

EU Standards velocity within EaP countries

Evaluation of the progress and challenges
in Moldova, Ukraine and Georgia



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List of abbreviations

AA	Association Agreement
ACAA	Agreement on Conformity Assessment and Acceptance of Industrial Products
ASTM	American Standard
CEN	European Committee for Standardization
CENELEC	European Committee for Electrotechnical Standardization
CIB	Comprehensive Institutional Program
CIS	Commonwealth of Independent States
DCFTA	Deep and Comprehensive Free Trade Area
DIN	German Standards Institute
DSTU	Ukrainian Standard
EaP	Eastern Partnership
EaP CSF	Eastern Partnership Civil Society Forum
EU	European Union
EN	European Standard
ETSI	European Telecommunications Standards Institute
GeoSTM	National Standards Body of Georgia
GOST	Soviet Union Standard
GOST R	Russian Standard
IEC	International Electrotechnical Commission
ISM	Institute for Standardization of Moldova
ISO	International Organization for Standardization
LEPL	Georgian National Agency for Standards and Metrology
MoESD	Georgian Ministry of Economy and Sustainable Development
ND	Normative Documents
NFND	National Fund of Normative Documents
NTB	Non-Tariff Barriers
RS	Standardization Rules
SM	Moldovan Standard
SME	Small and Medium Enterprise
SNIP	Normative documents in Construction sector
SR	Romanian Standard
STB	Belarusian Standard
TBT	Technical Barrier to Trade
TC	Technical Committee
UkrNDNC	Ukrainian Agency for Standardization
WTO	World Trade Organization

1. Introduction

The European Union and the Eastern Partnership countries (Georgia, Republic of Moldova, Ukraine, Armenia, Belarus and Azerbaijan) have committed to build strong and mutually beneficial economic and political relationships. In this respect, the European Neighborhood Policy of the European Union set ambitious objectives for the six EaP countries that request effective implementation of political, economic and institutional reforms from their behalf. However, only Georgia, the Republic of Moldova and Ukraine have implemented the necessary reforms that enabled the signing of the Association Agreements (including Deep and Comprehensive Free Trade Areas- DCFTAs) with the EU in 2014.

By signing these Association Agreements and DCFTAs, Georgia, Moldova and Ukraine have committed to harmonize their legislation and standards to those of the EU through which the objectives of boosting trade and economic growth through improved access to the European single market for their autochthonous products can be achieved. However, this objective could be achieved only through minimization of Tariffs and Non-Tariffs Barriers, which imply compliance with EU legislation, practices, technical regulations, standardization, metrology, accreditation, conformity assessment procedures and the market surveillance system as provided in the Association Agreements between the EU and Georgia, Moldova and Ukraine.

In this respect, the three EaP countries have started to accelerate the processes of implementation of European standards, benefiting from significant EU financial and technical assistance. The key objective of the European standardization system is to achieve an advanced degree of harmonization at European and national level. This harmonization is considered to be achieved when a product or service, conforming to a national standard of an EU Member State, complies also with the national standards of other EU Member States. The most effective way to achieve this goal is to develop European standards and the mandatory adoption of these standards by each member of the European Committee for Standardization (CEN) by withdrawing any conflicting national standard. However, the process of implementation of EU standards in Georgia, Moldova and Ukraine is a difficult challenge mainly because of the adopted and implemented soviet standards (GOSTs) that are conflictual with the European ones. More than that, the European standards aim at higher quality and require more efforts and financial resources than GOST standards.

This paper approaches in a comparative view the challenges and opportunities of the standardization process in three Eastern Partnership countries – Georgia, the Republic of Moldova and Ukraine- and outlines the basic trends and dynamics. It focuses on the transition from Soviet (GOSTs) to European/International standards and analyses the obstacles associated with this process. The paper seeks to figure out how the signing of the Association Agreements between the EU and the three EaP countries have contributed to the implementation of European standards in these countries and discusses practical examples in construction, agro-food and energy efficiency sector in support. In addition, it touches upon the development of national standardization frameworks in the EaP countries and reviews the level of engagement and partnership among other stakeholders, such as the civil society, public sector, academia, SMEs, etc.

Finally, the paper outlines major findings and offers specific recommendations for a greater implementation of the European standards in Georgia, Moldova and Ukraine.

