

# UNDP ARMENIA WHITE PAPER

LAND REFORM, RURAL POVERTY AND INEQUALITY:  
A PRO-POOR APPROACH TO LAND POLICIES

MAX SPOOR

Associate Professor Institute of Social Studies  
Centre for the Study of Transition and Development (CESTRAD)  
The Hague, the Netherlands  
E-Mail: [spoor@iss.nl](mailto:spoor@iss.nl)

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## LAND REFORM, RURAL POVERTY AND INEQUALITY: A PRO-POOR APPROACH TO LAND POLICIES

### 1. INTRODUCTION

This White Paper intends to promote a public debate on issues concerning land fragmentation, consolidation and concentration, which should contribute to the development of ‘pro-poor land policies’ focused primarily on improving the position of very small peasant farms and their poor and vulnerable households, for which land is still the main ‘safety network’. Land policies are highly relevant in Armenia today, as the paper will highlight that the country has entered in a *new phase (or wave) of land reform*, through the massive transfer of remaining state owned land to the jurisdiction of the communities (and by finalising the formal registration of private land titles). Apart from an analysis of the agricultural sector in Armenia, which is dominated by small-scale land holdings since the redistributive land reform of the early 1990s, a variety of policy options related to land, poverty and inequality will be discussed, with their possible outcomes. Important issues that need to be analysed are the interlocking role of land, credit, services, output and input markets, and that of the institutional framework, and the appropriateness of some forms of intervention in these markets (with legislative, fiscal, investment, and subsidy instruments). The context is an overarching question, namely *what can the state do* to improve the growth of agricultural output, while not worsening (already high) rural unemployment, and weakening the safety net that land has meant for the rural poor? Does it leave everything to the market, apart from providing public goods, and creating an facilitative institutional framework, or can it go beyond this role of the ‘minimal state’, steering as it were the development of markets, and safeguarding the interests of those who have the weakest position? The latter – in rural Armenia – are without any doubt those who have little or no land. Therefore, while many factors are important in analysing the success and failures of the agricultural sector’s economy of Armenia, land and the access to it, is indeed of crucial importance.

The structure of the White Paper is as follows. In the following second section, a brief overview is provided of the Armenian land reform. Firstly, the focus is on its initial outcome of a rather egalitarian agrarian structure. Secondly, the emerging agrarian structure is being analysed more from a regional perspective, combining the initial unequal endowments (population density, land scarcity, irrigation and land quality) with factors

such as increased rural out-migration, and the land lease and sales markets that have started to be more important. Thirdly, rural poverty is looked upon from the perspective of land and access to it, as the land reform provided a cushion against impact of the dramatic economic crisis, land being the ultimate refuge for food self-sufficiency of households and partial employment generation, as the agricultural sector absorbed superfluous labour from other sectors. However, since 1996, rural poverty is stagnating while urban poverty seems to be rapidly in decline.

In the third section the performance of the agricultural sector is being scrutinized, again –as far as possible– from a regional point view, using *Marz* data.<sup>1</sup> This more disaggregated analysis provides insights in why agricultural production is not developing faster? Firstly, the section will focus on how the product-mix changed in Armenian agriculture, in particular reflecting ‘risk aversion’ behaviour of the small farms that were created during the land reform of the early 1990s. Secondly, it will show that agriculture in terms of volume has done better than the growth figures (that show gross agricultural output or GAO, in value terms) suggest, in particular because of the price scissors of the immediate post-Russian crisis years. It will also look at the issue why incomes are not growing while the domestic terms of trade (ToT<sub>D</sub>) have improved somewhat since 2000. Thirdly, although the data is not detailed enough to be able to provide a definitive analysis, it seems that there is a certain dynamism in the changing agrarian structure, which reflects the need for somewhat larger farms that produce the bulk crops, such as grain (Aragatzotn, Shirak and Gegharkunik) and potatoes (Gegharkunik and Lori), while other *marzes* specialise much more in fruits (Ararat, Armavir, and Kotayk) or vegetables and melons (Ararat and Armavir) produced in much smaller farms.

The fourth section is fully dedicated to the operation of land (lease and sales) markets. Detailed data are not (yet) available on who buys or leases land, from whom and for which reason. However, there are aggregate data, in particular from the State Cadastre Committee, which show an increasing number of land transactions, in particular since 2002. Firstly, the section will discuss the possible impact of ‘push’ and ‘pull’ factors in land transactions. The main push factor for land sales is poverty and destitution (and the strategy to migrate, which in the case of Armenia means the last step, cutting very important roots). The pull factors might come from neighbouring farms that do better and

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<sup>1</sup> The *Marz* is the Armenian name for the main regional administrative unit.

expand, but also from absentee financial groups that invest (or speculate) in land<sup>2</sup>, or the emerging agro-industry (of wine and canned fruit) that seeks vertical integration. Secondly, an overview will be given of the current land distribution at *Marz* level, in which beginning forms of land concentration can be seen to emerge.<sup>3</sup> This can be also seen from detailed land transaction cadastral data, which will be analysed in conjunction. Thirdly, the land structure in Armenia still shows a large number of very small farms, while at the same time these farms have fragmented land holdings, with an average of 3 plots. Therefore, land consolidation –understood as a process of ‘consolidating’ these plots into unified land areas of farms, and distinct from the concept of land concentration– is needed. However, in absence of trust in each other and in existing institutions to handle these issues, this process seems to be highly complicated and costly.

The fifth section analyses the current new phase (or wave) of land reform, that is occurring at this very moment. Although rather unnoticed, the state is transferring a substantial amount of land, mostly hay land, pastures and meadows to jurisdiction of the communities, only keeping the land that is outside their *de jure* borders.<sup>4</sup> This gives the possibility to communities to decide themselves about the allocation of this land, its privatization, leasing or sales through public auctions. Firstly, we will analyse the programme by itself, as it is in full swing to be implemented. Around one third of the rural communities have by now received full control over this part of the State Reserve Fund of land. There is some anecdotal evidence that first sales were done in a rather non-transparent manner and that even some large land transactions took place.<sup>5</sup> Secondly, it will be shown that through this process, a powerful instrument is provided to the rural communities to improve the weak position and meagre land holdings of the poor and vulnerable farm households (through land allocations, supported by a combination of private and public finance). Communal pastures should furthermore be carefully handled, and access to these ‘commons’ has to be regulated through collective property rights and leasing rather than selling them to private farmers, as the latter is neither efficient (except for specific cases) nor equitable.

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<sup>2</sup> With the expectation that agricultural land will soon increase in value.

<sup>3</sup> Although we will show that only a very small share of land has been subject to sales, and most land concentration is effectuated by informal or formal leases.

<sup>4</sup> This was already on the agenda since the late 1990s, but was only recently concretized (see first reference in Lerman and Mirzakhanyan, 2001:8).

<sup>5</sup> There were some reports of sales (of state land by communities) that were between 100 and 300 hectares, as was confirmed by a high official of the SCC. In response the government had installed restrictions on such sales of land (Interview, 7 October 2004, Yerevan).

The sixth section will attempt to broaden the focus of the White Paper beyond issues of ‘land, rural poverty and inequality’, towards the market and institutional environment surrounding small farmers or peasants in the transition economy of Armenia. There are three crucial issues that define this ‘environment’, which is still largely characterized by ‘missing’ markets and institutions, i.e. inefficient, fragmented (just like in the case of land) and with high transaction costs. Firstly, apart from the far-reaching land reform, agricultural and rural development policies have been minimal to say the least, reflecting a rather strong urban bias in the political economy of Armenia. Secondly, and related to this, in absence of cooperative or associative institutions, lack of credit and investment resources, and asymmetrical information problems, the rural producers are often in substantial disadvantage in commodity chains. Thirdly, it is not only access to land that is important, as is shown by household surveys, in some cases it is lack of financial resources (credit), quality of land, and irrigation that are indicated as the main bottleneck to improve agricultural production, or even fully use the available (albeit scarce) land resources.

In the concluding section seven, coming back to the original question ‘what can the state do’ in terms of pro-poor land (and linked rural development) policies, a number of possible policy interventions will be discussed that should be considered in order to improve production and efficiency on the one hand (amongst other through land consolidation and increased differentiation of farm size), while safeguarding as much as possible access to land because of its high propensity to reduce poverty levels. Several institutional issues will be brought forward and recommendations made for land policies and institutional changes regarding: regulated and transparent forms of using transferred state reserve land by the communities (directed allocations to the poor and vulnerable peasant farm households, leasing, sales and proper management of community land, such as pastures); promotion of cooperative or associative forms of production and/or marketing; completion of the property title registration (which is in full swing at the moment); further development of land markets (and institutional capacity to manage this process); and improvement of institutional cooperation, with as main objective the strengthening of institutional capacity for (rural) policy analysis, development and implementation of rural (land and development) policies, which is currently rather weak (at central, regional and local levels). Furthermore, other sub-sectoral policies will be recommended (and prioritized) on: public investment programmes in rural infrastructure, possibly using local unemployed people (‘food for work’), especially focusing on rural roads, irrigation systems, and communication; credit policies; regional development & fiscal

decentralisation in view of the increasingly important role of the community level in public administration; development of a thriving rural non-farm economy (RNFE) as a way of complementary income generation of the rural dwellers that are now largely dependent of agriculture-based activities; human capital formation by redirecting funds in the educational systems towards small towns and rural areas; provisioning of vocational training programmes, in particular related to skill development in agricultural and non-agricultural jobs in rural or semi-urban areas. Finally, a number of scenarios will be discussed that are based on our current knowledge of the agrarian structure and the development of the Armenia agricultural sector.

