village during or after the cacao boom at the beginning of the 1990s. The households in contrast who have immigrated before 1990 clearly use at least a part of their total cultivation area for the basic staple rice more often Hereby it is irrelevant to which ethnic group the individual migrant household is affiliated. Therefore the impact of ethnicity on land use is overlaid by the influence of the time of immigration to Toro. Even households of the local ethnicity of the Kulawi who have immigrated after 1990 show a tendency of solely cultivating cacao, although this tendency is slightly weaker than with the non-local ethnicities.

Hence the regional cacao boom which reached the Lore Lindu region at the beginning of the 1990s is reflected by the time of immigration and the momentarily (that is at the time of the census in 2004) practised agriculture. The migrants arriving after 1990 in Toro are the actors who are most of all groups exclusively focused on cacao production for export. This is also the case today. The socio-cultural dynamic caused by their immigration is accompanied by a forced transition from the production of rice to the export crop cacao. Consequently, the migrants arriving after 1990 in Toro can be described as the cacao “pioneers“ in that village more than any other group.

Despite this it must be said that altogether the rice cultivation is still considerably important in the traditional-static village of Toro. Even a good third of the migrants identified as cacao-"pioneers" who have moved to the village after 1990 still cultivate rice paddies today. Furthermore this shows that the individual socio-cultural groups in this traditional-static village only slightly differ in their land use. Toro is to be seen as relatively homogenous in respect to socio-culture as well as land use. The land use change has just begun here and is mainly carried by recent immigrants.

The analysis of the situation in Toro, which has been relatively little affected by immigration, showed that the differences between the socio-cultural groups are rather marginal. Bulili on the contrary represents the other extreme. The comparison between immigrated and local households does not apply here, since it is a young migrant village consisting nearly exclusively of immigrated households which often not originate from the surrounding area. The population of the village produces cacao for export just about exclusively. There are merely differences in the scale of cultivation of households applying this type of land use. As illustrated before in Fig.5 a relatively high proportion of heads of household belong to the ethnic group of the Bugis, who originate from South Sulawesi. The Bugis differ distinctly from the autochthonous ethnicity Kaili in respect to the scale of cacao cultivation. The following chart (Fig.10) shows this difference. The clusters 6 and 7 are aggregated to the group of cacao farmers with above average production scale.

Fig.10: Cacao cultivation of Bugis households and households of local ethnicities in Bulili.



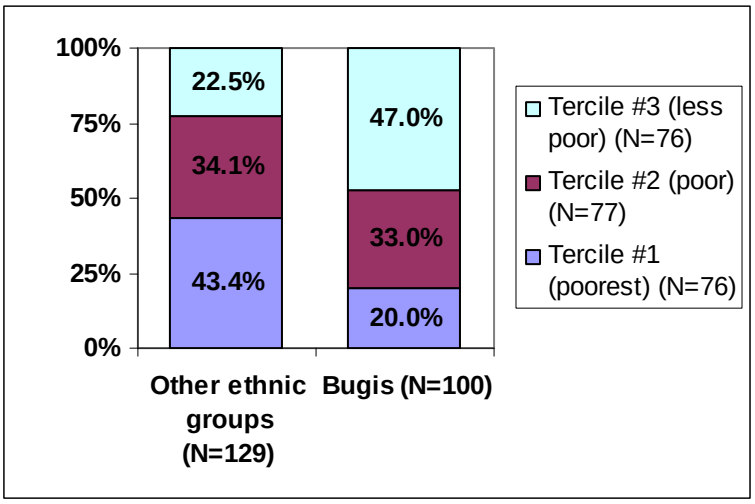
Chi-Square = 37.48; p<0.01; contingency coefficient = 0.380
Data source: STORMA-A1 household census (2004) (N=222)

While the members of the local ethnicities predominantly use small scale cultivation the majority of the Bugis households have above average sized total cultivation areas for this export product. This correlation can be described as relatively strong with a contingency coefficient of 0.38.

The Bugis picture themselves as an old seafaring and trading ethnicity from South Sulawesi. Even today they exhibit a "tradition of opening up new regions"(Weber et al. 2007). Many Bugis possess pronounced knowledge of cultivating cacao. This knowledge originates from many Bugis working on Malaysian cacao plantations, where they could gather experience with this type of land use (cf. Weber 2006). As a consequence they established cacao cultivation in their homeland region of South Sulawesi. There this caused an increasing scarcity of land which triggered emigration to other places. Migrating Bugis households reached the Lore Lindu region in search of suitable land for cacao production. Here they found adequate land available and good conditions to cultivate cacao (cf. Weber 2006; Faust et al.2003).The main target region of these interregional migrants was and is predominantly the eastern part of the research area (Weber 2006) in which Bulili is located. This also explains the strong influx of Bugis migrants to this village.

