



www.laender-analysen.de/cad

www.css.ethz.ch/en/publications/cad.html

AGRICULTURE

Special Editor: Bruno De Cordier, University of Ghent

- | | |
|--|----|
| ■ The Feasibility of Averting Collapse: the Resurgence of Georgia's Agricultural Sector | 2 |
| Juan Echanove, Strasbourg | |
| ■ Armenia's Agricultural Sector: From the Subsistence Line to Discrete Take-Off? | 6 |
| Virginie-Anne Dubois, Orléans | |
| ■ How to Handle Food Security in the Light of Agricultural Development.
A Look at Georgia Through the Southern Caucasus | 12 |
| Levan Dadiani, Tbilisi | |
| ■ DOCUMENTATION | |
| Agricultural Statistics and Maps | 15 |
| <hr/> | |
| ■ CHRONICLE | |
| 23 September – 14 October 2016 | 19 |

The Feasibility of Averting Collapse: the Resurgence of Georgia's Agricultural Sector

Juan Echanove, Strasbourg

Abstract

About half of Georgia's workforce are farmers to some extent and size, and agriculture and rural identities are fundamental components of the nation's identity. Georgia's economic and societal collapse during the 1990s ruined the agricultural sector, which was also largely neglected during Saakashvili's neoliberal reform government (2004–2012). In the last few years, however, there has been a noticeable incipient revival of agriculture; this is largely due to a coherent set of ambitious policies, including innovative private-public partnerships, the re-establishment of the food safety systems and the promotion of market-driven small farmers' cooperatives. These policies are already delivering results, including improvements in productivity, production and exports. Georgian agriculture, as "third-world" as it was in the 1990s, was one of the worst among the post-communist countries for more than two decades but is now becoming a promising economic sector.

The Post-Independence Disintegration

Historically, Georgia is a traditional, agricultural country. Its diversified soils and ecosystems provide optimal conditions for quality production. Agriculture has always been a core element of the nations' economic fabric even after the industrialization during the Soviet times. However, food and agriculture are much more than economic assets in Georgia: they are an integral part of its sociocultural ethos and identity. The South Caucasian nation is well-known as the land where wine production was allegedly first developed and as the home of a rich, rural-based cuisine. Much of the wine, tea, fruits and vegetables found across the USSR came from Georgia, which had one of the highest levels of agricultural productivity among all of the union's constituent republics. However, after the collapse of the USSR, Georgian agriculture experienced a total disintegration.

Unrest, armed conflicts, the secession of Abkhazia and South Ossetia, lawlessness, and massive corruption brought the country and its society to the edge of disintegration. Virtually, all of the existing agriculture infrastructure and equipment (irrigation systems, warehouses, tractors, combine harvesters, etc.) were dismantled for scrap. In parallel, a sudden and poorly planned privatization process resulted in the breakdown of the former Soviet collective farms into small plots, which were then distributed to rural families including those who lacked the background and skills of farmers. In the short-term, this massive land reform helped prevent the country from falling into a humanitarian crisis and requiring food aid. People were able to cultivate something to survive. On the other hand, instead of their privatization as limited companies or business-oriented cooperatives, the options selected in other post-Soviet countries, the breakdown of the collective farms transformed the agroindustry of the pre-independence times into subsistence agriculture.

By 1992, half a million Georgian families had turned into small farmers, producing minimal amounts of food, which were often insufficient to place production in the markets. Rural Georgia became a pre-modern economy where money and salaried jobs were almost absent. With neither investments nor access to fertilizers, pesticides and other inputs, yields declined to levels of parts of Sub-Saharan Africa. Many plots were left uncultivated. By 1995, Georgia's sown area was 45 percent smaller than it was in 1990, and the number of livestock was reduced by half. This primitive agriculture was unable to supply the urban areas that were relying on food imports from Russia and Turkey, often controlled by well-connected mafia groups who worked via South Ossetia, Armenia and Turkey.

For the first time in modern history, Georgia became a net importer of agricultural products. After the initial dark and chaotic years following the country's independence, the Shevardnadze administration gradually managed to bring some stability although they were unable to tackle corruption and place the country in the path of substantial economic growth. The declining trend of agriculture started to change somewhat for the better. By the year 2000, the cultivated area was increasing close to the levels of the final Soviet times, and farm productivity was modestly increasing.

The (Near) Death Knell of Doctrinal Libertarianism

The Saakashvili government, which took power in 2004, has been praised for its impressive performance in cracking down on mafia dons and the worst corruption. In addition, it has been praised for implementing massive economic reforms, as well as reputedly placing the country back in the path of modernization. Nevertheless, not much changed in the small villages of Geor-

gia during the aftermath of Mikheil Saakashvili's takeover other than improvements on some roads and better access to a reliable supply of gas and electricity. Additionally, the agricultural sector started to decline again, losing the modest gains that occurred during the latter part of the Shevardnadze period. By 2008, the sown area reached a historical minimum of a mere 329,000 hectares, almost half the sown area of the year 2000.

Despite a very favorable economic context with high growth rates and massive augmentation in public revenues, agriculture remained the forgotten sector of the economy in terms of governmental priorities. The state's allocations to the Ministry of Agriculture declined massively. By 2010, the government was investing only 0.3 percent of its budget in agriculture, becoming a country with one of the smallest funds for the primary sector worldwide. Additionally, half of the people were farmers (one of the highest percentages in the post-Soviet sphere), and the agriculture was still contributing to a substantial 16 percent of the GDP during certain years. The agriculture extension system was dismantled, and the district-level offices of the competent agriculture-related ministries and government agencies were closed.

The remaining state-owned agriculture assets, including arable lands that were not yet privatized, were sold in rather obscure auctions. Most animal vaccination campaigns ceased, causing the spread of new epidemics such as African swine flu, which killed the near-totality of the country's pig population in 2007. The sanitary and phytosanitary or SPS border controls were stopped, and the units were dismantled. Food inspections were cancelled, causing a worrisome augmentation of foodborne diseases. In short, Georgia became one of the few countries in the world that officially and consciously demolished its food safety system. It is difficult to assess the actual damage caused by these essentially nihilistic policies, mainly because, as part of this same attitude, the official agriculture statistics deliberately ceased to be collected and updated. However, there is massive anecdotal evidence of the enormous alienation and despair that they caused among the already impoverished farmers. Still, agriculture remained an important, albeit declining, sector in terms of economic contribution, net foreign exchange and employment.

There are various reasons to explain why the Saakashvili administration *de facto* dismissed agriculture. First, there were ideological motivations. Libertarianism, an extreme version of economic liberalism, became the *de facto* ideology of the regime. Libertarians profess the total withdrawal of the state from all the sectors of the economy other than the protection of private property, security and defense. However, in practice and despite all the official rhetoric, the state contin-

ued intervening in most other sectors of the economy, often substantially. Only in agriculture, the libertarian dogmas were followed down to its most extreme practice. Fighting against corruption, which was rampant in the Eduard Shevardnadze times, was also an important reason behind the dismantling of the agricultural public structures. However, contrary to other public functions, such as the patrol and traffic police which were disbanded and re-created from scratch, the state agronomists and border inspectors or officials were terminated without replacement.

Another explanation is the particular interpretation of modernity that Saakashvili, his entourage and his ideological mentors wanted for Georgia, which was strongly associated with futuristic urban developments and very negative towards the legacy of traditional rural life. Things turned almost histrionic when the city state of Singapore officially became the recurrent aspirational model for the 'new' Georgia by 2009. Finally, a less evident motivation but perhaps more important than any ideological driver, was the vested interest by some political and business circles to obtain easy economic gains. Many of the privatized agriculture-related assets ended in the hands of figures who were well-linked to the government. This included former minister of economy and libertarian pundit Kakha Bendukidze, who obtained the property of the Tbilisi Agrarian University without a due tender.

The removal of the sanitary border controls favored various food importing groups who were allegedly connected with governmental officials. The post-Soviet land privatization process, total absence of a coherent agriculture policy and political animosity to the sector all left a paltry legacy. Another factor further worsening the situation was the deterioration of its relations with Russia and the brief South Ossetia War in the summer of 2008, which caused a total ban by Russia of Georgian wine, mineral water and other foodstuffs, preventing the Georgian producers to reach what was still, after all, their first external market.

From Reluctant Reanimation Attempts...

The year 2010 marked the lowest point for the Georgian agriculture. Exports collapsed, yields rapidly declined and food prices climbed. Without any doubt, the massive failure of Georgian agriculture to modernize was the root cause of the persistence of high poverty levels in the rural areas. Some circles within the government, especially around the very influential Vano Meravishbili who was designated prime minister by Saakashvili in 2012, started realizing that the ruling party could risk losing ground in the rural areas if no tangible changes would be delivered to the farmers. A modest augmen-

tation of the budget for agriculture was approved—the first in 15 years—and some highly visible, although not very effective, programs were promoted. These programs included some subsidies, as well as the establishment of a network of sophisticated agriculture service centers, albeit not really adequate to match the needs of the small farmers.

In 2010, the European Union and Georgia started negotiations for an association agreement and a Deep and Comprehensive Free Trade Area (DCFTA) agreement, which would gradually fully open Georgia to the EU market and bring the country politically closer to the European Union. Beyond its economic significance, the agreements were perceived as a main step for the realization of the country's European aspirations. The DCFTA agreement would require Georgia to mend its SPS system gradually in order to become more compatible with EU standards and legislation. This process was at odds with the still-dominant libertarian approaches, which had been destroying Georgian agriculture. The EU started providing substantial technical support, but some of the most radical elements within the government's economic structures sabotaged the process as much as they could.