## 2. REDISTRIBUTIVE AND EGALITARIAN LAND REFORM

In only a few countries of the former Soviet Union a redistributive land reform has taken place, particularly in the smallest newly independent states, namely first in the early 1990s Armenia and Georgia, partly in Kyrgyzstan, and later on in Moldova. Actually, the institutional framework for Armenia's land reform was already put in place before the Soviet Union fell apart, with the adoption of the 'Peasant and Peasant Collective Farms Law' and the 'Land Law', of February 1991. Soon after independence followed the legislation necessary for the privatization of land, and 70 percent of arable land came into the hands of individual peasant farms.<sup>6</sup>

### *Outcomes of Land Reform*

The first outcome of this reform for Armenia was the very small size of these family farms which (see Table 1), on average, was not more than 1.3-1.4 hectares (and less than 0.5 ha per rural capita). The second was that primarily arable land (with in addition most of the orchards and vineyards) was privatized, while an important part of the hayfields and all pasture land remained in the hands of the state. This meant that by the mid-1990s one third of agricultural land was privatized.<sup>7</sup> Unfortunately no disaggregated data is available, which would picture the full land structure in the direct aftermath of the land reform in the early 1990s. However, as it seems that not much changed until the first Land Balance was published (in 1997), the latter will serve us as a base line for analysis of further changes.

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<sup>6</sup> Lerman, Zvi and Astghik Mirzakhanyan (2001: 6-7).

<sup>7</sup> Hay land and pastures were mostly held by state farms during the Soviet period, with most often communal (informal) grazing rights for households. Comparable with countries such as Kyrgyzstan and Mongolia, also the Armenian government decided to keep the communal access arrangements (in combination with leasing to individual producers), and did not privatize substantial areas of this land.

Around 330,000 individual peasant farms were formed, which number seems to have remained fairly stable.

TABLE 1: NUMBER AND ACREAGE OF PEASANT FARMS (1998-2003)

	1992	1993	1996	1998	2000	2002	2003
Nr of Peasant Farms Units (x 1,000)	165.2	238.3	316.4	333.8	332.6	334.7	337.9
Land Area of Peasant Farms (x 1,000 Ha)	214.9	310.4	429.2	447.0	460.1	453.1*	461.3
Average Size Peasant Farms (Ha)	1.30	1.30	1.36	1.34	1.38	1.35	1.37
		Agric. land	Arable Land	Perennial Grass	Fallow Land	Hay Land	Pasture
Land Balance (1997) (x 1,000 Ha)		1,391.4	494.3	63.8	0.4	138.9	694.0

Source: NSS (2003a; 2004d); StatKom SNG (2002) *Ezhegodnik SNG 2001*.

Note: \*NSS (2003a) did provide another figure, namely 471.9, suggesting an increase in acreage.

Third, landownership also was extremely fragmented, as most of the recipients of land received several plots of arable land (itself divided between irrigated and non-irrigated plots), orchards, vineyards, and hay fields.

Fourth, while access to land was in principle egalitarian of nature, the standard allocation of land to members of eligible families depended on the available amount of land, and the density of the eligible population at that moment. Hence, regional differences emerged. This is clear from the Land Balance of 1997, and further data that is available for the year 2000. From the latter data (see Table 2) it can be seen that the average farm size in the *marzes* Ararat (0.64 ha) and Armavir (0.91 ha) were much smaller than in for example the *marzes* of Shirak (2.45 ha) and Syunik (3.02 ha).<sup>8</sup> This comparison still misses important variables, namely the altitude, the availability of water (irrigation) and the soil quality, but it provides some indications for the somewhat unequal endowments for peasant farms in the country, at least in terms of size. A similar conclusion can be drawn from a recent household survey (Table 3) that also shows these different averages per region, close to the data presented by the NSS for the year 2000.

<sup>8</sup> 'Private land' excludes land that is rented from other individuals or the community.

TABLE 2: LAND INVENTORY (PRIVATE AND STATE-OWNED) FOR THE YEAR 2000

	Number of farms*	Total Private Land	Average Private Land Area	Arable	Orchard	Vineyard	Hay Field	Fallow & other	Total State Land	Arable	Orchard	Vineyard	Without use	Hay Field	Pasture
Aragatzotn	37139	55969	1.51	41219	1875	2164	1705	9006	61549	12051	266	121	426	1233	47452
Ararat	52482	33728	0.64	18366	1886	3711	874	8891	31045	10697	289	316	0	1459	18284
Armavir	50332	45876	0.91	27773	2813	3782	30	11478	25020	12777	795	434	580	121	10313
Gegharkunik	46133	74578	1.62	48769	27	0	15655	10127	97847	27701	89	0	5350	6272	58435
Lori	32549	64659	1.99	33258	885	74	21483	8959	87826	9889	745	3	707	12690	63792
Kotayk	37611	45731	1.22	27060	2428	749	7734	7760	41932	9316	788	13	79	2525	29211
Shirak	28153	68858	2.45	57944	22	0	2875	8017	76014	19110	119	0	242	7819	48724
Syunik	12707	38330	3.02	30231	750	81	3806	3462	95302	12237	319	26	1216	3256	78248
Vayotz Dzor	11010	16748	1.52	10924	291	472	2814	2247	40320	4602	52	7	2016	2122	31521
Tavush	24492	29222	1.19	19470	493	1258	3524	4477	39932	7411	1006	39	107	7168	24201
Yerevan	2478	3443	1.39	198	68	127	0	3050	2970	1308	337	389	0	37	899
Within the community boundary	335086	477142	1.59	315212	11538	12418	60500	77474	599757	127099	4805	1348	10723	44702	411080
Outside the community boundary									324868	6540	44	3	0	30740	287541
Total agricultural land in Armenia		477141		315212	11538	12418	60500	77474	924625	133639	4849	1351	10723	75442	698621

Sources: NSS (2003b), *Regions of the Republic of Armenia in Figures*; and data provided by the State Cadastre Committee.

Note: \*These include 335,086 (individual) peasant farms and 10 collective peasant farms. Since 2002 the latter category is renamed into 'commercial organisations'. In 2003 there were, according the NSS, 334,789 peasant farms and 110 commercial organisations.

TABLE 3: OWNED AND LEASED LAND BY PEASANT FARMS:  
DISTRIBUTION BY REGION (2003)

(Ha)	Agricultural land in use	Of which is Owned	Of which is rented
Aragatzotn	1.79	1.73	0.07
Ararat	0.57	0.51	0.07
Armavir	1.16	1.01	0.16
Gegharkunik	1.77	1.54	0.25
Lori	2.13	1.68	0.49
Kotayk	1.58	1.53	0.05
Shirak	2.83	2.79	0.05
Syunik	2.48	2.03	0.52
Vayotz Dzor	1.34	1.21	0.14
Tavush	1.18	1.14	0.07
Total Average	1.53	1.37	0.16

Source: AST Nr. 6 (November, 2004), based on a survey of 6,000 households.

According to Table 3, individual peasant farms were leasing (again on average) small plots of land (0.18 ha), to increase the meagre average land holdings the own (1.37 ha). These data are somewhat lower than those of the World Bank-sponsored farm-survey of 1997.<sup>9</sup>

Fourth, going back to the detailed data presented in Table 2, we can note that the original land reform has only touched upon a relatively small part of the total agricultural land area of Armenia. In the year 2000 (since then there is only gradual change, as we will see in the section on land markets) 477,141 ha was private land<sup>10</sup>, while 924,625 ha was still state owned (with 599,757 ha within the boundaries of the communities, and 324,868 ha beyond these boundaries). The latter distinction is important as currently, during the period 2003-2005, state land ‘within the boundaries of the communities’ is being transferred (free of charge) to these administrative units, given them a variety of options to privatize, lease or manage them (see below). Most land that is still state-owned is pasture (75.5 percent), although arable land, and in

<sup>9</sup> See *Ibid*, pg. 16, where the authors present an average size of 2.17 ha for all surveyed farms, including 1.99 ha for owned and 0.18 ha for leased land. However, only a small share of all farms do lease in land, and for those who do, the lease land plot was on average 1.16 ha. The legislative changes implemented since 2001, which concerned the privatization of reserved lands to the vulnerable population (mostly to refugees and internally displaced persons, which was done free of charge), and the emerging land sales and lease market might explain some of these differences.

<sup>10</sup> This includes land in the form of household (‘subsidiary’) plots, estimated at around 70,000 hectares.

addition orchards and vineyards in the hands of the state, still represent 15.1 percent of the state-owned 'land fund'.

*Land as a 'Cushion' against Poverty*

The Armenian land reform has functioned as an important buffer or cushion against the impact of the negative supply shock that has struck the Armenian economy during the first years of transition. By the mid-1990s, when economic growth started to regain positive momentum, after years of extremely severe contraction, poverty had become a widespread phenomenon in the country, with urban poverty more severe than its rural counterpart. Widespread access to land, providing the capability to produce food for household consumption (or crop/animal based output to increase cash income), has definitely improved the lot of many rural dwellers.

In table 4 one can see the development of poverty (distinguishing urban and rural poverty) between 1996 and 2003. The income gap between rural and urban areas is widening, and during the past years, urban poverty is rapidly diminishing (going down from 59.8 percent in 1996 to 39.7 percent in 2003), while rural poverty remains stagnant (fluctuating around the level of 48 percent in 1996 to 47.5 percent in 2003). Even worse, as poverty is measured by using only monetary based indicators or the level of nutrition, it does not take into account the severe deterioration of social (and other public) services in rural areas (although this issue is beyond the scope of this White Paper). All together this means that the 'poverty reducing elasticity' of land ownership seems to have somewhat diminished over the years, mainly because of the weak bargaining position of peasant farmers in markets. We will see below that in the value change primary producers have been suffering price discrimination, and incomes for agricultural producers stagnated or even dropped. This has led to the perseverance of similar levels of rural poverty since the mid-1990s, while urban poverty is rapidly diminishing.

TABLE 4: RURAL AND URBAN POVERTY COMPARED (1996-2003)

	Urban Areas					Rural Areas				
	1996	1999	2001	2002	2003	1996	1999	2001	2002	2003
Total Population	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Not Poor	41.2	41.7	48.1	47.4	60.3	52.0	49.2	51.3	54.7	52.5
Poor	29.2	35.1	33.6	37.6	31.8	23.6	28.2	37.4	35.1	40.7

Extreme Poor	29.6	23.2	18.3	15.0	7.9	24.4	22.6	11.3	10.2	6.8
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*Source:* NSS (2003c), ‘Social Snapshot and Poverty in the Republic of Armenia’.