Apart from the introduction of the cacao plant into the Lore Lindu region the Bugis households also brought along more effective and so far unknown methods of cacao cultivation (cf. Weber 2006; Faust et al. 2003). In respect to the entire research area Kreisel et al. (2004: 52), Weber/Faust (2006) and Weber et al. (2007) reach the conclusion that the level and speed of the adaptation of cacao cultivation by the local population are influenced by the proportion of Bugis migrants in the total population. This is also due to many Bugis reaching a certain level of prosperity with their focus on *cash crops* (cf. fig.11). This prosperity is also shown publicly, as can be measured in the condition of their houses or with the installation of satellite dishes (cf. tab.2).

Fig.11: Poverty index terciles in Bulili according to ethnic affiliation.



Chi-Square = 19.53; p<0.01; contingency coefficient = 0.280
Data source: STORMA-A1 household census (2004) (N=229)

Tab.2: Selected prosperity indicators in Bulili according to ethnic affiliation.

	Bugis	**Other ethnic groups**
Condition of house:		
Sound state	*83.0%*	*40.3%*
In need of renovation	*17.0%*	*59.7%*
Ownership of satellite dish?:		
Yes	*19.0%*	*3.1%*

Data source: STORMA-A1 household census (2004) (N=229)

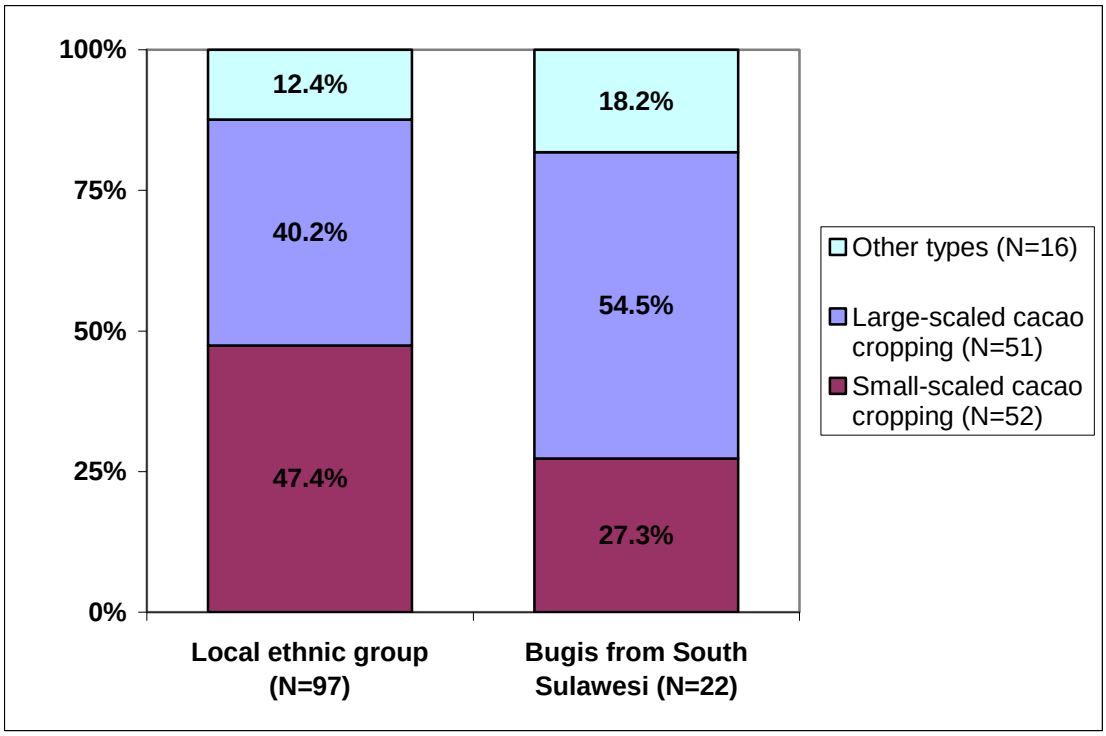
The Bugis can be stated to be the cacao-innovators for Bulili and in principle for the entire Lore Lindu region. They have introduced this export crop into the region and dominate the cacao production on a large scale in many places like Bulili. In many cases they show their prosperity publicly. A lot of farmers from the region have followed their lead and have also migrated to young villages like Bulili on the lookout for suitable land for the cultivation of cacao. In this village the differences between the Bugis and other local ethnicities are considerable concerning the scale of cacao cultivation (see above).