2. Methodology

This study applies both qualitative and quantitative methods of analysis: carrying out comparative analysis of the legislation and institutional framework of the EaP countries (Moldova, Ukraine and Georgia) in the area of standardization in the context of the Association Agreement and Deep and Comprehensive Free Trade Agreements signed by these countries with the EU.

Besides, desk research and expert interviews have been carried in each EaP country which is the object of this study. Experts, from each EaP state were selected, both from standardization bodies and civil society representatives.

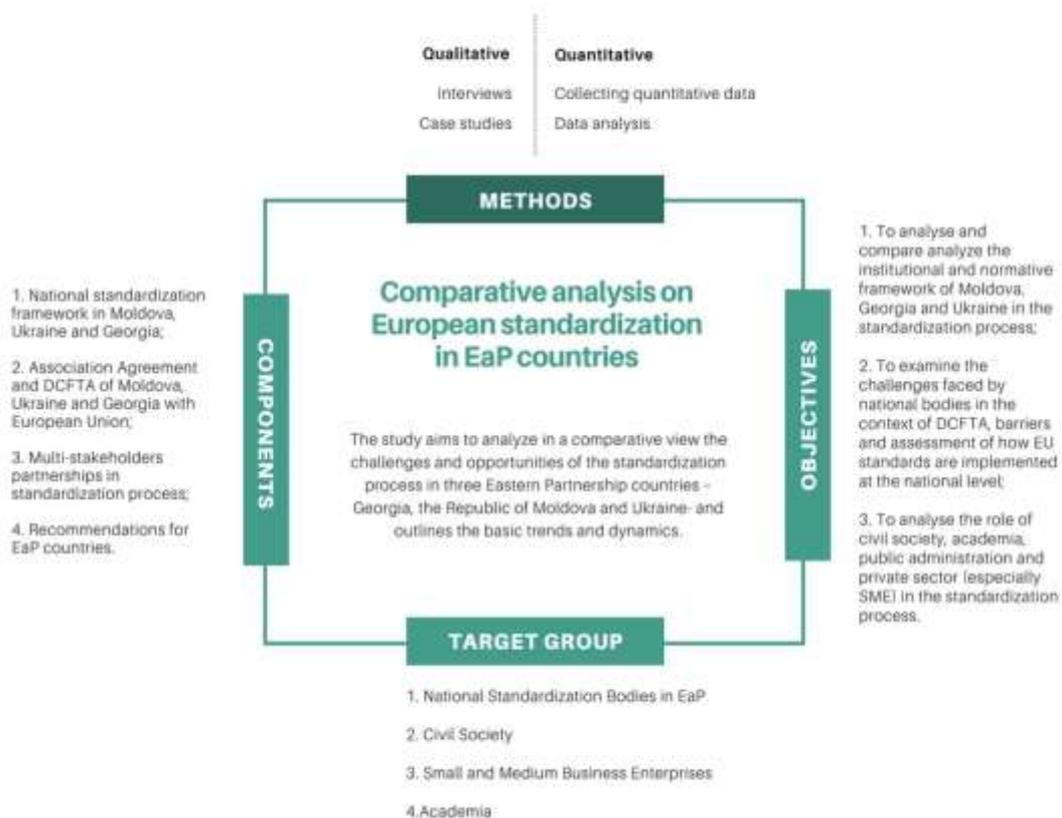


Figure 1: Flowchart of Research Methodology

Multiple case studies were chosen for our comparative analysis based on the similarities which exist between these countries (Moldova, Georgia and Ukraine) in terms of their political engagement. All three countries signed the Association Agreement (AA) and Deep and Comprehensive Free Trade Area (DCFTA) with the EU.

The study is framed in four main components:

1. National standardization framework in Moldova, Ukraine and Georgia – Chapter 3 of the Study;
2. Association Agreement and DCFTA of Moldova, Ukraine and Georgia with European Union – Chapter 4 of the Study;
3. Multi-stakeholders partnerships in standardization process – Chapter 5 of the Study;
4. Conclusions and recommendations for EaP countries.

In the chapter regarding *National standardization framework* we analyze the institutional and normative framework of Moldova, Georgia and Ukraine in the standardization process. The intention is to have in depth description of national regulations and institutional set-up and how these developed in the last years in the context of new political agenda.