### 3. PERFORMANCE OF THE AGRICULTURAL SECTOR

Firstly, the development of agricultural employment and productivity, as Armenia passed in the 1990s through a process of ‘agrarianization’ of the economy, is quite similar to a number of other transition economies in the FSU. Secondly, the development of Gross Agricultural Output (GAO) needs to be carefully assessed, as physical indicators of output seem to reveal a better performance than in value terms. Thirdly, related to this observation, our data suggested that the domestic Terms of Trade (ToT<sub>D</sub>) actually deteriorated substantially for Armenian agriculture (measured over the period 1997-2003, for which the data is more reliable). Fourthly, there are substantial differences at regional level in a country where the geography is strikingly varied, which would point to a certain agro-ecological specialisation. However, one can also observe an increase in wheat production in the two most important agricultural regions, specifically at very small farms. While these would be more suitable for high value agricultural (HVA) agricultural production, peasant households seem to choose for food security (risk aversion) rather than profit maximization.

#### *Agricultural Employment and Productivity*

The importance of the agricultural sector in the transition to a market economy has grown substantially in Armenia. This is mainly because sectors other than agriculture largely collapsed in the early 1990s, in particular in industry. The agricultural sector henceforth absorbed a substantial volume of redundant labour, shed by other sectors. Agricultural employment increased from an estimated 389,000 workers in 1991 to 586,000 in 1996, thereafter stabilizing at a level around 565,000 during the late 1990s (StatKom SNG, 2002: 211). This process instigated a form of ‘re-peasantization’ of the economy, which can also be noted in countries such as Georgia, Moldova, Kyrgystan and Uzbekistan. As could be expected, agricultural labour productivity declined during the first half of the 1990s, with a value added per worker decreasing to a level of 69.6 percent of the 1990 level in 1995 (with the entire economy being at 58.3 percent). It continued to reduce until the year 2000 (when value added per worker stood at 52.4 percent of the 1990s level), while the entire economy was

recovering, and overall labour productivity had recovered to 86.6 percent of its original pre-transition level).<sup>11</sup>

### *Gross Agricultural Output*

Gross agricultural output (GAO), with relatively small fluctuations, shows a smaller decline during the 1990s than GDP. For example, it dropped 16.3 percent between 1991 and 1993, and in comparison with 1990 only 2.0 percent (Griffin *et al*, 2002: 55). In the late 1990s, 1998 was a good year for agriculture, but in the aftermath of the Russian crisis, another more severe dip in GAO followed (see Table 5),

TABLE 5: GROSS AGRICULTURAL OUTPUT (1998-2003)

Billion AMD	1998	1999	2000	2001	2002	2003
Total Gross Agric. Output	402.1	311.7	281.2	351.0	377.6	410.1
Plant Growing GAO	245.6	180.0	136.2	208.0	226.6	228.7
Animal Husbandry GAO	156.5	131.7	145.0	143.0	151.0	181.4

*Source:* NSS (2003a; 2004d);

*Note:* The NSS makes a differentiation between two sectors, namely ‘household plots’ (or sometimes even ‘people’s enterprises’) and commercial enterprises. The latter represents only a very tiny share of production.

The negative trend in GAO between 1998 and 2000 can only be partially explained by the trends in physical output. According to official data provided by the DSS, in this period, physical output (measured in equivalents) from the crop sector decreased by 12.6 percent, while sub-sectoral GAO decreased by 44.5 percent. Its counterpart, the animal husbandry sector increased its physical output by 17.4 percent, while the corresponding GAO dropped by 8.3 percent.<sup>12</sup> This is a clear indication that prices for primary agricultural products were decreasing in real terms and that profits were shifting towards other parts of the value chain (such as the food and agro-processing sector). On the whole agricultural output (in volume) has done relatively well during the whole period, much better than one would expect, when keeping in mind the deep economic crisis Armenia went through in the early 1990s (see Tables 6 and 7).

What is very important to note from these data, is that ‘low value, high volume’ crop output (such as is represented by wheat and potatoes), indicate an increasing

<sup>11</sup> Griffin *et al*, 2002: 85

<sup>12</sup> See StatKom SNG (2002), and Table 5.

trend throughout the 1990s and 2000s, in particular the latter. This shows the food self-sufficiency strategies of many small peasant farms. Production of ‘high value, low volume’ crop output follows a more contradictory trend. In the case of grain the expansion of output can be largely explained from a larger sown area, which expanded from 152,500 ha (1991) to 200,800 ha (2003) (NSS, 2001, 2002a, 2004d).

TABLE 6: MAIN AGRICULTURAL INDICATORS (1991-2003)

Production	1991	1995	1998	1999	2000	2001	2002	2003
Grain (x 1,000 t)	304.0	262.7	325.6	301.0	224.8	367.3	415.5	310.0
Yield (t/ha)	(2.0)	(1.5)	(1.6)	(1.7)	(1.2)	(1.8)	(2.2)	(1.5)
Potatoes (x 1,000 t)	275.2	427.7	440.0	414.1	290.3	363.8	374.3	507.5
Vegetable (x 1,000 t)	443.5	450.9	395.2	449.0	375.7	456.0	466.0	569.4
Water Melons (x 1000 t)	35.5	54.0	60.6	88.5	52.8	54.8	89.7	115.4
Fruit and Berries (x 1,000 t)	166.7	146.1	126.7	88.1	128.5	102.4	82.6	103.1
Grapes (x 1,000 t)	191.2	154.9	106.0	114.8	115.8	116.5	104.0	81.6
Meat (x 1,000 t) Slaughter weight	84.7	48.4	51.3	49.1	49.3	48.3	50.2	52.6
Milk (x 1,000 t)	412.0	428.3	447.5	456.2	452.1	465.3	489.5	513.7
Eggs (Million Pieces)	485.0	197.6	219.4	325.9	385.4	448.3	477.7	502.2
Wool (tons, physical weight)	2419	1463	1270	1311	1310	1081	1120	1180

Source: NSS (2003a; 2004d)

Note: The data for 1999 were substantially lower in NSS (2003a), than in NSS (2004d)

Grain yields have fluctuated wildly, as output is very much dependent in stable rainfall, and in its absence, of functioning irrigation systems. Low-investment crops, such as vegetables and fruits have substantially expanded in terms of output, adding cash income for the peasant farms, while high-investment crops such as grapes, have substantially suffered. Anecdotal evidence from a field visit to the Vayots Dzor *marz* in October 2004 also revealed that individual peasant farms had sometimes cut (sic!) vineyards in favour of planting wheat, because credit, inputs and outlets were ‘missing’, and hence food self-sufficiency was preferred instead. This happened also in other *marzes*, such as Ararat and Armavir.

The livestock sector in Armenia, again similar to other transition countries of the FSU, suffered a severe contraction (although much less than for example Russia and

Kazakhstan). This was particularly strong in the sub-sectors of pigs, sheep and goats, beef cattle, and poultry, although this last category has been picking up substantially throughout the first years of this decade. Interestingly enough, the herd of cows has gradually expanded (to be expected with the large number of individual peasant farms), just as the production of milk and eggs (the latter after a substantial trough in the early 1990s, when specialised large-scale livestock and poultry complexes collapsed and the centralised production of fodder practically vanished). Finally, wool production dropped to about half of its previous production level, which reflects the sudden drop in subsidized fodder provisioning.

TABLE 7: MAIN LIVESTOCK INDICATORS (1991-2003)

	1991	1995	1998♦	1999	2000	2001	2002	2003
Cattle (x 1,000 heads)	640.1	503.7	469.1	478.7	497.3	514.2	535.8	565.8
Including Cows (x1,000)	250.9	276.2	256.2	262.1	264.9	270.1	280.8	291.0
Pigs (x 1,000)	310.9	82.3	86.2	70.6	68.9	97.9	111.0	85.4
Sheep and Goats(x1,000)	1186.3	636.0	546.3	548.6	540.0	592.1	602.6	628.5
Horses (x 1,000 Heads)	6.5	12.1	12.0	11.5	11.4	12.1	12.1	12.5
Poultry (x 1,000)	9352.3	2913.6	3190.2	4255.1	3975.2	3130.3	3604.6	3830.0

Source: NSS (2003a; 2004d);

Note: ♦ Per 1 January following year.

#### *Deteriorating Domestic Terms of Trade*

Another depressing effect for agricultural incomes, in spite of the reasonable performance when looking to physical indicators, was the negative development of the domestic (agriculture *versus* industry) terms of trade. Although the data is insufficient to be able to calculate this important indicator with a solid degree of confidence, the overall trend can be clearly discerned. In particular for the period 1998-2003, with as base year 1997 (when the statistical system was substantially improved, the overall trend for the domestic terms of trade (ToT<sub>D</sub>) was negative (see Table 8). The producer price index (PPI<sub>A</sub>) for agricultural production declined between 1997 and 1999 by 19.5 percent, followed by fluctuations and an increasing trend until 2003. Overall the PPI<sub>A</sub> index in the latter year compared with 1997 was 96.7. However, the PPI<sub>I</sub> index for industrial production grew to 132.8 (compared to 1997= 100), which means a deterioration of the ToT<sub>D</sub> by -27.2 percent!

TABLE 8: PRICE INDICES (CPI AND SECTORAL PPIs)

Dec.-Dec. % of previous year	1998	1999	2000	2001	2002	2003	2003 /1997(*)
Consumer Price Index	98.7	102.0	100.4	102.9	102.0	108.6	115.2
PPI Agricultural production	87.4	92.1	101.1	106.9	97.4	114.1	96.7
PPI Industrial Production	108.2	103.8	100.4	96.4	100.9	121.1	132.8
Domestic Terms of Trade (compared to 1997)	-19.2%	-28.3%	-27.8%	-20.0%	-22.7%	-27.2%	

Source: NSS (2002b; 2003a)

Note: The Domestic Terms of Trade between Agriculture and Industry have worsened during the period 1997-2003 by 27.2%, going down to the level of 1999-2000, after some recovery in 2001-2002.