... To Steady Revitalization

In autumn of 2012, against all odds, Saakashvili's National Movement badly lost the parliamentary elections, defeated by Georgian Dream, a coalition of disaffected groups formed around the billionaire and philanthropist Bidzina Ivanishvili. The impact of the South Ossetia War and the anonymous disclosure of video material, just a few days before the elections, showing human rights abuses committed by government officials were the main triggers of the electorate's choice. Nonetheless, the long-standing disenchantment of the farmers and rural dwellers also played a major role despite years of abandonment by the administration. Revitalizing agriculture was one of the key political slogans of Ivanishvili.

The new administration, in fact, made modernization of agriculture one of the top economic priorities. The Ministry of Agriculture, run by a new team of committed professionals and advised by experts from the Food and Agriculture Organization (FAO) and the EU, installed a battery of ambitious reforms. These reforms included the approval of an agriculture sector multiyear strategy, the enactment of key SPS and food safety legislations, the restoration of the food control systems and the recruitment and deployment of agriculture advisors all across the country. To update statistics, a door-to-door national agriculture census was conducted in 2014 for the first time in a decade. In 2013, an agree-

ment was reached with Russia to lift the embargo on Georgian food imports, and in 2014 the DCFTA agreement was signed with the European Union. Along with the improvement in the quantity and quality of production, this better context permitted an augmentation of agriculture exports, from US\$349 million in 2010 to US\$824 million in 2014.

An innovative system that consisted of the distribution of vouchers that small farmers could use for acquiring fertilizers and other agricultural inputs from private providers of their choice, permitted a massive augmentation of the sown area for the first time in two decades. Some 700,000 farmers are benefiting from this scheme every year. A similar model of private-public partnership was also developed to enhance access to credit. The government signed agreements with virtually all of the financing institutions to grant a portion of the interest rates for agricultural funding.

Because of better investments and increased access to inputs, productivity increased significantly. In 2015, the average yield of wheat reached 2.6 tons per hectare, compared to 1 ton per hectare in 2010. During the same period, the number of livestock increased from 1 million heads to 1.3 million.

The promotion of business-oriented cooperatives was another key aspect of the sector reforms. The underlying logic was that by organizing themselves into cooperatives, Georgian small farmers could exploit economies of scale and increase their capacity to compete in the market.

It was believed that, in principle, many Georgian farmers were going to be reluctant to form cooperatives, feeling that this would mean a return to the Soviet collective farms. Therefore, massive awareness campaigns were conducted by the Ministry of Agriculture, NGOs and the farmers' organizations, explaining the role and functioning of Western-style market-oriented cooperatives. In 2013, a progressive law on farmers' cooperatives was enacted, creating tax incentives, and an Agriculture Cooperatives Agency was established, providing capacity building to the farmer groups. Various projects, funded by the EU and implemented mainly via NGOs, provided technical assistance and grants for capital investments.

The Remaining Land Issue(s)

These efforts paid off. By mid-2016, 1,640 agriculture cooperatives were established all over the country. The reforms required a substantial augmentation of public funding. By 2015, the government was investing ten times more in agriculture than it did in 2011. Still, these financial resources were not a large burden for the public finances as they consisted of only 3 percent of the state budget, or the equivalent of approximately 100

million euros, plus some 30 million euros per year from various donors (mainly the European Union, the International Fund for Agricultural Development, USAID and Switzerland), including direct budget support by the EU to the state upon fulfillment of pre-agreed conditions. Long-term commitment by the government, professional management and a strong collaboration with the civil society have been the key aspects of the positive progress.

Of course, a number of challenges remain to be solved so that Georgian agriculture can fulfill its potential, including completing the land registration process,

improving the access to finance and micro-finance by small farmers, and defining and promoting more holistic rural development policies. Beyond agriculture, solutions to these challenges will also preserve the natural resources and solve environmental issues as well as create non-farming job opportunities for rural people. It is still too early to see how the early gains of the reform will be consolidated in the long-run. Agriculture policies require patience and continued efforts to deliver sustainable results. What is already certain, however, is that after twenty-five years of falling and lagging behind, thousands of Georgian small farmers are now starting to catch-up.

About the Author

Juan Echanove is an agriculture and food security expert with 23 years of experience as program manager and policy advisor. He was the agriculture attaché of the EU Delegation to Georgia (2009–2015) and was officially awarded for his contribution to the development of agriculture. He is the honorary chairman of the Georgian Farmers' Association. Now he works as Senior Global Food Security Policy Advisor for CARE-US.

Recommended Reading

- Juan Echanove's personal blog, 'A tale from the Caucasus', a detailed description of the role of the civil society, donors and other stakeholders in the resurgence of Georgian agriculture <<http://juanechanove.blogspot.fr/2016/08/a-tale-from-caucasus.html>>
- Mills, John (2013), *Agriculture and rural cooperation examples from Armenia, Georgia and Moldova*, Policy Studies on Rural Transition no. 2013-2, Budapest: FAO Regional Office for Europe and Central Asia.
- Ministry of Agriculture of Georgia, *The Strategy for Agriculture Development of Georgia, 2015–2020* (English version) <<http://www.moa.gov.ge/Download/Files/92>>
- Legislative Herald of Georgia, *Law of Georgia on Agricultural Cooperatives* (English version) <<https://matsne.gov.ge/en/document/download/1972742/0/en/pdf>>

Armenia's Agricultural Sector: From the Subsistence Line to Discrete Take-Off?

Virginie-Anne Dubois, Orléans

Abstract

This contribution discusses the overall lay-out and (re-) orientation of Armenia's agricultural sector since it decreased to subsistence levels and a virtual standstill in the early 1990s. Promising due to both a set of favorable, natural-physical conditions and agricultural traditions, part of which survived Soviet agricultural policies and the country's "transition" and integration in the world economy following its collapse. Armenia's agriculture and agro-industry have had a timid resurgence in the past few years. Driven by the emergence of small and medium-sized farms and the regionalization of a number of primary sector activities and the presence of markets in Russia and the Persian-Arab Gulf, the potential of Armenia's agriculture remains stunted, however, by the country's land-locked position and the border blockades that have been in effect since the Nagorno-Karabakh War, both of which are obstacles for proper agricultural exports.

Enclaved Twice

Situated at the heart of the Lesser Caucasus, the smaller of the two chains that form the greater Caucasus range, Armenia is the smallest of the successor states of the USSR if non-recognized states such as Transnistria and Nagorno Karabakh are excluded. With approximately 98% of its population consisting of ethnic Armenians, it is also linguistically and ethnically one of the most homogenous. Like most other constituent republics of the USSR, it became independent in late 1991 and has been going through similar episodes of radical social and economic changes and "transitions," which also naturally and dramatically affected its rural areas and its agricultural sector. There is a particular aspect about Armenia in relation to its primary sector and its agricultural potential since we are discussing a sector that is directly dependent on physical geography.

Two aspects are of interest: First, there is Armenia's landlocked status and its geographic-political isolation since the political turbulences during its early independence years. Second, there is its mountainous character, consisting mainly of highlands. Indeed, the first factors are decisive in its relations with the neighboring states and in the organization and viability of trade routes for raw agricultural produce as well as for processed agro-industrial products. The second reality heavily determines the possibilities for region-based agricultural diversification as well as the cultural practices connected to these regions. Contrary to Georgia, which has direct access to the Black Sea, and Azerbaijan, which has direct access to the Caspian Sea, Armenia has no maritime front. Since the Nagorno-Karabakh War (1988–94), eighty percent of its borders, more specifically those with Azerbaijan and with the latter's ally Turkey, are closed, with no possibility for people and goods to officially pass.

Thus, deprived of a major economic asset, namely, access to the sea, agricultural trade and access to potential markets face a double impediment. This predicament also determines the nature and direction of Armenia's exports and imports. For the time being, Armenian agricultural goods are largely dependent on transport routes north into Georgia and on to the Black Sea and the Russian markets and on the southern route and the border crossing into Iran at Agarak for access to the Middle Eastern and Persian-Arab Gulf markets. The blockade and the limited number of export routes and surcharges on products caused by it are obstructing not only the expansion of trade networks but also the emergence of parallel trade, which is particularly burdensome for economic development and for the growth of a proper tax base.

The Highlands, Impediment or Asset?

One of the driving forces of Armenia, one of which is also a key pillar of its development, consists of the wealth of agricultural practices, which are derived from an ancestral know-how in the fields of cultivation and artisanal processing. The relationship between the natural environment and the conditions for agricultural development are dependent on the benefits and constraints of the geographical situation of Armenia, particularly on the mountainous environment to which it belongs. Regardless of altitude, the mountainous environment in agricultural development is crucial because Armenia's territory is essentially uniformly highland. The country's average altitude is 1,800 meters. About ninety percent of its area is situated above 1,000 meters, and three-quarters are above 1,500 meters, while the peak of Mount Aragats, north of the capital Yerevan, culminates at 4,090 meters.

The altitude and the country's staged relief form the components of the agricultural landscape, which also

benefits from a continental climate with large temperature variations; summer temperatures can increase to over forty degrees centigrade and in winter temperatures can decrease as low as negative 40 in some areas. At approximately 2,500 hours, annually, the rate of sunshine exposure is very high. In addition, two large drainage basins, which are jointly nicknamed “the water tower of the southern Caucasus,” cover the majority of irrigation needs. The Aras River forms the border with Turkey. The Kura River flows in Azerbaijan, Georgia and into the Turkish province of Kars but has a number of tributaries that flow into the Armenian territory. Lake Sevan, one of the world’s oldest and largest mountain lakes, which, perched at 1,900 meters, constitutes a hydrological reserve of 32.8 cubic kilometers, is also part of the geography. Objectively, these are excellent conditions for the rehabilitation and development of a solid agricultural base. The regional particularities resulting from the configuration of the relief and the topography divide the country into an array of vast high-altitude plains, basins, trays and peaks and compose a remarkable diversity in the conditions of farming.