Especially, will be analyzed following aspects:

- Legislation on standardization;
- Actual institutional framework in standardization: national standards body (statutes, functions, etc.);
- Implementation of European practices in national standardization rules;

The *Association agreement and DCFTA* chapter examines the challenges faced by national bodies in the context of DCFTA, barriers and assessment of how EU standards are implemented at the national level. A necessary element for EaP countries in converging towards EU regulations and standards is to move away from the GOST standards that are still in place in these countries and applied jointly with European ones.

In the Chapter regarding *Multi-stakeholders partnerships in standardization process*, the study analyses the role of civil society, academia, public administration and private sector (especially SME) in the standardization process. Thus, we examine what is the status quo of these actors' involvement in this process and what can be done to enhance their participation in this sector. Also, we present the communication tools developed by national standardization bodies of Moldova, Ukraine and Georgia to engage in the multi-stakeholder dialogue of interested parties.

In the chapter regarding *Conclusions and recommendations* for EaP countries, after drawing the main conclusions, a set of recommendations is designed for taking further steps towards reforms in EaP countries which are the object of the study. Also, based on the lessons learned from these countries recommendations will be made to other EaP countries as well.

3. National standardization framework in Moldova, Georgia and Ukraine

3.1 Institutional framework (Moldova, Georgia and Ukraine)

3.1.1 Republic of Moldova

In the Republic of Moldova, the development of a national standardization system, independent of the former Soviet system, began in 1995, with the adoption of Law no. 590/1995 "On Standardization", which introduced the notion of "national standardization body", these functions being assigned to the Department of Standards, Metrology and Technical Surveillance (Moldovastandard).

Subsequently, the Law no. 590/1995 has been amended several times, and the national standardization system has conducted a series of reforms. The final stage of reforming the national standardization system took place in 2012, when by the Government Decision no. 996/2012 "On some measures for reforming the quality infrastructure", the public institution "National Institute for Standardization" was created, as a distinct entity, separated from the other entities responsible for the quality infrastructure, subordinated to the Ministry of Economy, the public authority responsible for quality infrastructure.

With the support of international experts, as a result of the Twinning project "Strengthening institutional capacities in the field of standardization and metrology", has been developed the Law no. 20/2016 "On national standardization", through which have been transposed the relevant provisions of Regulation (EU) No. 1025/2012 of the European Parliament and of the Council of 25 October 2012 on "European standardization".

By Law no. 20/2016, the National Institute for Standardization was renamed into Institute for Standardization of Moldova. Its legal status was not changed – public institution. The activity of the Institute for Standardization of Moldova is regulated by the Regulation "For the organization and functioning of the Institute for Standardization of Moldova", approved by the Government Decision no. 969/2016. The main functions in the field of standardization are: development, adoption, review, modification, withdrawing of Moldovan standards, establishment of national standardization rules, management of the National Fund of Standards, creation and management of the activity of the technical committees and the Standardization Council, participation in the European, international and interstate standardization activity.

The Institute for Standardization of Moldova performs some activities related to standardization work as: stakeholder trainings and consultations in the field of standardization. The Law no. 20/2016 provides the Institute for Standardization of Moldova with a relatively high degree of autonomy in conducting its activity. Moreover, considering the status of a public institution of the Institute for Standardization of Moldova, it regularly presents information on the implementation of the National Standardization Program, the realization of the budget, the performance of membership functions at European, international and interstate standardization organizations.

The activity of the Institute for Standardization of Moldova is financed mainly from the state budget (approximately USD 270,000 annually, or 87% of ISM's annual budget) and incomes

from sale of standards (about 40,000 USD annually or 13% of ISM's annual budget). In the average, 4,500 copies of standards are sold annually.

Besides the Institute for Standardization of Moldova there are two structures with attributions in the field of standardization:

Institute for Standardization of Moldova	Standardization Council , advisory body on strategy and development issues in the field of national standardization, made up of representatives of all stakeholders	Main attributions: participating in the development of national standardization policy; approving the documents regarding the activity strategy of the national standardization body and standardization program
	Advisory Committee , an ISM consultative structure, without legal personality, made up of ISM employees with extensive experience in the field of standardization	Main attributions: assisting the ISM management in the processes of withdrawing of conflicting or obsolete standards in areas where there are not standardization committees and examination of the drafts of standards if these projects do not comply with the standardization rules

Besides the Institute for Standardization of Moldova there are also 26 technical committees:

Institute for Standardization of Moldova	18 technical committees in the following areas: tobacco, fruit, bakery products, meat, beer, biofuel, combustible gases, medical devices, conformity assessment, power engineering, information technology, building products, energy efficiency of buildings etc.	<p>3 of technical committees are declared mirror with the European technical committees:</p> <p>a) TC 33 "Medical devices" mirror with CEN/TC 204 "Sterilization of medical devices" și cu CEN/TC 205 "Non-active medical devices";</p> <p>b) TC 49 "Energy efficiency of buildings" mirror with CEN/TC 89 "Thermal performance of buildings and building components", with CEN/TC 169 "Light and lighting", with CEN/TC 228 "Heating systems and water based cooling systems in buildings";</p> <p>c) TC 50 "Products processing plant raw material" mirror with CEN/TC 275 "Food analysis - Horizontal methods".</p>
	8 project technical committees (ad hoc committees) in the following areas: special vehicles, mileage indicators, assessment of the competence of testing laboratories, carpets etc.	<p>4 of technical committees are declared mirror with international technical committees:</p> <p>a) TC 1 "Library. Information. Documentation" mirror with ISO/TC 46 "Information and documentation";</p> <p>b) TC 32 "Solid biofuels" mirror with ISO/TC 238 "Solid biofuels";</p> <p>c) TC 43 "Conformity assessment" mirror with ISO/CASCO Committee on conformity assessment;</p> <p>d) TC 48 "Information technology and electronic communications" mirror with ISO/IEC JTC 1/SC 6 "Telecommunications and information exchange between systems".</p>

3.1.2 Georgia

Standard is a document developed on the basis of consensus and registered by the National Authority, laying down the rules and general specifications for universal and multiple use in order to optimise different types of activities and their outcomes in the specific field. Standards in Georgia are developed and registered through LEPL-Georgian National Agency for Standards and Metrology (GeoSTM)¹, which is recorded in the system of the Georgian Ministry of Economy and Sustainable Development (MoESD).

The main functions of the Agency are: a) maintenance of the registry of standards and provision for their publicity; b) maintenance of the registry of patterns of legalised measurement means; c) approval/recognition and verification of patterns of legalised measurement means; d) providing information on the registered standards; e) exchanging information with appropriate international organisations on standards and technical regulations registered in Georgia; f) representation of Georgia in international and regional organisations operating in the field of standardization and metrology – within the scope of its authority; g) provision for the fulfilment of obligations undertaken under international agreements concluded by Georgia in the field of standardization and metrology².

The list of standardization organisations whose standards are available through GeoSTM include the following:

- ISO (International Organization for Standardization);
- IEC (International Electrotechnical Commission);
- CEN (European Committee for Standardization);
- CENELEC (European Committee for Electrotechnical Standardization).

3.1.3 Ukraine

The Ministry of Economic Development and Trade of Ukraine (further – the Ministry), being a central body of the executive power, among its other activities, ensures shaping of state policy in the field of standardization³.

In particular, there are the following activities that belong to the Ministry:

- 1) ensuring normative and legal regulations in the field of standardization;
- 2) defining priority directions of development in the field of standardization;
- 3) informing and providing explanations regarding the implementation of state policy in the field of standardization⁴;
- 4) generalization of practices of applying legislation in the field of standardization⁵, elaboration of proposals on its improvement and initiating in the respective order the

¹ http://geostm.ge/geostm.php?id_pages=72

² <https://matsne.gov.ge/en/document/view/1659419?publication=8>

³ <http://www.me.gov.ua/Tags/DocumentsByTag?lang=uk-UA&id=38beb036-588e-4f53-8676-37ada2005572&tag=Standartizatsiia>

⁴ <http://www.me.gov.ua/Documents/List?lang=uk-UA&tag=ZagalnaInformatsiiaSchodoSferiTekhnichnogoRegulivannia>

⁵ https://www.google.com.ua/url?sa=t&rct=j&q=&esrc=s&source=web&cd=8&cad=rja&uact=8&ved=0ahUKewiW9r7M2cDV AhXHDxoKHVuHAtYQF ghAMAc&url=http%3A%2F%2Fcci.dp.ua%2Ftl_files%2Fdata%2Fcontent%2Fmaterials%2520library%2F10%2520ljutogo%25202016r%2FSistema%2520texnichnogo%2520reguljuvannja%2520Ukrajini.ppt&usg=AFQjCNGI6qQq-jG9kWFUfj7cz1xc1M34A

- projects of the legal acts, acts of the President of Ukraine and Cabinet of Ministers of Ukraine;
- 5) coordination of Programs of activities on national standardization.