Although there was a small relative improvement of the  $ToT_D$ , during the years 2000 and 2001, the overall trend between 1997 and 2003 is a strongly negative one. One explanatory factor is that while Armenia became a relatively open economy during the 1990s, the trade blockade at its borders with Turkey and Azerbaijan, and the continuous internal upheavals in neighbouring Georgia, made Armenia *de-facto* land-locked. Surplus production could therefore most often not be sold externally, depressing domestic prices of agricultural products (Griffin *et al*, 2002). However, there are also other important factors that are negatively influencing the  $ToT_D$ , namely the insufficient bargaining power (towards traders and processors) of large numbers of unorganised and individually operating peasant farmers; insufficient access to finance; and poor infrastructure (including storage facilities).

While volume trends for agricultural production during the same period were substantially positive (see tables 6 and 7), with the above analysed negative relative price development (depressing farm gate prices in relative sometimes even in absolute terms) the impact on agricultural incomes was negative.

#### *Output Specialization and Farm Size*

As stated in the introduction, Armenian agriculture shows very specific regional differences, that reflect natural endowments (the Ararat valley versus pre-mountain and

#### Box 1: Visit to Sayat-Nova community, Masis (Ararat)

The fragmentation of land in the village is extreme, as most peasant farms have only one plot of between 2,000-5,000 m<sup>2</sup>. At the moment most people produce wheat on their land plots, which is very inefficient in terms of GAO and also bad for the soil quality, as for over 10 years it is only this crop what is grown here. An official of the community administration explained that no trust existed between peasants and in public institutions, but the only alternative would be the formation of some form of cooperative or associative institutions, in order to overcome the current agricultural stagnation and near-subsistence production. (*Field notes Armenia, October 2004*)

mountainous areas); land allocation during the land reform (available land in combination with population density, causing the individual peasant farms in Ararat and Armavir to be relatively small); and crop/livestock specialisation. In Table 9 the estimated GAO per *marz* is given, which clearly shows a much higher GAO/ha for Ararat and Armavir, followed (at quite some distance) by Lori, Kotayk and Vayots Dzor.

TABLE 9: GAO PER MARZ (1999-2002), PER HA

(1,000 Dram/ha)	1999	2000	2001	2002
Aragatzotn	489.7	310.8	422.7	503.1
Ararat	1271.4	1251.0	1289.4	1445.7
Armavir	1246.1	1117.5	1262.6	1208.1
Gegharkunik	477.6	445.8	563.1	630.6
Lori	690.3	630.9	786.5	857.1
Kotayk	570.8	538.2	678.5	761.1
Shirak	432.9	343.2	428.8	472.5
Syunik	441.4	540.9	677.0	640.8
Vayotz Dzor	427.0	417.8	669.8	745.5
Tavush	541.7	424.9	724.9	689.5

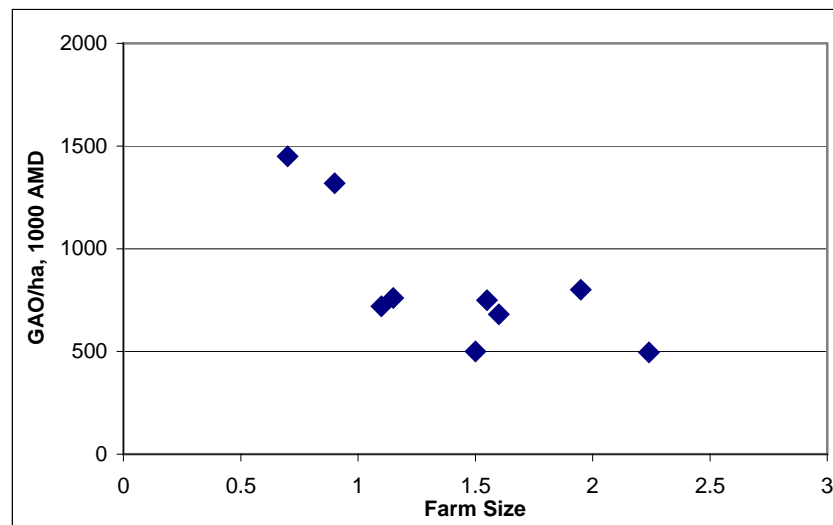
Source: NSS (2003b), *Regions of the Republic of Armenia in Figures, 1998-2002*, p.30

From the data on physical output this can be simply explained by the fact that the first two *marzes* produce a large part of vegetables, fruits and grapes, while other regions produces more grain, potatoes (representing a lower value of output/ha), or are specialised in livestock production.<sup>13</sup> However, as mentioned before, there is also a problematic tendency in the most important (in terms of GAO) agricultural *marzes* to diminish the acreage of vineyards, while the grain area (for food security reasons) has increased at the same time (see Box 1). If we compare the data of Table 9 (GAO/Hectare) with the average size of farms that was given in Table 2 (for the year 2000), we can see that there is a clear inverse relationship between the two variables (see Figure 1). Even so, these data combined with data on regional averages of farms

<sup>13</sup> See NSS (2003b), *Regions of the Republic of Armenia in Figures, 1998-2002*, pp. 31-33

indicate that the initial unequal distribution of land indeed has produced differences in production of GAO, not compensated for by crop/livestock specialization.

FIGURE 1: GROSS AGRICULTURAL OUTPUT VERSUS FARM SIZE



However, from the above discussion it remains unclear whether a more efficient and high-value producing farm sector is emerging in which individual farms tend to own more land (see further discussion below on this topic, when we will look in detail to an emerging change in the distribution of land in Armenia).

#### 4. EMERGING LAND SALES AND LEASE MARKETS

In the early 1990s an agrarian structure was created, with a large number of small peasant farms that own privately most of the arable land, orchards and vineyards, and part of the hayfields, while all pasture land remained state-owned. Land was managed under formal, informal and customary arrangements, and only by the late 1990s, land markets for the sale and lease of land emerged in Armenia. As generally is the case in agricultural land markets, there are ‘push’ and ‘pull’ factors that provoke transactions in land.<sup>14</sup> The ‘push’ factor for particularly land sales is obviously the emergence of rural poverty and destitution. Poor families might in the end be forced to migrate to urban areas or even abroad, and therefore have to sell their land in a form of ‘distress sale’. According to Armenian tradition this is indeed the last step of uprooting, as the sale of land really means cutting the umbilical cord with the place of birth or

<sup>14</sup> In the Armenian legislation ‘land alienation’ is generally used, rather than transaction. Alienation includes the sale, inheritance, or donation of land, and excludes leasing. Land transactions also include leasing and mortgaging of land.

traditional residence. In the leasing of land, such as can also be seen in an emerging lease market of agricultural land in the Republic of Moldova, the ‘push’ factor might be the fact that no capacity exist to cultivate the land (such as within the growing group of pensioners), the cash income is needed, and other opportunities for rural labour are better remunerated than working the land. The ‘pull’ factor for the sale of land (or in this case, the buying), is firstly represented by those neighbouring peasant farms that do well, and want to expand the size of their farm. Secondly, agro-industry (in case of wine/cognac production, or fruit and vegetable canning/processing) is trying to integrate vertically, in order to be able to guarantee sufficient quality and quantity of supplied raw materials and therefore invest in land (and infrastructure). Finally, land purchase can also be ‘pulled’ by capital groups or rich individuals who wish to speculate with agricultural land (which is expected to have a higher value in the future), while only having to pay low land taxes. All the above ‘push’ and ‘pull’ factors seem to be valid for the emerging land sales and lease markets in Armenia. As can be seen from Table 12, the official data provided by the State Cadastre Committee show the development of formal agricultural land sales and land lease markets in Armenia. From a level of only 268 land sales transactions in 1998, the land market developed relatively quickly, showing a total of 3,312 land sale transactions in 2003. The (officially registered) leasing of land had a strong growth since 2000.

TABLE 10: THE AGRICULTURAL LAND MARKET IN ARMENIA (1998-2004)

Agric. Land Alienation (Nr) ♦	1998	1999	2000	2001	2002	2003	Total
Aragatzotn	29	51	80	78	250	379	867
Ararat	132	272	364	618	675	950	3011
Armavir	42	141	318	270	341	588	1700
Gegharkunik	37	12	8	17	63	216	353
Lori	3	29	23	45	73	181	354
Kotayk	10	121	118	131	327	559	1266
Shirak	10	32	47	69	171	282	611
Syunik	2	0	2	14	15	66	99
Vayotz Dzor	1	11	48	16	12	64	152
Tavush	2	7	15	29	6	27	86
Total Number	268	676	1023	1287	1933	3312	
Total Nor of Land Lease Transactions	..	127	103	4355	3915	2110	

Source: State Cadastre Committee, *Real Property Market in 1998-2003*.

Note: ♦Alienation’ means sales, donations, and inheritance.

Land lease transactions numbered only 103 in that year, while in the following years their numbers grew to respectively 4,355 (2001) and 3,915 (2002)! Interestingly

enough, in the following year the registered number of leasing transactions reduced again substantially, without knowing the exact reason. However, it might well be that many lease operations are done without formal registration, avoiding substantial transaction costs.<sup>15</sup> Regional differences are fairly large, with the *marzes* of Ararat, Armavir and Kotayk representing 70.3 percent of all sales of agricultural land.