History as Agrarian Destiny

After this concise presentation of Armenia’s natural conditions, which result from its geographical location, it is also necessary to take into account a number of historical factors in order to inform our statements relating to developments in the agricultural sector. If there is no doubt about the ancient nature of Armenia’s environment-specific agriculture, archaeological evidence shows that six thousand years ago, amphoras were used to preserve and export fruits and wine in these parts of the Southern Caucasus. The country’s formation and integration in the USSR in the late 1920s sealed the main directions of its agricultural development for the next seven decades. Indeed, the application of socialist-statist production and management principles in the field of agricultural production has led to the replacement of a system based on the peasantry by an industrial mode of agricultural work. Of course, between 1929 and 1936, the Armenian SSR did not escape the collectivization of the means of production and of the land.

Once it was dissolved along with the USSR itself, this form of industrialized and heavily ideologized agriculture, which was in the end often disconnected from contemporary developments, left a pernicious legacy (supply deficits, soil depletion, quantitative and qualitative degradation of flocks, etc.). In addition to old cultivations and practices, more so-called “technical” crops were introduced, which were dependent on heavy irrigation and whose production quota were determined by the central state plan. However, after 1991, the transi-

tion from a statist and bureaucratic agrarian system to a privatized one led to the appearance of a large segment of small and medium-sized household farms along with impoverishment and an upheaval of modes of production, as it did in many successor countries of the USSR. If, shortly before the dissolution of the USSR, agriculture represented less than twenty percent of both the official GDP and employment of the Armenian SSR, it rose in prominence due to the food security needs of the population facing uncertainty during the first phases of transition and the collapse of the non-agricultural and social sectors to one-third of the GDP and 40 percent of employment by 1999.¹

The former 869 large collective and state farms on approximately 147,000 separate parcels of land were privatized to create approximately 338,000 farms and rural households with relatively small plots, with an average size of 1.1 hectares. Nonetheless, neither socialism, reduction in agricultural productivity, transition, or more rapacious form of capitalism, which immediately followed, fully obliterated traditional practices and local specificities. The stark reduction in the sizes of farms and plots after 1991 even made the use of heavy and costly machinery designed for vast spaces superfluous. Thus since its independence, once the country and its society were gradually integrated into the global economy, Armenia has constantly been confronted with a new economic environment and the challenges of adaptation. The collapse of socialism, the planned economy and the disappearance of central subsidies guaranteed markets both in the USSR and its wider socialist commonwealth, but the severing of export channels were not the only shock the country had to cope with.

From Socialism to Subsistence

The economic and infrastructural damages caused by the Spitak earthquake in late 1988 further weakened the already stagnating socialist economy of what was then still the Armenian SSR. The overall situation of heavily dislocated agriculture and the decline of food security and supplies were further worsened by the Nagorno-Karabakh War that started at approximately the same time in a country with a clear agricultural vocation and destiny. Armenia’s passage to a market economy and its integration in the world economy that came with its independence also made its economy, including its agricultural component, vulnerable for the first time since Armenia’s creation as a modern nation-state to

¹ Millns, John (2013), *Agriculture and rural cooperation examples from Armenia, Georgia and Moldova*, Policy Studies on Rural Transition no. 2013-2, Budapest : FAO Regional Office for Europe and Central Asia, p. 11–12.

conjectural shifts and external competition. The result were starkly decreasing yields and overall productivity. Until the 2000s, the primary sector was by far the least productive.

Many agro-industrial factories also closed down due to the severing of commodity and spare part supplies and the disappearance of their markets. At the same time, during the first years following the collapse of the USSR, many Armenians, being faced with shortages and unemployment, sought refuge in the fertile countryside to engage in plot agriculture on land from which they first removed industrial crops such as cotton, tobacco and sugar beets to replace them with more diversified food crops. Rural society in this most southern (together with Turkmenistan) of the former states of the USSR managed to conserve a number of traditional agro-pastoralist practices and a strong orchard and vegetable gardening culture as well as a certain amount of knowledge in the field of treatment, processing and stocking of produce. All of these practices were and remain rooted in a rather strong social fabric and family-centered culture.

With independence also came international aid from both donor institutions and from the Armenian diaspora in the U.S., Western Europe, Russia and the Middle East. Thanks to a number of technical support programs from donors in the US, Russia, the EU, specialized international organizations, and of course the inputs of Armenian farmers and workforce themselves, the negative agricultural growth curves have been gradually reversed since the mid-2000s. Towards the end of the 2000s and the beginning of the 2010s, there seems to be a sustainable rebound of agricultural production with a stronger agricultural infrastructure, a regular renewal of equipment, a renewed marketing in the food industry and, therefore, a return of demand and orders. New or rehabilitated larger-size industrial structures with foreign—mostly Russian and Diaspora-Armenian—capital coexist near much smaller structures whose operations are sometimes based at the village or at the regional level. Regardless, the essential is that a revival of the primary sector can be observed.

The Plateau Backbone

Agricultural economics remains a pillar of development due to the numerous benefits of favorable physical and historical conditions that allows pastoralism, gardening and, vegetable, fruit production to join livestock raising. The plateaus that are situated around the mountains, which are sometimes carved by gorges and canyons, are located in the northern Lori province on the Shirak high plains around Gyumri, around Lake Sevan, and in Armenia's southern "tail." These spaces are quite suitable for the cultivation of cereals and potatoes, which

are both staple foods. In the early 1990s, industrial crops were removed from the fields in the high plains in order to replace them with these and other food crops to meet basic food needs. Since the mid-2000s, potato growing has become a regional specialty of the Shirak plateau and the Lake Sevan region, which jointly ensure more than half of the national production. The high prices for potatoes also led to a situation where they are often grown in city courtyards. Similarly, the agricultural machinery park was gradually replaced, even if globally, and still tends to be rather obsolete.

It is also largely in these mountainous regions, plus the hills of Aragatsotn close to the capital that the pastoral dimension and vocation of the Armenian countryside manifest itself. People have always taken advantage of the complementarity of spaces by adapting their lifestyles to bioclimatic terracing. However, if this trait is common in many parts of the highlands, the southwest of Armenia has a different rationale: the transhumance practices have long been steered by the cross-border nature of the southern Caucasus countries, especially those between Armenia and the Azerbaijani exclave of Nakhchivan (Naxçıvan). Currently, it is no longer possible to observe the same practices given the border closures. This sector has also not escaped the difficulties of post-Soviet transition because it has been confronted with the reduction of forage areas due to the new borders, the slaughtering of livestock for immediate consumption, the inability to maintain herds up to level, and the failure to improve the gene pool of the cattle. However, cattle remain at the heart of the Armenian pastoral economy and is also increasing. Sheep farming, which is ancient to the area and a traditional activity of Armenia's Yezidi and Kurdish minorities, has increased because of the emergence of markets in Iran and high-income countries around the Persian–Arab Gulf.

The emergence of *terroirs*

Poultry farming is also experiencing a recent revitalization with a better control of the sector, whereas pig raising is still hindered of its potential by the competition from Russia, a clear lack of technical capacity to properly manage the activity, and the limited genetic potential of the Armenian pigs. Finally, irrigated areas and lower foothills are particularly conducive to gardening, fruit growing and viticulture or grape cultivation. The Plain of Ararat, which is situated north of the valley of the Aras and irrigated by the Sevan and Aras drainage complex, is the most fertile depression of Armenia. It is bounded to the north by Mount Aragats and to the south by Mount Ararat (called Masis in Armenian), and although it is a national symbol of Armenia, it is located in Turkey (where it is called Ağrı Dağı). There

are many historical accounts about these areas; these accounts describe the idyllic nature of these fertile areas and the array of product growing there because of the silt that is deposited by the Aras River and the warm summer months. Additionally, the area currently grows produce as diverse as melons, peaches, apricots, pomegranates, grapes, cucumbers, tomatoes, eggplants and peppers. The western Armavir and Ararat regions provide three quarters of Armenia's fruit and vegetable production, a net increase since the mid-2000s.

Similarly, the vineyard is an iconic culture of Armenia and marks its identity because its core cultivation area is situated in the wide piedmont of Mount Ararat where, according to Biblical and popular tradition, Noah and his entourage quenched their thirst after the retreat of the deluge. Local grape varieties grow and develop in this southwestern part of Armenia and are maintained through an old tradition of vinification. One example is in Areni, where wine-making is believed to go back approximately six thousand years. Having also suffered the impact of socialist-statist modes of production and management and its subsequent collapse, a critical mass of cultivated land area is maintained and has gradually expanded. However, production is primarily increasing, which highlights an increase in yields through better control of wine-making and as well as a new dynamic of the winemaking process.

Time for Agro-Investment

Except for the last decade, Armenia's agricultural output generally showed a rising trend (see Figure 1 on p. 10); it is necessary to consolidate the output, initially to continuously meet local needs. Indeed, as can be seen in Figure 2 on p. 11, the trade balance of Armenia is in deficit, and the country imports foodstuffs that it could adequately and sufficiently produce itself. Additionally, the storing and processing infrastructure, which are both the real missing links in the entire chain, may

need to be restructured. This restructuring is necessary not only to optimize the Armenian agricultural potential and to meet both domestic needs but also to meet external requests in order to reset the trade balance and counter the harmful effects of the blockade. Finally, we must question the valorization of production, which necessarily involves the notion of quality, adapted to the Armenian singularity, to highlight the existence of *terroirs*, regions with specific agricultural traditions and comparative advantages in their production. The industrial as well as artisanal means of processing can be a vehicle to allow the value of these quality productions.