However, most of the key tasks in organizational and methodological tasks in terms of regulating the relations and interactions in the field of standardization of Ukraine (according to the Law) belong to the competence of National Standardization Body, which is (according to the Decree of the Cabinet of Ministers of Ukraine dated by 26.11.2014, #1163-r) Ukrainian Agency of Standardization (further – Agency), which is currently being reorganized on the basis of State Enterprise “UkrNDNC” (which was created by the Decree of the Cabinet of Ministers of Ukraine dated by 21.08.2003, #1337; currently it is being rebranded). According to the decision of the Cabinet of Ministers of Ukraine, the Agency is subordinated to the above-mentioned Ministry.

The key activities of the Agency are ⁶:

- ensuring functioning and development of the national system of standardization; technical inspection of projects of standards, harmonization of national standards with the international and European standards, coordination of national technical committees of standardization and consultations on marking production, certification of products, services and systems of management;
- assessment of the products compliance with the technical regulations;
- training and advanced training of specialists in the fields of standardization, certification, metrology and systems of management, training of scientific staff of highest qualification;
- managing *the National Fund of normative documents*⁷; ensuring preservation, audit, actualization of normative documents and providing access to them to the users;
- preparing and issuing normative documents, manuals, informational catalogues of standards, etc.;
- issuing the professional journal “Standardization, certification, quality”.

3.2 Legal and methodological framework (Moldova, Georgia, Ukraine)

3.2.1 Republic of Moldova

For the first time, the national standardization system of the Republic of Moldova, as an independent state, was regulated by Law no. 590/1995 "On standardization". Until 2007, this law has maintained the old approach to the mandatory character of standards. In 2006 was adopted the Law no. 420/2016 "On technical regulation activity". This law it first established the voluntary nature of the standards and implemented the modern technical regulation mechanism (New Approach), creating a clear link between mandatory technical regulations and voluntary standards.

At the moment, the standardization activity in the Republic of Moldova is regulated by Law no. 20/2016 "On national standardization". The Law no. 20/2016 provides the elements of the national standardization system, the attributions of the national standardization body, its relations with regulatory authorities, including the regulatory authority responsible for quality

⁶ <http://uas.org.ua/ua/zagalni-vidomosti-pro-dp-ukrndnts/>

⁷ <http://uas.org.ua/ua/natsionalniy-fond-normativnih-dokumentiv/polozhennya-pro-natsionalniy-fond-normativnih-dokumentiv/>

infrastructure (Ministry of Economy), the attributions of the Standardization Council, the objectives and principles of national standardization.

In accordance with the provisions of the Law no. 20/2016, the national standardization rules establish how to develop, approve, adopt, periodically review, amend, withdraw standards, and how to create and management the national technical committees. The national standardization rules are based on the European and international standardization rules (CEN, CENELEC, ISO and IEC), are developed and approved by the Institute for Standardization of Moldova. In 2017 ISM has developed and approved 8 national standardization rules:

- a) RS 1:2017 "Development of Moldovan standards";
- b) RS 2:2017 "Adoption of European standards as Moldovan standards";
- c) RS 3:2017 "Adoption of international standards as Moldovan standards";
- d) RS 4:2017 "Adoption of interstate standards as Moldovan standards";
- e) RS 5:2017 "Adoption of standards of other states as Moldovan standards";
- f) RS 6:2017 "Presentation of Moldovan standards";
- g) RS 7:2017 "Structure, draw up and content of Moldovan standards";
- h) RS 8:2017 "Requirements for the establishment and for the operation of the technical committees".

3.2.2 Georgia

The legal framework of the standardization process in Georgia is provided by the 2012 law on Product Safety and Free Movement Code, which among other goals intends to introduce best practices in this field and contribute to its harmoniation with EU legislation⁸. According to the law, a standard must be based on the generalised results of practical experience, science and technology and must be intended to increase production efficiency and compatibility. The use of a standard is voluntary in Georgia. A manufacturer may develop and use other technical approaches to meet the requirements of technical regulations, except when a technical regulation directly specifies the use of a particular standard.