TABLE 11: LAND SALES OF PRIVATE AND STATE LAND (2003, F.H. 2004)

	2003				2004 First Half			
	State Land		Private Land		State Land		Private Land	
	Nr	Ha	Nr	Ha	Nr	Ha	Nr	Ha
Aragatzotn	72	69.7	301	197.2	7	49.3	226	131.8
Ararat	12	47.5	903	298.5	190	412.9	543	204.7
Armavir	0	0.0	581	630.8	7	225.8	353	326.3
Gegharkunik	23	160.8	192	326.6	0	0.0	27	26.2
Lori	0	0.0	164	136.2	0	0.0	101	82.2
Kotayk	37	17.2	508	192.2	50	101.4	648	245.4
Shirak	0	0.0	280	295.0	0	0.0	139	132.3
Syunik	1	1.0	48	37.2	1	0.1	32	35.2
Vayotz Dzor	0	0.0	57	50.3	5	25.2	35	9.1
Tavush	0	0.0	23	11.2	1	1.2	41	38.5
Total	145	296.2	3057	2175.2	261	815.9	2145	1231.7

*Source:* State Cadastre Committee (2003), 'Agricultural Land Market in 2003'; Ibid (2004), 'Agricultural Land Market in the First Half of 2004'.

Although there are slight discrepancies in the data, in comparison with the previous table, Table 11 provides insights in the amount of agricultural land that has been transferred in terms of sales. For 2003, this was 296.2 hectares of land in 145 transactions (which is 2.0 ha on average) of state land to private owners, and 2,175 hectares of land in 3,057 transactions between private landowners (0.7 ha on average). This is most likely because the former are pastures, and the latter is largely arable land. In the first half of 2004, the first category grew to 815.9 hectares of land in 261 transactions (increasing the average), and the latter to 1,232 hectares in 2,145 transactions (lowering it compared to 2003). These data indicate a rapid growth in sales transactions, albeit starting from a near-zero level, but the total area of agricultural land subject of sales in the past 6 years, has been less than 2 percent of privately owned land in Armenia. This means that the land sales market is still nearly non-existing or 'missing', at least the formal market. There is some anecdotal evidence that informal land renting, in view of migration to urban areas and abroad,

<sup>15</sup> Although registration costs are low (USD 5 Dollar), red tape and therefore time investment are substantial. Furthermore, peasants want to avoid the 10 percent of income tax on rental income.

has become more popular, leading to a slightly higher degree of land concentration than before. Finally, the land sales market is expected to expand rapidly (with larger areas of agricultural land to be sold or leased), in particular because the government is pushing forward the process of (first) property title registration. At this moment this registration has started or even has been completed in 778 of the 929 communities, and it expected to be completed by the end of the year 2005.

#### *Land concentration?*

There is an emerging diversity in the size of Armenian farms. This differentiation in landholdings is mostly caused by renting (leasing) land in (or out), as there are quite some small farmer's household who do not have the capital, or even knowledge to farm, and have been pushed in off-farm employment. Although no hard data exists, this explanation is more likely, than that land concentration is emerging through purchasing and selling. Even in terms of formal data on land distribution (ownership titles and formally leased land) there is a serious data problem. The State Cadastre Committee gathers this type of data at a disaggregate level in the regional and sub-regional offices, but no nation-wide land distribution is (as yet) available.<sup>16</sup> At the moment it is working at an updated Land Balance, which will be published in 2005 (the last one is from 1997). Therefore, in this White Paper we reverted to a recent survey data produced for the publication *Armenian Social Trends* (Nr. 6, November 2004), which is based on a survey that includes 6,000 households.

**TABLE 12: LAND DISTRIBUTION AND CONCENTRATION  
BY REGION (2003)**

%\ (Ha)	<0.0-1.0	<1.0-3.0]	>3.0	Average Farm Size (1)	Average Farm Size (2)
Shirak	22.3	41.4	36.3	2.83	2.28
Syunik	36.4	37.2	26.4	2.48	2.87
Lori	42.6	28.3	29.1	2.13	1.72
Aragatzotn	44.0	40.0	16.0	1.79	1.26
Gegharkunik	49.0	36.1	14.9	1.77	1.42
Tavush	50.5	46.0	3.5	1.18	1.01
Armavir	52.4	43.7	3.9	1.16	0.68
Kotayk	54.6	25.4	20.0	1.58	1.03

<sup>16</sup> As we will present later in this report, on special request of the mission, the State Cadastre Committee produced a special set of data, with 20 communities, on their land distribution and operations on the land market. This effort is highly appreciated.

Vayots Dzor	62.3	24.9	12.8	1.34	1.18
Ararat	82.8	16.3	0.9	0.57	0.48

Source: AST, No. 6 (2004).

Note: (1) AST (2004) Survey; (2) NSS 1997 Land Balance (Owned Land)

In Table 12, these data (in accumulated form) are being presented, using categories of landholdings with intervals of <0.0-1.0], <1.0-3.0], and >3.0 hectares, and comparing the ranking of the survey-based regional average of landholdings and the one which was produced for the 1997 Land Balance (of the State Cadastre Committee). At a slightly more disaggregated level the original survey measured land distribution within the following categories: <0.0-0.5], <0.5-1.0], <1.0-2.0], <2.0-3.0], <3.0-5.0], <5.0-10.0] and >10.0 hectares (Figure 2). For example, in Shirak 4.5 percent of the farms was larger than 10 hectares, while in Lori and Syunik this was 2.1 percent.

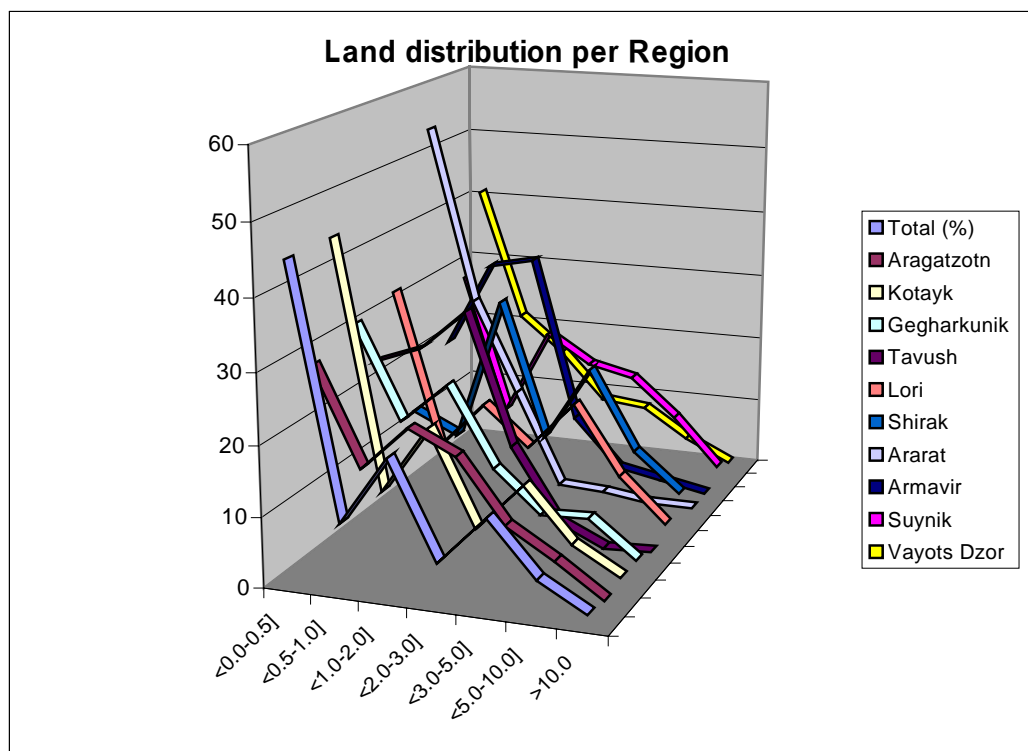
**Box 2:**

- **Entrepreneurial Farmers:** They have sufficient capital, own machinery, processing equipment; they rent out equipment and often produce seeds; rent in land (15-500 ha); have livestock (5-50 heads of cattle); hire workers; and have good access to credit and market outlets; they sell >50% of output.
- **Subsistence Farmers:** They have limited capital, little or no own machinery. They have their own land (1.5-5 ha), do not rent in other land, but rent out or leave it fallow. They have limited access to credit and markets; sell around 20-50% of output.
- **Vulnerable Farmers:** They have no capital, and often no working capital. They rent out land, leave their land fallow, or are landless. They have no access to credit, and limited market access. They sell/barter <20% of farm produce, and are involved in mostly off-farm activities.

There is, however, some anecdotal evidence that much larger farms are being formed through informal leasing arrangements. In the above mentioned *Marz* of Syunik, for example a recent field study found entrepreneurial farmers, cultivating between 15 and 500 (sic!) hectares of mostly rented land (ICRA, 2004: 42). This study introduced a farm household typology which is possibly useful for the *marzes* that are outside the Ararat valley, distinguishing between entrepreneurial, subsistence and vulnerable farm households (see Box 2). However, this is a very crude differentiation, unfit for other *marzes* such as Ararat, Kotayk and Vayots Dzor, which show large numbers of very small farms. It is likely that the latter category also presents substantial differentiation, which is not measured through the degree of land concentration, but through the involvement in remunerative off-farm employment or business activities. Nevertheless, the proposed farm household typology does help to

understand the emerging differentiation that is taking place in rural areas in Armenia.<sup>17</sup> Figure 2 presents the non-accumulated survey data of the AST graphically in order to visualise the degree of fragmentation of agricultural land in Armenia.

FIGURE 2



When sorting the data according to the number of farms in the first (*minifundio*) category of between 0 and 1 hectares, the survey results tell us that (in ascending order), the following *marzes* have more than 50 percent of their peasant farms in this category: Tavush, Armavir, Kotayk, Vayots Dzor and Ararat. The latter is a (well-known) extreme case of land fragmentation, namely 82.8 percent of the peasant farms are smaller than 1 hectare (Table 12), and 54.2 percent of the farms are even smaller than 0.5 hectare (*Armenian Social Trends*, 2004, Nr. 6; see also Figure 2)<sup>18</sup>. If we combine this particular order of *marzes* with the average size of the peasant farms, it is clear that the order is the inverse one (with only small exceptions in the ranking), as the smaller share of very small peasant farms will also produce a higher overall farm size at *marz* level. However, returning to the discussion on land markets, it seems that this differentiation has been initially caused by the original unequal (state-led)

<sup>17</sup> Lerman and Mirzakhanyan (2001) distinguish between sellers and non-sellers, in which probably the last category would include the 'vulnerable farm households'.