Over the years, a number of structures that are born from local and regional initiatives and cooperation networks between various actors are operational. One example is the pastoralism development project in the northern province of Tavush that is supported by France's Conseil départemental des Hauts-de-Seine (a regional council), the Fonds arménien de France and the Center for Agribusiness and Rural Development (CARD), a one-stop agricultural development board that is supported by a number of international donors and international NGOs. Their purpose is to promote Armenian regional products through processing methods that not only include ancestral knowledge but also comply with current standards with a solid training of the workforce. A number of corporate structures also started to tap into Armenia's agrarian and agro-industrial potential, such as the ACBA-Crédit agricole bank, which provides rural micro-crediting and Pernod-Ricard's purchase of Armenian brandy factories. Unfortunately, these corporate structures have received minimal advertisements. These structures are the ones, however, that should be encouraged so that Armenia is able to offer diversified and sustainable methods of recovery of its agricultural production and of its productive land area.

Translated from the French by Bruno De Cordier

About the Author

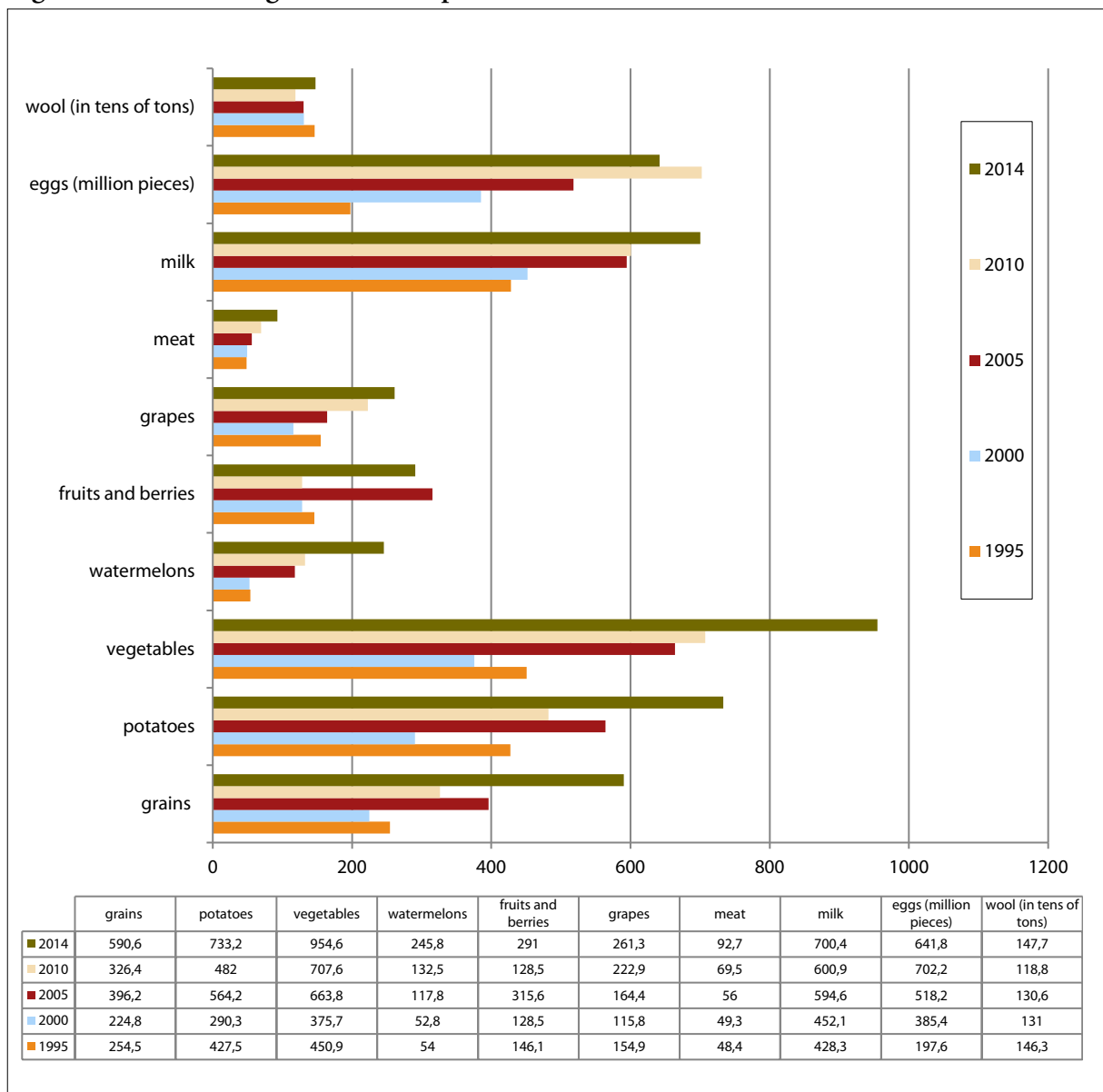
Virginie-Anne Dubois holds a Doctorate Degree in Geography at the Université d'Orléans with the support of the Centre d'Etudes pour le Développement des Territoires et l'Environnement (CEDETE). She is working on the question of farming and food industry in Armenia.

Recommended Reading

- Alaverdyan, Davit, Kehende, Olagunju, and Panosyan, Ira (2015), 'Analysis of agricultural production and -programs in Armenia', *International Journal of Innovation and Scientific Research*, 17(2), p. 466–473.
- Ardillier-Carras, Françoise (2006). *L'Arménie des campagnes. La transition post-soviétique dans un pays du Caucase*. Paris : L'Harmattan.
- Dubois, Virginie-Anne, *Agriculture et industrie agroalimentaire en Arménie : entre immobilisme et innovation*, doctorate thesis defended at the CEDETE – Université d'Orléans in 2015 (in the process of being published)
- Barnard, Hans *et al.* (2011), 'Chemical evidence for wine production around 4000 BCE in the Late Chalcolithic Near Eastern highlands', *Journal of Archeological Science*, no. 38(5), p. 977–984.

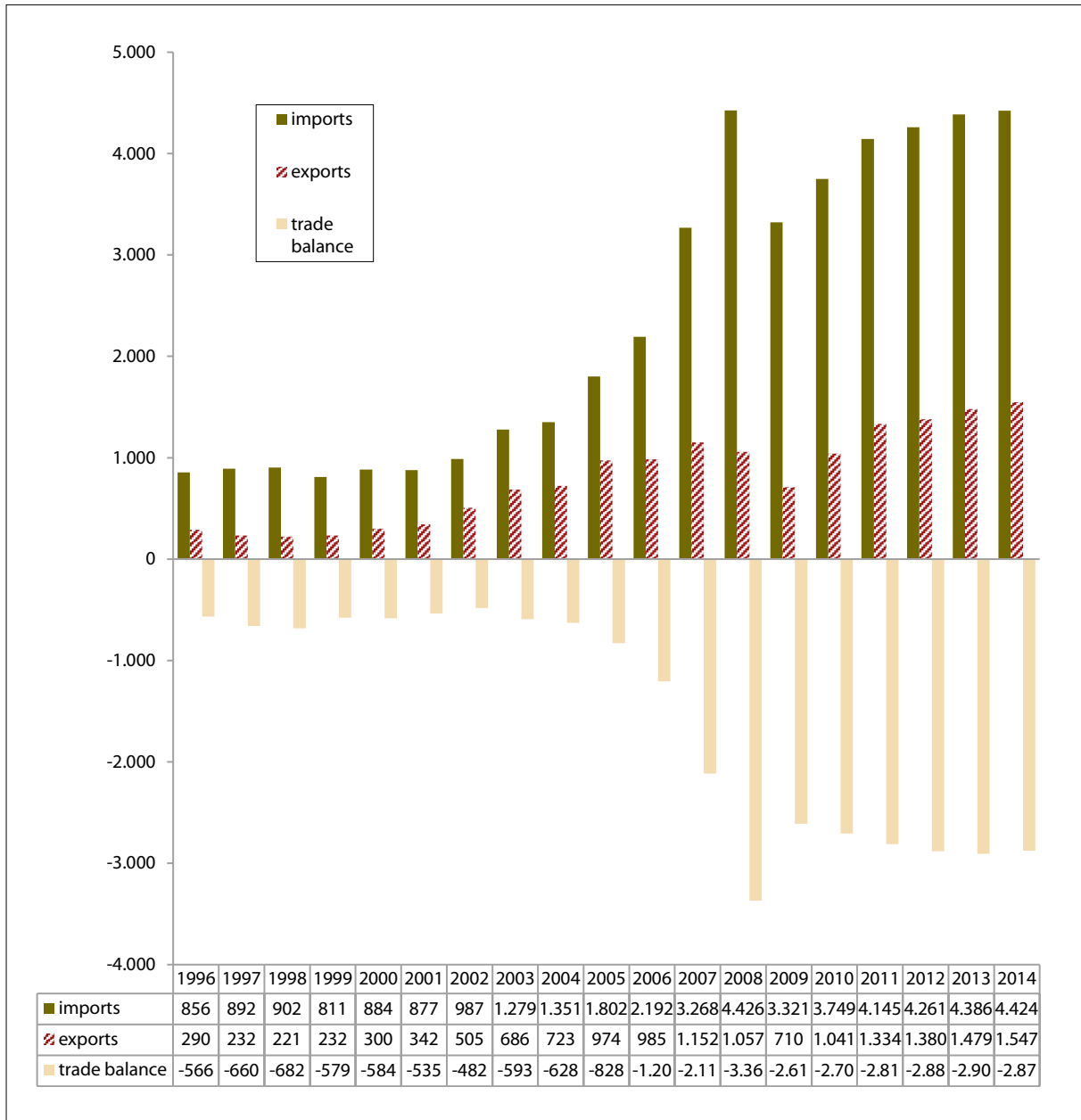
- Bérard, Laurence, and Marchenay, Philippe (2006), 'Productions localisées et indications géographiques: prendre en compte les savoirs locaux et la biodiversité. Revue internationale des sciences sociales, no. 187, p. 155–122
- Cormier-Salem Marie-Christine, and Roussel, Bernard (2009), 'Localiser les produits de terroir et valoriser les spécialités locales. Une dynamique générale et foisonnante', Autrepport, 2009/2, no. 50, p. 3–15.
- Millns, John (2013), *Agriculture and rural cooperation examples from Armenia, Georgia and Moldova*, Policy Studies on Rural Transition no. 2013-2, Budapest : FAO Regional Office for Europe and Central Asia.
- Nicolas, François, and Valceschini, Egizio (1993), 'Agro-Alimentaire et qualité. Questions aux sciences sociales', *Économie rurale*. no. 217(1), p. 5–11.