A standard is granted a legal status after it is registered by the Agency within the Register of standards. The Agency operates through technical committees, which it established in coordination with the Ministry of Economy and Sustainable Development of Georgia (MoESD) according to the respective fields of standardization. The methodological framework of standardization is as follow: 1. An interested party can approach the Agency with the aim of developing a standard; 2. The Agency makes a decision on the appropriateness of recognizing a standard by discussing the issue in a suitable technical committee; 3. The discussion process by the technical committee is coordinated by the agency with the MoESD; 4. The technical committee makes a decision on the basis of consensus on the appropriateness of adopting a standard. In the case of adoption of a standard developed in Georgia, the Government of Georgia makes a decision to allow its application based on a request of the technical committee⁹.

The following standards are applicable in Georgia: the national standard of Georgia; standard of international/regional organizations (ISO, IEC; CEN, CENELEC); Interstate standard – named "GOST", which is used in Georgia on the basis of the 1995 Agreement of heads of

⁸ <https://matsne.gov.ge/en/document/view/1659419?publication=8>

⁹ <https://matsne.gov.ge/en/document/view/1659419?publication=8>

Commonwealth of Independent States (CIS); Internal standard of the enterprise; It should be mentioned that unlike standards of international and regional organizations, GOSTs are not registered as state standards.¹⁰

3.2.3 Ukraine

The national mechanism of standardization in Ukraine is shaped by the following founding structural, legal and administrative (governmental) factors:

- *The Law of Ukraine "On Standardization"* (dated by 05.06.2014 #1315-VII, which came into force on 03.01.2015 p.)¹¹;
- government of Ukraine represented by *Ministry of Economic Development and Trade of Ukraine*¹²;
- national standardization body which is *Ukrainian Agency of Standardization – SE "UkrNDNC"*¹³.

All the activities in the field of standardization in Ukraine are being taken within the regulations prescribed by the aforementioned Law. Although it is a framework document by its nature; it outlines only the main aspects of both expertise and procedures. The law foresees legal and organizational founding stones of standardization in Ukraine, points at the procedures of solving the key issues of state policy in the field of standardization, envisages that activities of the responsible executors, defines the objects of standardization and the aspects of property, regulates interaction of the interested parties and their relations regarding the activities in the field of standardization and of the implementation of the results of the mentioned activities.

It is noteworthy that the Law does not take into consideration sanitary activities related to safety of food, veterinary and sanitary and phytosanitary activities, construction norms, medicines, standards of medical care, standards of accounting, assessment of property, education and other social standards foreseen by the legislation of Ukraine. It is noteworthy that the legislation of Ukraine in the field of standardization includes the mentioned Law, relevant international treaties where Ukraine is a party and other normative and legal acts that are regulating the relations in the field of standardization.

3.3 Evolution of the national fund of standards (Moldova, Georgia, Ukraine)

3.3.1 Republic of Moldova

The Republic of Moldova, as well as other former Soviet Union countries, has inherited the entire GOST standards fund, approved until 1992. The application of about 19,000 GOST standards on the territory of the country was ratified in 1992, after the proclamation of the independence of the Republic of Moldova. Since 1992 until 2004 the National Fund of Standards has grown insignificantly, the main concern of the national standardization body was to maintain the current versions of the GOST standards (replacement of the old versions

¹⁰ http://geostm.ge/geostm.php?id_pages=72

¹¹ <http://zakon2.rada.gov.ua/laws/show/1315-18>

¹² <http://www.me.gov.ua/?lang=uk-UA>

¹³ <http://uas.org.ua/> (which according to the Decree of the Cabinet of Minister of Ukraine dated by 26.11.2014 #1163 performs the functions of a national standardization body)

with the new ones approved by the EASC), as well as the development of the original Moldovan standards (SM) in areas for which there were no GOST standards.

In 2004-2005, Moldova's approximation to the European Union was supported by the Moldova - EU Action Plan developed under the European Neighborhood Policy and adopted in February 2005 by the Cooperation Council. This approximation determined an enhancement process of transposing European legislation into national legislation and, implicitly, the adoption of the relevant European and international standards as Moldovan standards. By 2012, 3693 European standards and 772 international standards have already been adopted in the Republic of Moldova (see Table 1).