<sup>18</sup> From Figure 2 it can be noted that the *marzes* of Ararat, Kotayk and Vayots Dzor, have the largest share of very small peasant farms (<0.0-0.5] hectares).

distribution of land. To a lesser extent this can be explained by the follow-up process of (market-led) land concentration, although the data on the informal land rental market is lacking, which –if available– could highlight its importance in the changing agrarian structure.

Completing the current process of property title registration will certainly lead to more sales/purchases of land and a gradual concentration of land in the hands of more dynamic farms. The extremely small peasant farms will have great difficulties to be competitive in an open economy as Armenia is at the moment, but land for them will remain the main source of income, and a continued ‘cushion’ against worsening poverty. The future size of farms is of course completely depending on the type of crop-mix, the available technology and the capital/labour ratio. Land concentration should furthermore not be confused with land consolidation, which is the process of interchange (through purchasing and selling, barter and the use of public compensation funds) of fragmented plots of land belonging to one peasant farm, with as objective to diminish transportation costs, and taking away technological bottlenecks, such as not being able to work the land with machinery. This need is still fairly urgent in the Armenian agricultural economy, as most owners have on average three plots of land, which are mostly quite distant from each other. The plots are (especially in the Ararat valley) are often of awkward size, such as 5-10 meters wide and 1,000 meters in length.<sup>19</sup> The government, through the State Cadastre Committee (SCC) through its Land Use Planning Institute (*Giprozem*), has developed a pilot project for land consolidation in 8 communities in the *marzes* of Ararat, Armavir and Kotayk.<sup>20</sup> Furthermore, one of the most recent initiatives is a pilot project financed by the FAO, which focuses on land consolidation and improved land management schemes.<sup>21</sup> Unfortunately, this project is incorrectly portrayed as a project that would force peasants to sell, and in the interest of land concentration. This shows how politically and socially sensitive land consolidation is. The government has also made some steps towards avoiding further fragmentation of land, by prohibiting the division of land in case of inheritance.

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<sup>19</sup> Interview with an official of an Armenian agrarian NGO, 8 October 2004, Yerevan.

<sup>20</sup> CFOA (2003), ‘Armenia Country Paper: Land Policy’. Paper prepared for the South Caucasus Regional Land Policy Conference in Tbilisi, February 22-26, 2003. *Source:* [http://www.aplr.org/conference/en/country\\_papers/countrypaper\\_armenia\\_eng.htm](http://www.aplr.org/conference/en/country_papers/countrypaper_armenia_eng.htm)

<sup>21</sup> FAO project (TCP/ARM/3004), to be executed during the period 2004-2006, with as counterpart the State Cadastre Committee.

## 5. LAND TRANSFER: A NEW PHASE (OR WAVE) OF LAND REFORM

It is crucial to note, as part and parcel of an analysis of land policies in Armenia, that there is a new institutional transformation underway in terms of property rights of land, involving a large-scale transfer of state-owned land to the jurisdiction of the communities. This transfer will also mean that these communities will have discretion to dispose of the land as they please, to sell it, to lease it, or to manage it (or even establish systems of communal ‘use rights’). The impact of this fundamental change in the property right system of land might well be deeper than it seems at the surface. Going back to the detailed Table 2, a total of 599,757 hectares of agricultural land (with as main categories 127,099 hectares of arable land and 411,080 hectares of pastures), i.e. all state-owned land that is within the boundaries of the communities, will be transferred in the period 2003-2005 to the communities themselves. Before this transfer, this land could be (and was also) used by and leased to individual peasant farms.<sup>22</sup> The rent and the taxes paid, had to be transferred to the central authorities, and could not be retained by the local administration, although they were already very short in revenues. The current transfer within the realm of ‘public ownership’ means that fiscal and other revenues (such as from renting and sales) from land that is legally controlled by local administrations, will be fully retained by them, and these proceeds can be used at that level. The State Cadastre Committee would like to see the proceeds being earmarked for expenditure needed for land development and area management plans, which are now occasionally financed by the central level, while other parts of the government voice different ideas for the use of this income. No specific rulings seem to have been developed for this purpose, although central government direction and guidance of this crucial process is badly needed.

It is clear that there will be a strong incentive provided to the community administration to sell land, as the revenue can be retained. This might well be contrary to other priorities, namely to search for improved institutional arrangements of land management at local level, in particular when it concerns communal pastures. The land transfer program should be used in order to strengthen the weak position of the extremely small peasant farms, as a primary tool of pro-poor land policies. Furthermore, the communal pastures –in case of their privatization– would provide

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<sup>22</sup> In some cases, it seems even that land which was leased for very long periods of time, was included (in a sense illegally) in the most recent formal land titling process.

only limited access for many peasant households who will have not gained private ownership, leading to rapidly increasing inequality of access to such important rural resources as grazing grounds and water resources. Interestingly enough this issue was already raised in the World Bank survey of 1998. As Lerman and Mirzakhanyan (2001: 31) stated:

Farmers express an overwhelmingly negative opinion of the privatization of pastures: 74 percent of respondents are opposed and only 9 percent support the suggestion.

**TABLE 13: LAND TRANSFER PROGRAM (2003-2005) FROM THE STATE RESERVE FUND, COMPLETED IN 309 RURAL COMMUNITIES (09/2004)**

Ha	Total Agric. Land	Private	Community	State	Other
Aragatzotn	69,801.3	18,682.6	48,874.7	2,244.0	0.0
Ararat	56,448.6	21,900.8	32,030.5	2,388.9	128.4
Armavir	81,874.8	35,348.0	43,194.2	3,332.6	0.0
Gegharkunik	46,345.0	18,523.1	26,706.3	1,115.6	0.0
Lori	42,596.3	9,887.8	22,377.6	10,331.4	0.0
Kotayk	32,454.8	10,689.8	18,797.1	2,961.1	6.9
Shirak	82,186.6	32,243.3	43,444.0	6,478.8	20.5
Syunik	74,646.9	15,660.2	53,473.1	5,513.5	0.0
Vayotz Dzor	-	-	-	-	-
Tavush	-	-	-	-	-
<b>Total</b>	<b>486,354.3</b>	<b>162,935.6</b>	<b>288,897.5</b>	<b>34,365.9</b>	<b>155.8</b>

*Source:* Data provided by the State Cadastre Committee.

*Note:* The category 'private land' has been the outcome of the land reform of the early 1990s. 'State land' will remain as such, at this is 'outside the boundaries of the communities'.

In Table 13 the current state of this land transfer programme is shown. By October 2004 it had been completed in 309 of the total 929 (urban and rural) communities, including a total amount of 288,898 hectares of land being transferred from the state to the jurisdiction of the community. Only a small share of this land has actually been privatized through land markets, as was shown in the previous section.

This observation will also be confirmed when we analyse detailed local data from a sample of 20 rural communities which was provided by the SCC in November 2004 (see footnote 10, and Annex I).<sup>23</sup> There were only incidental sales in this sample between 2001 and 2004, some of them representing very tiny plots (that look more like household or *dacha* plots), and some larger ones (such as one case with only one transaction of 38 hectares).<sup>24</sup> The problem is not that the situation has changed

<sup>23</sup> It is not known on what methodological basis these communities were chosen by the SCC.

<sup>24</sup> A recent government decree establishes a ceiling for community land that can be alienated at 20 has.

dramatically, but that neither clear regulations, nor transparency (in terms of access to auctions and other instruments of sales or leasing practices) exist, which might well lead to undesired practices of land concentration or speculation with this very scarce resource. From the detailed data provided for these 20 communities (2 for each *Marz*), which can only be used to provide some trends and indications, and in no way should be generalised for the whole country, we can see a few other important variables. Communities only (or still) own, 17.9 percent of total arable land within their boundaries. In some communities all arable land is irrigated, in some none, while on average (although this ‘mean’ does not mean much) around one third of arable land is irrigated (see Annex I). Pasture land, which is most of the land to be transferred to the communities –in the sample– is around 58 percent of total land (while total pastures in Armenia is around 50 percent of agricultural land, see Table 2).

The land transfer program, which indeed can be considered as the second stage (or wave) of the original land reform, can have a important impact on the Armenia agrarian structure in the immediate future, especially if clearly defined land policies are in place (and also if they are not). Moreover, this new stage (or wave) of land reform should be used to provide allocations of scarce land (finance by mixed public/private funds and even loans) to those poor households that for the moment badly need land for their basic survival (primarily food), in view of a rural non-farm economy in Armenia that is still poorly developed (Bezemer and Davis, 2003), and urban jobs are in short supply. It is also a crucial moment in time to promote more actively different associative and cooperative forms of labour exchange in production, joint marketing of output and purchasing of inputs (i.e. the so-called ‘single purpose cooperatives’). Important bottlenecks for land policy are furthermore, the management of communal pastures, the land consolidation of already established peasant farms (resolving existing extreme fragmentation), and the development of locally managed sustainable land management plans (such have been developed on an experimental base by the SCC), which will improve the possibility to modernize agricultural production.