Figure 1: Armenian Agricultural Output 1995–2014



Source: Virginie-Anne Dubois, on the bases of data of the National Statistics Service of the Republic of Armenia, Statistical yearbook of Armenia, 2015, <www.armstat.am>

Figure 2: Armenian Trade Balance 1996–2014



Source: Virginie-Anne Dubois, on the bases of data of the National Statistics Service of the Republic of Armenia, Statistical yearbook of Armenia, 2015, <www.armstat.am>

How to Handle Food Security in the Light of Agricultural Development. A Look at Georgia Through the Southern Caucasus

Levan Dadiani, Tbilisi

Abstract

Food security encompasses not only thorough and strategic planning for agriculture but also careful considerations for health and education. This article presents a brief overview of the issues in relation to policies and strategies to be addressed in Georgia and the Southern Caucasus that are aimed at ensuring food security and improving nutrition, the key for which is the improvement of the competitiveness of local farmers and the increase in local food production. This requires complex support policies and programs favoring small-scale farmers through providing resources and education, land reforms, promoting biodiversity, developing infrastructure, supporting growth in export of agricultural products as well as promoting and saturating local markets with locally produced quality and nutritious food.

One Region, Three Predicaments?

Discussions of food security in the Southern Caucasus region generally focus around food independence and are often overwhelmed by agricultural development policies. It is quite understandable why this occurs. In this region, visions for agricultural development are driven by a strongly grounded perception that agricultural development could hold the key to improvements in employment, poverty reduction, economic growth and security. These are important issues, although they are production-oriented. In contrast, the definition of food security used by the FAO [Food and Agriculture Organization of the United Nations] is far more consumption-oriented. In our analysis, we try to combine both production and consumption issues.

To understand the likely trajectories for food security in the region, it is also important to understand the economic and political context within which this is occurring.

Despite being close neighbors, the Southern Caucasian countries are substantially different in a range of important ways. The most defining characteristic of Azerbaijan's economic context is its oil and gas resources. This provides massive resources to support economic development and public services. However, it also encourages "Dutch disease," namely, problems of economic unification that undermine economic diversity and promote dependence and corruption. The biggest food security risk for Azerbaijan in the long term is whether hydrocarbon resources will make the country fully dependent on food-imports without creating growth in the non-extractive sectors.

Second, all three states are only partial democracies, but differ significantly on their levels of democratization. This impacts the general governance environment, which subsequently impacts food security. In The Economist's democracy index for 2015, Georgia is ranked the 82nd

most democratic; Armenia is 116th, and Azerbaijan is 140th out of a total of 167 countries. Armenia and Azerbaijan both experience considerable corruption, which makes public policy in any area difficult, particularly if the policy involves the distribution of resources. In the food security sector, this also means that Armenia and Azerbaijan face higher-than-necessary local prices as a result of corruption on the border and "market capture" by local sector monopolists inside the country.

The third major contextual issue is the geopolitical orientation of the country. Armenia has recently dropped its plans to join the Association Agreement with the European Union, opting instead to join the Eurasian Customs Union. At least for the time being, Azerbaijan remains uninvolved, while Georgia has just signed the EU's Association Agreement. This may cause Armenia to expand its food exports to Russia, while Azerbaijan and Georgia would face an external tariff if trying to sell to the region. On the other side, Georgia will experience considerable pressure to align its phytosanitary, nutritional and health standards with the EU. This should improve food safety but may also increase food prices. Access to the EU market for Georgian goods could be a huge opportunity for producers but will depend on how successfully it makes the necessary changes and modifies its production processes to suit EU supply chains.

The Shackles of Import

The latter represents a considerable challenge for Georgia, as its food production sector is currently very weak and is grounded on the recently emerged, rural, small holders strata that has been re-born upon the crash of totalitarian socialist system as a result of massive land privatization during the early 1990s. Smallholder farmers are at the heart of Georgian agriculture, with almost 700,000 small farms (with one hectare of land as an

average) and with 53% of the working population being (self-) employed in this sector. Despite its high agricultural potential, Georgia has significantly low agricultural productivity due to its low competitiveness. As a result, with over 70% of its food products being imported, it is highly import-dependent. Consequently, Georgia has disproportionately high food prices. On average, 54% of the household income of the population is spent on food. The country and its society run a high risk of physical and economic inaccessibility of diversified and nutritious food, particularly in mountainous regions, making the country food insecure.

Fourteen percent of the households in Georgia systematically borrow money to purchase food, and due to logistical constraints, such as poor infrastructure and natural calamities, food availability is more unreliable in its high mountainous regions. In addition, non-communicable diseases, child stunting and obesity, all of which are linked to nutrition deprivation, have become some of the biggest challenges that the nation faces today. Non-communicable disease is the leading cause of death in Georgia, accounting for over 90% of deaths in total. Therefore, how can Georgia shape its food systems to ensure better food security and improved nutrition for the population? The level of food security in a country is strongly determined by the functioning of its food system. Public and private investments addressing gaps on either the supply or demand side can contribute to shaping healthy food systems that encourage healthy diets and improved nutrition.

Investments, however, need to be suited to the level of development in the agriculture sector of the country, which can then be accompanied with gradual layers of more complex investments. Therefore, in light of the current situation, a greater emphasis needs to be placed on investments targeted at increasing the productivity of smallholder producers, which can replace imports, stabilize food prices, and reduce susceptibility to global food price shocks. An overhaul of agricultural policies and state interventions could lead to healthier food systems. Food systems influence the availability and accessibility of diverse, nutritious foods, and thus, the ability of consumers to choose healthy diets. Therefore, if Georgia strengthened the link between agriculture and nutrition in policy design, it could considerably support advancing nutrition. To close the circle for both food security and nutrition outcomes policies in different sectors, common objectives must be supported; the best way to achieve this is through continuous inter-ministerial cooperation.

The State as a Catalyst

The current government of Georgia has already taken important steps in this direction. The Ministry of Agri-

culture has set up a multi-agency working group comprised of the Ministry of Health, the Ministry of Education, the Ministry of Regional Infrastructure and a number of NGOs, mandated to develop a plan and strategy to supply healthy and safe food to schools and preschools. The Ministry of Health has also elaborated and approved guidelines for healthy food in schools with menus and recommendations. It is only advisory in nature and can be used to introduce healthy food in schools. This approach, while commendable, can be further strengthened by creating direct links to local production through public procurements. Two excellent examples are the Hungarian school canteen and the Brazilian school feeding programs. These state interventions not only support smallholder farmers to access local markets but also simultaneously contribute to nutritional outcomes.

In addition, Georgia has drafted a national nutrition strategy that explicitly refers to food access, availability, and the importance of food production and import substitution. Investments discussed in this article can complement the national nutrition strategy, as investments increase a stable food supply to the population. The current context of globalization and market liberalization further exacerbates the challenges to food security in Georgia. The recently signed Deep and Comprehensive Free Trade Agreement (DCFTA) with the EU places considerable pressure on the country. On the one hand, it can increase the diversity and quality of available food on the market. On the other hand, it has a potential to pose a serious risk of further undermining local production development unless suitable policies are put in place to mitigate the risks for smallholders. The DCFTA Agreement requires Georgia to reform its regulations on food safety standards. While this may significantly boost the export of agricultural products, there is a risk that it will take considerably longer to harmonize food safety regulations to that of EU standards than for EU products to flood the Georgian market, potentially giving EU member states an unfair advantage over Georgian producers.

What to Do?

It is now more important than ever for Georgia to focus on import substitution, increase the competitiveness of small holders in a globalized market, and design impact-oriented long-term investments while focusing on improved nutrition. Expanding exports is important for the economic prosperity of Georgia. However, rather than focusing solely on products with high export potential (e.g., wine and hazelnuts) and neglecting other products necessary for nutritional diversity, it is also crucial that the government make nutritional outcomes also

a priority. Going from state-led interventions to private property agriculture and independent farms, this type of market transition demands changes in the expectations of both the government and farmers. Farmers must be motivated and capable of learning and receiving information, while also innovating and meeting market challenges.