The negotiation and subsequent signing of the Association Agreement Republic of Moldova - the European Union imposed an increase of the rhythms of adopting the European and international standards and, accordingly, the withdrawing of conflicting GOST standards. In the period 2012-2017, approximately 2500-3500 European standards and approximately 300-500 international standards were adopted annually in the Republic of Moldova (see Table 2 and Table 3).

Simultaneously with the adoption of European and international standards, the Institute for Standardization of Moldova initiated an extensive process of identifying and withdrawing the GOST standards and original Moldovan standards (SM) that were conflicting with European and international standards or were technologically outdated and did not correspond to current technical progress. During 2012-2017, approximately 14,300 GOST standards were withdrawn (see Table 4).

Table 1 – Total number of standards valid for 2012-2017 (on January 1st) by category of standards

Category of standard	2012	2013	2014	2015	2016	2017
GOST ¹⁾	18 996	18 699	13 670	12 202	7 629	4 580
EN ²⁾	3 693	5 585	7 915	10 556	14 544	16 591
ISO/IEC ³⁾	772	2 075	2 421	2 682	2 884	2 918
Original national ⁴⁾	218	221	223	225	129	132
Other standards ⁵⁾	399	449	432	443	378	390
TOTAL	24 078	27 029	24 661	26 108	25 564	24 611

NOTES:

1) GOST - Interstate standards, developed by former U.R.S.S. until 1992 and ratified as national, as well as GOST standards developed by the EASC after 1992 and adopted as national standards;

2) EN standards also include EN ISO, ETSI and other standards and technical specifications approved by European standardization organizations (CEN, CENELEC, ETSI) and adopted as national standards, including interstate or other states standards eg. GOST EN, STB EN, GOST R EN ISO etc.);

3) At the category ISO/IEC refers also all international standards approved by international ISO and IEC standardization organizations and adopted as national standards, including interstate or other states standards (eg. GOST ISO, GOST IEC, GOST R ISO, STB IEC, etc.), except for European standards that adopt international standards (see note 2);

4) At the original national standards category refers also the standards developed and approved at national level, including those based on other standards but not taking them identically. For example, an original national standard may be based (harmonized) on international standard (ISO) or other states (ASTM) but is not identical with it;

5) Other states standards (eg. STB, GOST R, ASTM etc.), adopted as national standards, are attributed to the "other standards" category, except for the standards of other states that take international and European standards (see notes 2) and 3))

Table 2 – Number of European standards (EN) adopted as national standards in 2012-2017

2012	2013	2014	2015	2016	2017
2 190	2 166	2 558	2 762	4 744	2 074

NOTE - EN standards also include standards EN ISO, ETSI and other standards and technical specifications approved by European standardization organizations (CEN, CENELEC, ETSI) and adopted as national standards, including interstate or other states standards: GOST EN, STB EN, GOST R EN ISO, etc.)

Table 3 – Number of international standards (ISO, IEC) adopted as national standards in 2012-2017

2012	2013	2014	2015	2016	2017
907	652	540	209	368	194
NOTE – At the category of ISO/IEC refers also all international standards approved by international ISO and IEC standardization organizations and adopted as national standards including interstate or other states standards (eg GOST ISO, GOST IEC, GOST R ISO, STB IEC, etc.), except for the European standards that take international standards (see note 2) in Table 1)					

Table 4 – Number of GOST standards and original national standards withdrawn in 2012-2017

Number of withdrawn standards, including	2012	2013	2014	2015	2016	2017
GOST standards	103	766	4 821	1 152	4 686	2 827
National original standards	12	4	20	17	47	35

In order to ensure the effective implementation of European legislation transposed into national law, the Institute for Standardization of Moldova adopted the entire body (3 491) of harmonized European standards by 2016, cited in the Official Journal of the European Union. According to national policy documents¹⁴, the Institute for Standardization of Moldova has planned to adopt the entire corpus of European standards (about 24 800¹⁵ standards) by the end of 2019.

3.3.2 Georgia

Prior to 2005, State Department of Standardization, Metrology and Certification (GeoStandard) was responsible for providing supervision on industrial goods' market. Standards (GOSTs) were adopted by the state and implementation of their requirements were obligatory. On the basis of reforms implemented in 2005, the Department of Standardization, Accreditation and Certification, which was a single state body, was divided into two – LEPL National Agency of Accreditation and LEPL National Agency of Standards, Technical Regulations and Metrology of Georgia. At the same time, standards became voluntary and obligatory requirements were transferred from standards to technical regulation¹⁶. From this time onwards, the Agency has become a member of relevant international and European organizations, such as ISO (from 2006), CEN (from 2008), CENELEC (from 2010), etc.