## 6. RURAL MARKETS ‘BEYOND LAND’

After more than a decade of transition, any visitor of Armenia would be impressed by the relative wealth encountered in the city centre of Yerevan. However, when he or she would take the trouble to travel only a short distance beyond the borders of the

capital, this impression would be suddenly replaced by the observation of an amazing gap between the ‘rest of the country’, in particular the more remote rural areas, and the capital. This enormous gap can be seen in quality of the standard of living, infrastructure, and quality of services. Particularly in areas that have been struck by the earthquake of 1988 (the north-west), and those who have absorbed large quantities of Armenian refugees, originating in the conflict around Nagorno-Karabakh, have high indices of poverty and destitution (World Bank, 2002). Rural poverty used to be lower than urban poverty, and access to land has been important in the explanation of this phenomenon. However, as was shown above, rural poverty in 2003 has surpassed its urban counterpart, stagnating at a level similar to 1996 (Table 4). While access to land is still widespread in rural Armenia, amongst farm households, the poor and extreme poor are those who own very little land, or the landless. It can be shown (for example in the *marz* Ararat) that a small addition to the private landholding substantially reduces the poverty risk. Nevertheless, for peasant farm households land is important, but not only land. This would indicate that (the lack of) across-the-board development of rural areas (including the small towns) has become the real Achilles’ heel of the Armenian transition, in its quest for sustainable (and equitable) development strategy. The current growth pattern is clearly ‘*urban-b(i)ased*’, and the fruits of growth equally so. Furthermore, because of the current fragmentation of markets, it also seems that in the domestic value chains (and their interconnection with external markets), the primary agricultural producers are the ones left with the smallest share of benefit, squeezed by price scissors, and with insufficient access to financial resources (such as credit), inputs & technology, and output market outlets. Therefore, in this section we will analyse some of these markets (and corresponding institutions) ‘beyond land’, in order to properly frame land policies in the broader rural development context of Armenia. The most important of these are: irrigation, credit, farm services and output markets, while one of the cross-cutting bottlenecks is the problematic state of rural infrastructure (such as roads, communication).

#### *Irrigation: the ‘Kingpin’ of Agricultural Development*

Irrigation is without any doubt the most important aspect of agricultural (crop-based) production in Armenia. However, as the data is rather weak around the precise state of the deteriorating irrigation systems, it is also quite difficult to judge the current needs. The Armenian government has given substantial priority to the

rehabilitation of the irrigation systems for arable land, as is shown by its application for the Millennium Challenge Account programme, financed by the USA government (for which Armenia was selected), that included substantial plans to invest in irrigation infrastructure.

Reliable data on what is the current state of the irrigation system in Armenia is hard to get. In their 1998 household survey Lerman and Mirzakhanyan (2001) found that only an estimated 18 percent of all agricultural land was irrigated. This would correspond with 252,000 ha. The FAO (in its FAOSTAT data base) presents a near constant level of irrigated land of around 283,000 ha. The latter is hard to believe, as in most of the FSU there was a rapid process of deterioration of these large-scale, energy-intensive irrigation systems.<sup>25</sup> We therefore assume that the current irrigated acreage is substantially smaller. This is confirmed by micro-data in the most recent household survey of UNDP (AST, Nr 6, November, 2004). In total 44.2 of the households indicated that they did not utilize, partially or totally, their owned and rented land.<sup>26</sup> The most important reason was ‘no irrigation or limited irrigation’ (26.3 percent of the farm households). Another 14.3 percent stated that it was bad quality land that was the main factor for this decision. On the other hand, the same household survey data tell us that 28.6 percent of agricultural land was irrigated, and that this was even substantially less than last year. In spite of these contradictory indications, it is clear that irrigation is a crucial issue in (successful) agricultural production, and substantial investments are needed, hand in hand with institutional changes regarding subsidies for, rights to and pricing of water.<sup>27</sup>

#### *Rural Financial Markets and Access to Credit*

Lack of financial means is the second major factor that prevents farm households to use all their agricultural land. According to the recent UNDP household survey, in total 20.7 percent indicated that they had ‘no [financial] means for cultivation’, and therefore left fallow part or all of their land, or rented it out. The access to financial services for the majority of small peasant farms in Armenia (and in many other

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<sup>25</sup> The draft ‘Agricultural Sustainable Development Strategy’ document published by the Ministry of Agriculture of the Republic of Armenia (MOA, 2004: 5) states that of the 274,000 hectares of potentially irrigated acreage, only between 200,000 and 210,000 hectares were actually irrigated.

<sup>26</sup> MOA (2004:11) notes that in 2001 a total of 35.9 percent of arable land was not used for cultivation.

<sup>27</sup> ‘If land is not irrigated, it does not make sense to add it to your property. The land value of an irrigated versus a non-irrigated plot of land has a ratio of 10:1’. Interview with an official of the SCC (12 October 2004).

countries) is quite problematic. A large part of state financial institutions have been dismantled, and most (new) commercial banks do not lend to the agricultural sector, except to those farms that are sufficiently large, and integrated into the (HVA) value chain. The only bank that is having a serious share in lending to the agricultural sector is the ACBA Bank, which in 2003 claimed to have 61 percent of the total commercial bank portfolio in agriculture. This seems much, but as the overall level is problematically low, it is no surprise that in 2003 (ACBA, 2004:14) the agricultural loan portfolio was only 8.8 million USD (or just above 1 percent of GAO of that same year). Some progress has been made in terms of micro-credit, as in total 596 agricultural cooperative village associations have been set up, which have a total of 20,491 members. However, all in all, credit remains a crucial bottleneck (and equally so the absence of regionally present financial institutions that combined the savings and credit function in one), and if compared with countries such as Kyrgyzstan and Moldova, much more can be accomplished in establishing savings and credit associations. Finally, also relating to finance, in Armenia there is still quite some insecurity with peasant producers, what kind of tax regime will be introduced in order to comply with Armenia's obligations under the WTO agreement on agriculture. A timely resolution of this problem, for example by the implementation of a comprehensive lump sum tax below a certain ceiling of turnover (avoiding complicated VAT payments and administration for small-scale producers) will be very helpful in this respect.

### *Inputs & Technology*

With the collapse of the planned economic system, the re-distributive land reform, and the formation of a large number of small-scale peasant farms, the declining purchasing power and the alignment of (all imported) input and machinery prices, the use of the latter reduced dramatically. Although there seems to be a slight recovery of input use in the past few years, in the 1990s, only limited amounts of nitrogen fertilizers were used, while others were practically abandoned, being too expensive. According to the FAO (FAOSTAT, 2004), the volume of N-fertilizer consumed in Armenian agriculture, went down from 25,000 tons in 1992 to even 5,000 in 2001, only to grow again to a level of 8,200 tons in 2002. This is comparable with many other countries in the FSU, where most often the fertilizer use dropped to levels of 10-

20 percent of the Soviet era.<sup>28</sup> Although in many cases there had been over (and mis)-use of fertilizers, the extreme drop now causes land quality to degrade.<sup>29</sup> Most trade in inputs is being executed by private traders, sometimes operating as commissioners of international companies active in Armenia. Prices are relatively high (see previous discussion of the ToT<sub>D</sub>), and as credit is most often unavailable (even for working capital), the intensity of input use is low (with negative consequences for yields). Machinery services suffer a similar problem as elsewhere in the FSU, as the deterioration of the stock (of tractors, harvesters etc.) is enormous, many machines have passed their useful life-span, and there are no funds to buy new machinery.<sup>30</sup> Better-off farmers, who had (or bought) machinery, currently rent out machinery services to neighbouring peasant farms. Still, the problem of land fragmentation prohibits most often these machines, as the plots are scattered (or even of a form or geography that makes it difficult to operate machines on them).

#### *Output Markets for Agricultural Produce*

Output markets are a difficult ballgame for small peasant farms. Firstly, they produce directly for the open market, hence not using any form of supply contracts with agro-industry (except for some canning and wineries). Producers bring their produce to the market as soon as they harvest, and many with them do the same, depressing local market and farm gate prices. Secondly, there are few (mostly donor-supported marketing cooperatives that improve bargaining power of the peasant farmers). They are badly needed (such as the already mentioned labour exchange groups, and 'single purpose cooperatives' for marketing of output of purchasing of inputs). Thirdly, in Armenia the main market is Yerevan, in the absence of sufficiently important regional wholesale markets. Distances are substantial, especially if one takes into account the dreadful state of roads in many of the more remote areas of the country. Intermediaries are often behaving in non-competitive ways, operating with high marketing margins. Finally, the country is not only physically landlocked, but with the trade blockade imposed by its neighbours Turkey

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<sup>28</sup> MOA (2004:5) notes that '...in the last decade, the use of mineral fertilizers was reduced by 10 times, organic –by 18 times and plant protection means– by 10 times' (sic!)

<sup>29</sup> In many conversations the issue of producing ecological products was discussed, sometimes suggesting that not using fertilizers and pesticides is enough. The fact that this niche market needs substantial investments in certification, packaging, and advertising was most often ignored.

<sup>30</sup> MOA (2004: 5): '...93 percent of present agricultural machinery and equipment is worn out'.

and Azerbaijan, and the complications of trade through Georgia (which might improve in the near future, in order to be able to penetrate the Russian market), export possibilities are limited. This causes domestic prices to be lowered, as domestic demand is limited (and cross-regional trade as well). It is therefore not surprising that selling of agricultural produce does not provide a large share of income for peasant farms, and many small farmers are part-time agricultural producers, forced to find other employment in the rural non-farm economy, temporarily migrate to urban areas or even migrate, in order to complement their meagre household incomes by other earnings or remittances from migrant workers.

## 7. PRO-POOR LAND (AND RURAL DEVELOPMENT) POLICIES

Up to this point we have been able to show a number of critical phenomena related to agricultural land in Armenia. Firstly, land concentration seems to emerge, although it is very difficult to judge how rapid this is proceeding. According to cadastral data this is not even the case, but informal rental markets might well escape the eye of official measurement, and anecdotal evidence suggests that the ‘push’ factor in renting out land (namely poverty, insufficient land, and absence of capital to work the land productively) is very important. The completion of the (formal) property title registration will contribute to a better working of land markets and hence, to a further ‘natural’ process of land concentration, and economically more viable farms. In the medium and long-run, this is certainly the scenario that will be relevant for Armenia, but in the short-run, it might simply lead to more poverty and destitution, when land is rapidly concentrated in the hands of a few powerful buyers, without the expected investment drive that would be needed to modernize (and capitalize) the agricultural sector, or to the detriment of many small land ownership who will become poorer than they already are.