To achieve something for the sake of small-scale farmers, such government interventions should not be purely social relief in nature. Instead, they should be supporting business-oriented farmers and their organizations, assisting in local market development, infrastructure, transport, water management and clear land legislation, designing long-term support programs as well as building capacity and education. Small holders need access to information and extension services to keep up with the changing market, to enable them to optimally use resources, and to adopt innovative and cost efficient practices. Effectively establishing extension services requires significant financial investment by the government. The international experience shows positive outcomes in strengthening extension services: China, India and the US serve as examples of countries that have substantially invested in extension services and received double the amount in turnover.

As we experience on-going economic transition in Georgia, it is important to understand that the demand for local products may not remain the same. The global history on similar issues has a lot to teach us in terms of investing in popularizing rural life. Promoting local production and supporting small family farms increases the availability of quality products on the market and can also preserve tradition and culture. The promotion of local production can be accomplished through local gastronomy, rural tourism and traditional culinary practices. Equally important is creating the demand

for locally grown and nutritious food. In that respect, Oxfam in Georgia has launched a campaign, branded as “Local production, Healthy food”, to inform stakeholders and the public of nutrition and food security. It advocates for political institutionalization of food security and nutrition as well as inclusive policies for small-holder farmers. It executes a public-facing campaign on nutrition, raising awareness of the importance of a diversified diet and the effects of malnutrition.

Triple Win

As a long-term perspective, the government would also be encouraged to adopt a similar approach towards launching long-term educational campaigns, creating a demand, and as a result, linking local producers with previously untapped markets, such as schools, creating rural and urban linkages, etc. The U.S. also provides a noteworthy practice in this area through the “Buy fresh, Buy local!” program, which targets consumers through education and outreach components. These include pilot projects, such as nutrition education built into the curriculum of various schools. As a result of the program, local food purchases from restaurants, food cooperatives, and local institutions increased by over a million dollars. Georgia, as a state and society, faces a unique opportunity to beneficially utilize its attractive potential in agricultural produce and if performed right can improve food security and nutrition. It also has the opportunity to establish strong links between nutrition, traditional gastronomy and agriculture. If investments can target rural infrastructure, facilitate access to credit and markets for small and medium producers and support agro-tourism, it can significantly change the dynamics of rural life in the country as well as create positive outcomes in areas of the triple win: critical growth, poverty reduction and food security.

About the Author

Levan Dadiani is an experienced agriculture and rural development professional with over 20 years of work experience in both the private and public sectors. Throughout his career, he has been engaged in designing and implementing development strategies, business investment projects, conducting relevant consultancies with regard to rural development policies and rural businesses, managing investments and funding activities through investment grant schemes, and designing and managing development programs/projects. In his current role as the Economic Justice Program Manager of Oxfam Georgia, he oversees the implementation of rural livelihoods development and related activities that incorporate strategic planning, capacity building, investment schemes, networking, campaigning, influencing, lobbying and work in policy advocacy.

Recommended Reading

- International School of Economics at Tbilisi State University (ISET), Assessing food security data relevance and collection Mechanisms in the South Caucasus, ISET Agricultural Policy Centre, 2016 <http://foodsecuritysc.com/wp-content/uploads/2016/09/Publication_FS-FINAL-Report-06.07.2016-3.pdf>
- Rural and Agricultural Policy Development Institute (RAPDI), *Food security and nutrition challenges in the high mountains of Georgia*, RAPDI, 2016 <http://foodsecuritysc.com/wp-content/uploads/2016/05/Kveba_Mtebshi_en.pdf>
- Biological Farmers' Association ELKANA, *National nutrition research of Georgia*, ELKANA, 2016 <http://foodsecuritysc.com/wp-content/uploads/2016/05/Oxfam_Nutrition_Research_en.pdf>

DOCUMENTATION

Agricultural Statistics and Maps

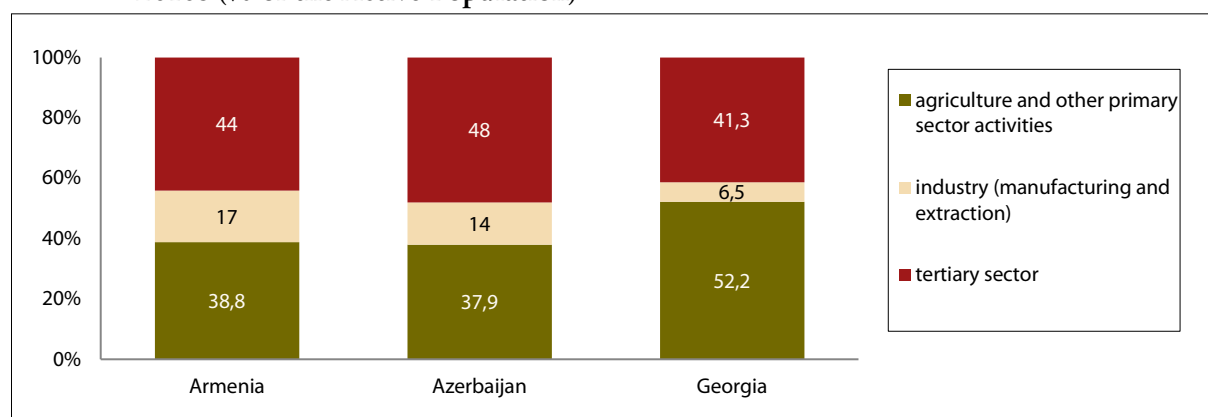
The figures may differ from figures used by the authors in the respective articles.

Table 1 : The Share of Value-Added Agriculture in the Gross Domestic Product of the Southern Caucasian Countries in 1995 and in 2014 (in % of Official GDP)

	agriculture		industry and extraction		tertiary sector	
	1995	2014	1995	2014	1995	2014
Armenia	42.3	20.8	32	28.6	25.8	50.6
Azerbaijan	27.3	5.2	33.6	58.3	39.1	36
Georgia	52.2	9.3	15.8	24	32.1	66.7

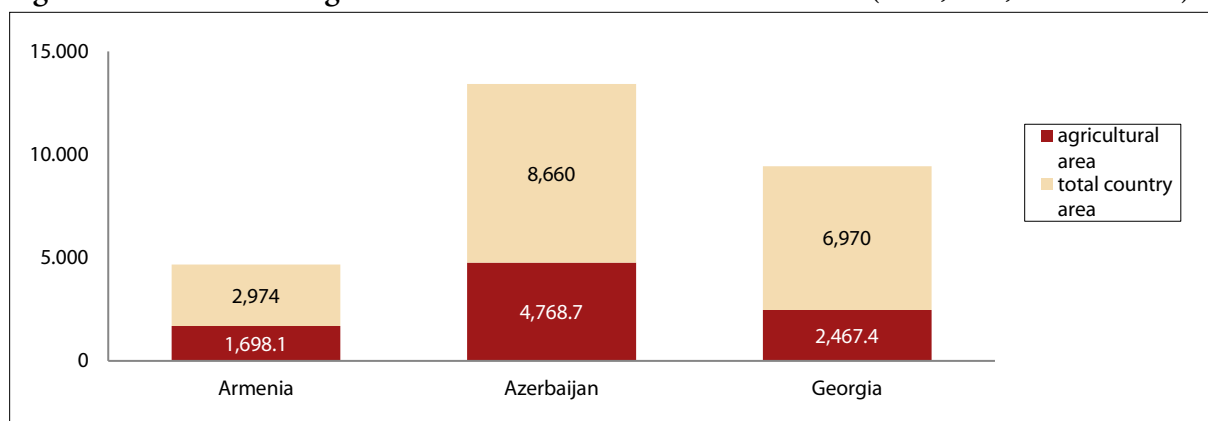
Source: Bruno De Cordier, on the bases of figures from The World Bank Development Indicators database.

Figure 1: Agricultural and Other Primary Sector Employment Vis-à-Vis Other Sectors in the 2010s (% of the Active Population)

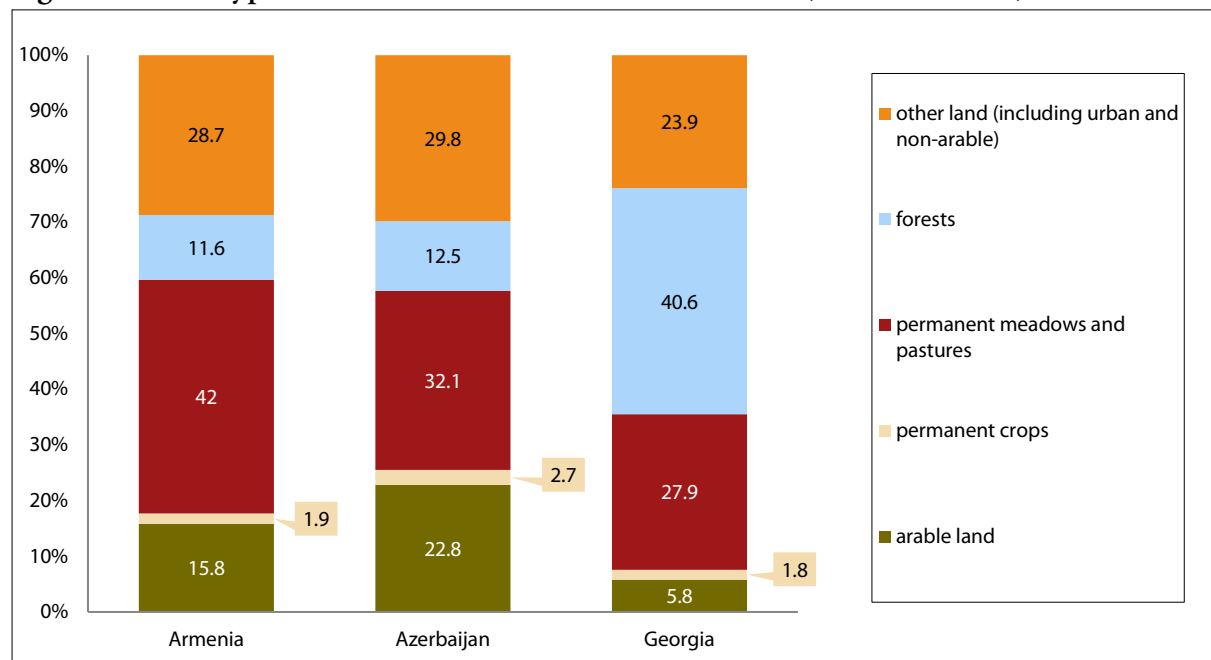


Source : Bruno De Cordier, on the bases of figures from The World Bank Development Indicators and the Food and Agriculture Organisation Statistics Division databases.