On the one hand the members of other local ethnic groups often lack the economic prerequisites for the purchase of land for large scale cacao production. On the other hand the rather limited knowledge of productive methods of cacao cultivation is another reason for members of the local ethnic groups to operate only comparatively small scale cacao cultivation. In most

cases there is no inter-ethnic knowledge transfer about cacao cultivation between the Bugis and the local population (Weber/Faust 2006). In fact most households of the local ethnic groups gain their knowledge about cacao production by observing and imitating the cultivation methods of the cacao-innovators (= the ethnicity of the Bugis). Often only small field sizes are available to them. Additionally they often do not apply modern cultivation methods (cf. Weber/Faust 2006; Weber et al. 2007; Faust et al 2003). The immigrated Bugis mostly have enough financial backing to buy up the best land for cacao cultivation on a large scale in villages like Bulili. In many cases they push out farmers of the local ethnicity, who in turn develop new agricultural land from the forest margins. The result is a tendency to increased conversion of rain forest land to agro-forestry systems (cf. Abdulkadir-Sunito/Sitorus 2007).

The situation in the village in transition Lempelero is similar to Bulili: the members of the ethnicity Bugis also focus on cacao production on a large scale, while the farmers of the local ethnicity rather cultivate small scale cacao production. This connection between ethnic affiliation and land use is just a tendency in Lempelero, since no statistical significance is given.

Fig.12: Cacao cultivation of Bugis and households of the local ethnic group in Lempelero.



Chi Square = 2.98; p=0.226; contingency coefficent = 0.156
Data source: Storma-A1 household census (2004) (N=119)

Relatively few Bugis households live in Lempelero so that the local situation can only be compared to Bulili in a limited way. Nevertheless the sale of land by local farmers to Bugis is

very pronounced (cf. Weber/Faust 2006). The simple distinction in migrants and autochthonous population in addition to the examination of the time of migration does not produce any visible land use differences between the individual groups.

Discussion

The regional village continuum of socio-cultural change is reflected by differences in the land use of the individual villages. Altogether the traditional-static village Toro is only affected marginally by immigration. Here immigrants who moved to the village after 1990 focus increasingly on the sole production of the *cash crop* cacao. The local population as well as long established migrant households (still) avoid a transition of production to solely cacao, but usually rather diversify their production strategy (combination of cacao and rice cultivation). All in all the differences in land use between the individual socio-cultural groups in the village are relatively small. Here the sole production of *cash crops* has relatively little importance (so far). Reasons for this are to be found in traditions, familial and intra-ethnic network structures in addition to long established property rights, but also in the almost complete absence of members of the ethnicity Bugis.

The situation in the post-transformative village of Bulili is characterised by immigrated Bugis households from South Sulawesi, who cultivate cacao on a large scale. Intra-regional migrants of the local ethnicity also focus on the sole production of cacao, but on a much smaller scale. By showing their financial power publicly the Bugis are seen as "role models" for local ethnicities in this village. This however causes the danger of prolonged deforestation by local farmers in search of new land, who have been pushed out their habitual production areas in the form of massive land purchases by wealthy Bugis. The few Bugis households in the "village in transition" Lempelero tend to have a similar standing as in Bulili.

All in all the strong migrational dynamic has promoted a change of land use in the Lore Lindu region, which is driven especially by inter-regional migrants and partially also adopted by the autochthonous population. The immigrated Bugis from South Sulawesi act as the outstanding cacao-"pioneers".
On the other hand, this new form of land use has initiated in the first place the increasing migrational dynamic in the region. Therefore these two processes are interlinked.

However the results for the villages Toro, Bulili and Lempelero point towards an inconsistent situation in the region. Each village is to be seen individually. Some villages like Bulili provide particularly good conditions for the cultivation of cacao. These were and still are the preferred destinations of land-seeking migrants. The change in land use in addition to the socio-cultural shift of the population has largely taken place in such villages.

Other villages like Toro on the other hand stand in the initial stage of this transition process. Here migrational processes are weak and declining, thus the land use type of wet rice cultivation continues to be of great importance. Intra-ethnic and familial network structures play an important role in this context. The members of the ethnicity Bugis, which act as the cacao-innovators in the region, are only marginally represented in Toro. Instead recently immigrated households effectively act as “substitute cacao-innovators”.

The third village type represented in this study by Lempelero was appropriately described as “village in transition”. The currently high migrational dynamic in such a village is accompanied by the increasing importance of the sole production of the *cash crop* cacao.Therefore the different socio-cultural village types also represent different phases of land use change in the region – with all positive and negative consequences for populace and nature.

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