Secondly, the current second stage (or wave) of land reform, which includes the massive transfer of the remaining arable land, hayfields and most of the pastures, to the jurisdiction of the communities, is much more important than seeing it as merely an administrative operation. Community administrations, which have substantial independence in terms of ‘local governance’, will have the possibility to privatise, rent or manage land resources. Therefore, they would be capable to use these scarce land resources as an important tool for safeguarding (and improving) the livelihood of vulnerable farm households, who would benefit substantially from small allocations

of land, rather than promoting the sales of land to individual (more ‘entrepreneurial’) farmers. The first (preferred) option will need central finance, while the second is attractive to local authorities, as it will bring in badly needed revenue. Thirdly, land policies cannot be seen in isolation, and actually land is not important in Armenia, if it is not irrigated, and if there is no market and institutional development ‘beyond land’, i.e. in terms of inputs and machinery services, infrastructure and farm produce market outlets. Parting from these three main observations, we can then distinguish two broad sets of policies, those, which address institutions and institutional frameworks, and those that focus on specific policies within the overall context of sustainable agricultural and rural development in Armenia. On the institutional side, the following recommendations can be put forward (in order of priority):

- Use the new phase (or wave) of land reform, that concerns the transfer of much of the remaining state-owned agricultural land to the jurisdiction of the communities to promote four targets: as most important one, reserve a substantial part of the transferred land resources in order to improve the livelihood of those vulnerable peasant farmers, through directed land allocations (to be financed by a mix of public/private funds, and loans); facilitate land consolidation (through exchange and merging, using the physical land reserve), using donor-financed land consolidation projects executed in pilot areas, providing ‘best practices’; promote equal (and transparent) access to auctions of land that will be privatised, but avoid (through the use of land ceilings) the (most often ‘distress’) sales of large tracks of land to a small elite, leading to worsened rural unemployment, or who would not be investing in the land, but rather use it as an instrument of speculation (or even worse, tax evasion); Finally, develop policies (and local institutions) to safeguard the communal pastures where this is appropriate for equity reasons in terms of access (using joined group rights of access, leasing arrangements etc).
- Promote actively the formation of cooperative, associative, and group-based institutions that dedicate themselves to selling and buying of inputs and output in agricultural markets (and labour exchange in productive activities), in order to break-through the current deadlock or squeeze, in which many small peasant farms are caught. There should be public awareness campaigns that these kind of cooperative or associative institutions have no resemblance to the

Soviet-type collectives, and that in many developed countries they were at the heart of the success of agricultural development. This mentioned 'deadlock' is not primarily an inefficiency problem, but one of market integration and obtaining some degree of 'market power', which they now completely lack. These institutional changes at local level can also have direct positive impact on the production side, as it will be possible to prepare and harvest land with machinery through cooperation or rental arrangements.

- Formalize as much as possible the rental market of land, promoting the official registration of land rent transactions (lowering the notaries' fees and taxes to be paid), as otherwise this market will be largely functioning underground, and no sensible land policies will be possible (as insufficient knowledge of the emerging reality exists). Facilitate and streamline the land rental procedures and administration. Proper lease payment enforcement is also badly needed, and awareness campaigns about the rights and obligations for both parties in a lease agreement. Finally, a land lease market study should be undertaken in order to make an inventory of the various informal and formal arrangements (such has recently been done in the Republic of Moldova).
- Complete the formal property title registration of all agricultural landowners, so as to make it possible to sell and buy land more easily, or to use land as collateral (currently planned to be completed by the end of 2005). Have central and local institutions be more actively involved in sustainable land management planning, that will take into account agro-ecological specificities, land fragmentation, and actual land use, in order to support local transformation of agrarian structures towards more the emergence of economically more viable peasant farms. For this the Armenian government should give more importance to decentralization (and local institutional capacity building), stimulating regional and local economic development, while similarly undertaking sufficient public investment that support the latter.
- Strengthen institutional capacity within the central and also *Marz* and community administration levels, which will need to improve their institutional policy analysis and policy development capacity *versus* the rural sector, in particular regarding the livelihood of farm households. After at first having been the focal point of attention in the transition (with the land reform in the early 1990s), it seems that in the past years they have been somewhat

lost in the government 'priority agenda'. Possibly there was at least some belief in the 'spontaneous' emergence of markets (and institutions), providing the environment in which small peasant farms would soon become economically viable. Reality has shown a different outcome, rural poverty is stagnating (at a fairly high level) and 'missing' markets and institutions are the rule rather than the exception.

In terms of sectoral or sub-sectoral policies the following should be considered:

- Public investment is clearly needed in rural areas. Rural roads are often deteriorated, and communications in Armenia are bad. External finance can (and is already) be attracted, such as from the Armenian Diaspora, in order to realize infra-structural projects. As discussed above, irrigation is crucial, and there are some signs that show gradual progress in this field (primarily donor-financed).
- Credit for agricultural activities is still very limited, and as it difficult to provide collateral, because of unclear property rights, or because land resources and other assets (and their value) are insufficient or in a very bad state. More emphasis should be provided to build up credit institutions, to promote that commercial banks dedicate a larger part of their loan portfolio to agricultural activities (apart from agro-industry that absorbs most credit), with as one of the goals the capitalization of those peasant farms which have the capability to become (or remain) economically viable and accumulate, but also provide credit resources to emerging small peasant farms accociations or cooperatives.
- Specific tax policies need to be developed, which promote cooperative institutional arrangements. This means that the formation of cooperative institutional arrangements must be made attractive in fiscal terms for small peasant farms to join (in terms of the level of income tax, certain exemptions, and the procedures of administration and registration). An appropriate tax strategy that will not weaken the already not very competitive agricultural sector of Armenia should be soon put in place (such as using a lump sum tax policy for small peasant farms that have a turnover below a certain established ceiling), in order to prepare the sector through a gradual transition towards the

implementation of Armenian commitments under the WTO agreement on agriculture, and avoiding unnecessary disincentives.

- Support to SMEs in rural areas will be an important part of the transformation strategy, in which in the end a substantial number of the small farm households will partly or fully migrate to other sectors (and areas), but during this transition will be able to provide alternative and complementary employment and income for them. They are also crucial in providing intermediate inputs for the agricultural sector, and also have a share in agricultural processing, which is an important part of the off-farm activities of farm households.
- Finally, emphasis needs to be given to human capital building, which can be done through technical assistance and extension, but even more importantly through re-emphasising the necessity for sufficient rural (particular vocational) education, and other investment in human capital that will enhance the emerging agro-industrial sector in Armenia.

In conclusion, in terms of possible scenarios, the first one is somewhat of a doom-scenario, parting from increased (also temporary) migration of the most important part of the rural population, namely workers between 15-50 years of age, leaving behind increasing socially (and economically) unviable villages. This scenario might well go hand in hand with ‘distress sales’ of land, but not necessarily with the development of economically viable farms. The second (limited growth) scenario will be more equivalent to a status quo path, in which there will be some spill-over of the rapid growth in the urban areas, externally financed investment in infrastructure and communication (shifting some of the observed extreme ‘urban bias’), but no real boost of agricultural production, except in some agro-industry connected sub-sectors. This would be a ‘muddling through’ scenario. The third scenario would be more focused on integrating rural and urban economies, counteracting the rapidly growing gap in terms of income and human development. This scenario would be the outcome of a concerted effort of institutional change, the introduction of a countervailing ‘rural bias’, a gradual concentration of land (corresponding with the absorption of surplus labour into the emerging RNFE and other –urban based– economic sectors. This more optimistic scenario would lead to sustainable agricultural growth, with the emergence of cooperatives and small peasant farmers associations that will be able to improve the

bargaining position of their members in various markets, next to individual (more capitalised) medium-sized farms, both having linkages to an innovative agro-industry (and export opportunities), while an even expanded and strengthened household economy (using the momentum of new allocations proposed here under the current state land transfer) would be able to improve food and income poverty levels in rural (and indirectly in urban) areas. This scenario would need a full-scale regional development strategy and a coherent institutional and policy framework to become realistic.

Max Spoor, UNDP Consultant  
Associate Professor, Institute of Social Studies, The Hague  
Centre for the Study of Transition and Development (CESTRAD)

@The Hague, December 2004

ANNEX I: PRIVATE AND COMMUNITY-OWNED AGRICULTURAL LAND IN 20 COMMUNITIES (OCTOBER 2004)

Marz	Aragasotn		Ararat		Armavir		Gegharkunik		Lori		Kotayk		Shirak		Syunik		Vayots Dzor		Tavush	
Name of Community	Vardenut	Artashavan	Darakert	Arevshat	Hushakert	Aragats	Gandzak	Hairavank	Vahagni	Debet	Hankavan	Aghavnadzor	Arevshat	Megrashen	Khot	Brnakot	Arpi	Rind	Achajur	N.K. Aghbiur
Arable Land (AL)																				
Private	361	283	216	82	265	226	868	300	269	62	0	192	506	780	504	1581	173	259	636	544
Community	71	59	43	63	48	58	191	28	37	53	63	38	112	198	28	230	50	111	103	188
Orchard/Vineyard																				
Private	79	1	4	112	42	37	0	0	19	0	0	0	0	0	49	5	0	32	118	29
Community	9	0	0	2	0	11	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Irrigated AL (%)	7	137	286	122	313	284	97	17	19	30	0	113	54	0	16	557	163	67	300	74
Hayfields																				
Private	79	71	0	2	0	0	392	178	42	141	0	110	0	0	30	0	0	50	183	0
Community	9	99	0	0	0	0	11	1	224	29	132	34	7	0	3	30	0	0	5	61
Pastures/Others																				
Private	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Community	1178	2125	59	124	510	304	1503	528	1179	340	1317	1009	796	435	999	2825	722	2712	1177	727
Land Sales from Community/Nr	0	2.7	12.1	38	0	66.8	8.36	19.8	0	0	0	10.1	0	0	0	0	0	0	0.13	0
		/1	/85	/1		/5	/70	/18				/23							/2	

Source: Data provided by the State Cadastre Committee. This was a specially commissioned study. It should be noted that in the communities of the *marzes* Vayots Dzor and Tavush there was not land transferred to the community level as yet (see also Table 13).

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