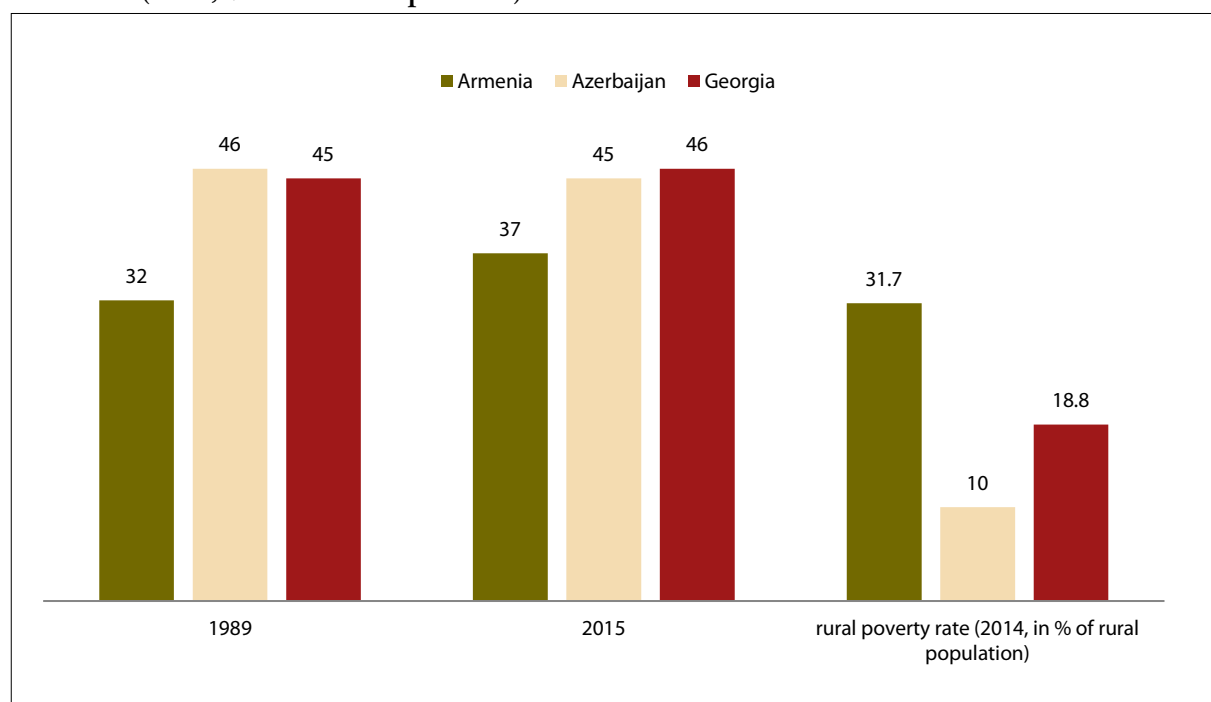
Figure 2: The Share of Agricultural Land in the southern Caucasus (2014, in 1,000 Hectares)



Source : Bruno De Cordier, on the bases of figures the Food and Agriculture Organisation Statistics Division database

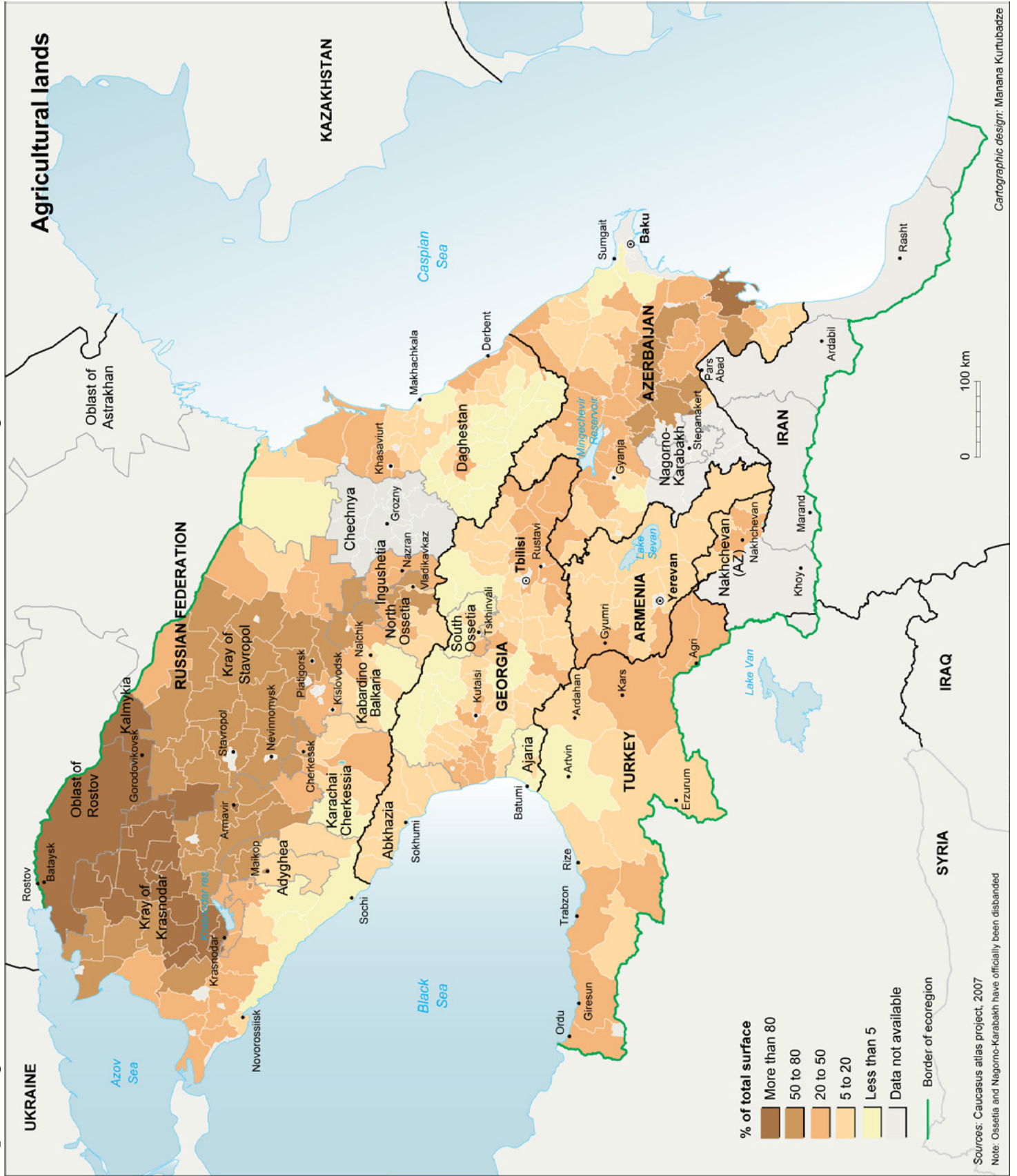
Figure 3: Land Type and Land Use in the Southern Caucasus (2014, % of Area)

Source: Bruno De Cordier, on the bases of figures the Food and Agriculture Organisation Statistics Division database.

Figure 4: Rural Population (1989 and 2015, % of Total Population) and Rural Poverty Rate (2014, % of Rural Population) in the Southern Caucasus

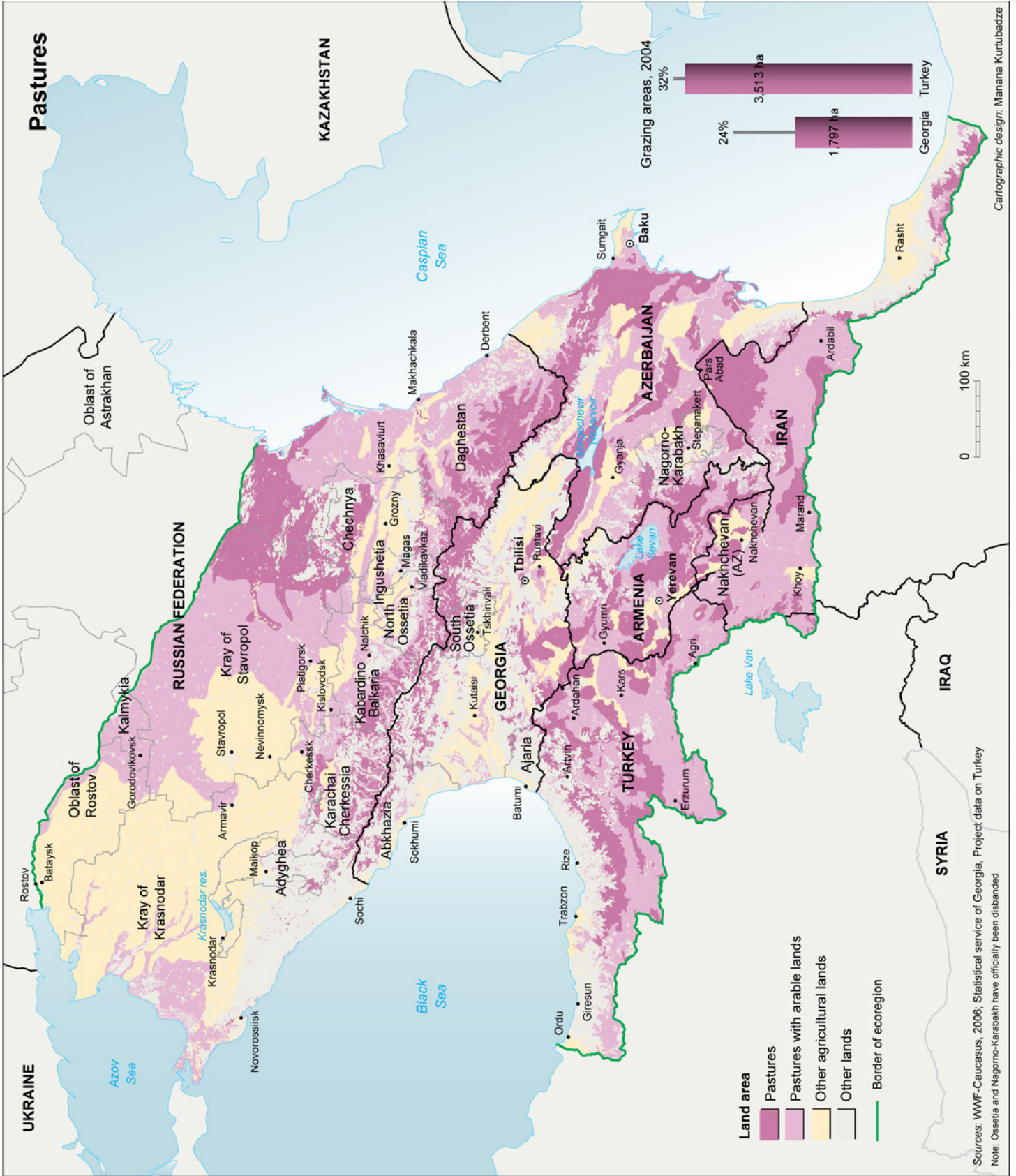
Source: Bruno De Cordier, on the bases of figures and extrapolations from The World Bank Development Indicators and the Rural Poverty Portal of the International Fund for Agricultural Development.

Map 1: Agricultural Land in the Southern Caucasus and the Wider Caucasian Ecoregion



Source: GRID Arendal-UNEP Graphics Library, Caucasus ecoregion, <www.grida.no/graphicslib/collection/caucasus-ecoregion-environment-and-human-development-issues>

Map 2: Pasture Land in the Southern Caucasus and the Wider Caucasian Ecoregion



CHRONICLE

23 September – 14 October 2016

23 September 2016	Low-cost airline company Wizz Air opens a base at the airport of the Georgian town of Kutaisi and offers seven new routes
26 September 2016	Azerbaijan holds a referendum on 29 constitutional amendments. The most important of the proposed changes is an extension of the president's term of office from five to seven years. The Central Election Commission announces that the turnout was over 63 percent. The following day the Commission declares that nearly 85 percent of voters supported the extension of the presidential term.
27 September 2016	Georgian Prime Minister Giorgi Kvirikashvili speaks of the necessity to "rebuild bridges" between Abkhazians and Georgians during a ceremony to mark the 23 rd anniversary of the "fall of Sukhumi"
30 September 2016	Pope Francis meets with Georgian President Giorgi Margvelashvili during his visit to Georgia and calls for the peaceful coexistence of peoples and states in the region
30 September 2016	The Azerbaijani Parliament votes to resume relations with the European Parliament that had been suspended following the EU's criticism of human rights abuses in Azerbaijan.
1 October 2016	Pope Francis holds a stadium mass in Tbilisi and preaches peace and religious tolerance during his visit to Georgia
2 October 2016	Pope Francis leads a Sunday mass in Baku and meets with Azerbaijani President Ilham Aliyev during his visit to Azerbaijan
4 October 2016	The car of Georgian opposition party member Givi Targamadze is destroyed by an explosion in a suspected bombing in Tbilisi
5 October 2016	EU ambassadors approve the start of negotiations on visa liberalization for Georgia between the European Council and the European Parliament
5 October 2016	Chinese Commerce Minister Gao Hucheng and Georgian Economy Minister Dimitri Kumsishvili sign a memorandum of understanding on concluding free trade negotiations in Tbilisi
7 October 2016	A court in Azerbaijan rejects an appeal by investigative journalist Khadija Ismayilova to clear her record of charges of illegal entrepreneurship
8 October 2016	Georgia holds parliamentary elections with the Georgian Dream ruling coalition claiming to have won at least 58 percent of the vote
8 October 2016	Men attempting to storm a polling station in a village near Georgia's capital of Tbilisi clash with police; the Georgian Interior Ministry blames the opposition party UNM for the violence
9 October 2016	The Central Election Commission announces the results of the proportional representation part of parliamentary elections in Georgia with close to 49 percent of the votes for the Georgian Dream party and about 27 percent for the United National Movement opposition party. 77 parliamentary seats are assigned on the basis of proportional representation. A further 73 deputies are elected through a two-round system in single-member constituencies with majority rule. The second round of voting will take place on 30 October
10 October 2016	The leader of the Georgian Free Democrats opposition party, Irakli Alasania, announces that he is quitting politics temporarily and withdraws from the race for a parliamentary seat for the town of Gori
11 October 2016	The United National Movement opposition party in Georgia votes against boycotting Parliament and in favor of contesting majoritarian MP seats in the second round of voting
13 October 2016	Kyrgyz President Almazbek Atambayev meets with his Georgian counterpart Giorgi Margvelashvili in Tbilisi and reiterates his country's support for Georgia's territorial integrity
14 October 2016	Georgia signs an agreement in Sarajevo to join Europe's Energy Community
14 October 2016	Georgian Prime Minister Giorgi Kvirikashvili visits a US warship making a port call in the Black Sea coast town of Batumi

Compiled by Lili Di Pippo

For the full chronicle since 2009 see <www.laender-analysen.de/cad>

ABOUT THE CAUCASUS ANALYTICAL DIGEST**Editors**

Tamara Brunner, Lili Di Puppo, Iris Kempe, Matthias Neumann, Jeronim Perović, Heiko Pleines, Tinatin Zurabishvili

About the Caucasus Analytical Digest

The Caucasus Analytical Digest (CAD) is a monthly internet publication jointly produced by the Caucasus Research Resource Centers (<<http://www.crrccenters.org/>>), the Research Centre for East European Studies at the University of Bremen (<www.forschungsstelle.uni-bremen.de>), the Center for Security Studies (CSS) at ETH Zurich (<www.css.ethz.ch>), and the German Association for East European Studies (DGO). The Caucasus Analytical Digest analyzes the political, economic, and social situation in the three South Caucasus states of Armenia, Azerbaijan and Georgia within the context of international and security dimensions of this region's development.

To **subscribe** or unsubscribe to the Caucasus Analytical Digest, please visit our web page at <<http://www.css.ethz.ch/en/publications/cad.html>>

An **online archive** with indices (topics, countries, authors) is available at <www.laender-analysen.de/cad>

Participating Institutions**Center for Security Studies (CSS) at ETH Zurich**

The Center for Security Studies (CSS) at the Swiss Federal Institute of Technology (ETH Zurich) is a Swiss academic center of competence that specializes in research, teaching, and information services in the fields of international and Swiss security studies. The CSS also acts as a consultant to various political bodies and the general public.

Research Centre for East European Studies at the University of Bremen

Founded in 1982, the Research Centre for East European Studies (Forschungsstelle Osteuropa) at the University of Bremen is dedicated to the interdisciplinary analysis of socialist and post-socialist developments in the countries of Central and Eastern Europe.

Caucasus Research Resource Centers

The Caucasus Research Resource Centers program (CRRC) is a network of research centers in Armenia, Azerbaijan and Georgia. We strengthen social science research and public policy analysis in the South Caucasus. A partnership between the Carnegie Corporation of New York, the Eurasia Partnership Foundation, and local universities, the CRRC network integrates research, training and scholarly collaboration in the region.

Any opinions expressed in the Caucasus Analytical Digest are exclusively those of the authors.

Reprint possible with permission by the editors.

Editors: Tamara Brunner, Lili Di Puppo, Iris Kempe, Matthias Neumann, Jeronim Perović, Heiko Pleines, Tinatin Zurabishvili

Layout: Cengiz Kibaroglu, Matthias Neumann, and Michael Clemens

ISSN 1867 9323 © 2016 by Forschungsstelle Osteuropa, Bremen and Center for Security Studies, Zürich

Research Centre for East European Studies • Country Analytical Digests • Klagenfurter Str. 3 • 28359 Bremen • Germany

Phone: +49 421-218-69600 • Telefax: +49 421-218-69607 • e-mail: fsopr@uni-bremen.de • Internet: www.laender-analysen.de/cad/