In 2010, within the DCFTA negotiations between the the EU and Georgia, the government of Georgia adopted a Technical Barrier to Trade (TBT) strategy, which aimed at reducing trade barriers upon the recommendations of the European Commission¹⁷. For the implementation of the strategy principles, the government has also developed a TBT program, which intended

¹⁴ The Moldova-EU Association Agreement establishes the obligation of the Republic of Moldova to integrate its standardization system into the European standardization system, including by obtaining by Institute for Standardization of Moldova of the status of full member in European standardization organizations. According to the CEN-CENELEC Guide 20, the national standardization body applying to become a national member must ensure that at least of 80% of the European standards have been adopted at the time the application is submitted and for the remaining of 20 % of European standards set a reasonable deadline for adopting as national.

¹⁵ 15985 standards approved by CEN (<https://www.cen.eu/about/CENinFigures/Pages/default.aspx>) and 6 857 standards approved by CENELEC (<https://www.cenelec.eu/aboutcenelec/whatwedo/factsandfigures/>). This figure does not include standards approved by ETSI, for the reason that not all ETSI standards need to be adopted as national standards.

¹⁶ http://gov.ge/files/68_32410_314102_strategia.pdf

¹⁷ http://www.economy.ge/uploads/dcfta/TBT_Strategy_GEO.pdf

to contribute to implementing legislative reforms and technical regulation also in the field of standardization¹⁸.

TBT strategy and program resulted in adoption of Supervision Strategy of Production Market in 2011¹⁹ and Product Safety and Free Movement Code in 2012²⁰. These reforms have accelerated the approximation process with the EU standards and legislative framework, which is yet to be proved by a quick pace of the standardization. Particularly, as of 2011, 50 standards were registered in total, from which 35 were national standards and 15 - international standards were registered as Georgian standards. As of today, 10,682 standards are registered, from which 5783 are national standards, while 4899 international standards. Nowadays, 45% of standards registered in Georgia are international and European, which is quite high number. The dynamics of standardization during the last 6 years demonstrate that the process is significantly progressive.

Table 1 – Total number of available standards for 2012-2017 (on January 1st)

2012	2013	2014	2015	2016	2017
149	234	977	1,725	2,238	1,092

Table 2 – Total number of available standards for 2012-2017 (on January 1st) with division by category of standards

Category of standards	2012	2013	2014	2015	2016	2017
GOST	-	-	-	-	-	-
EN	99	127	412	822	1540	1065
ISO/IEC	50	95	524	903	656	27
National standards (original)			1			4
Other standards	-	-	-	-	-	-

Table 3 – Number of European standards (EN standards) adopted as national standards in 2012-2017

2012	2013	2014	2015	2016	2017
99	139	453	822	1582	1065

Table 4 – Number of international standards (ISO, IEC) adopted as national standards in 2012-2017

2012	2013	2014	2015	2016	2017
50	95	524	903	656	27

¹⁸ http://www.economy.ge/uploads/dcfta/TBT_Programme_GEO.pdf

¹⁹ http://www.economy.ge/uploads/dcfta/samrecvelo_produqtebis_bazarze_zedamxedvelobis_strategia.pdf

²⁰ http://www.economy.ge/uploads/dcfta/produqtis_usafrtxoebis_kodeqsi.pdf

3.3.3 Ukraine

It was the adoption of a new edition of the Law of Ukraine “On Standardization” (dated by 05.06.2014, #1315-VII) that became crucial for the current development of system of standardization in Ukraine in general. By this law the obligation to apply standards and other normative documents in the field of standardization, registering of technical specifications, necessity to coordinate the drafts of the national standards between the institutions were cancelled. The implementation of the Law provides opportunities for improvement of legal and organizational basics of national standardization, creation of national system of standardization, which corresponds with the modern demands and trends and assures coordinated national policy in this field; correlates national system with the European model; creates organizational forms of activities in the field of standardization that will correspond to international and European practices; keeping the basic principles of standardization.

In Ukraine harmonization of national standards with the international and European standards is ongoing process. Mostly it relates to those standards voluntary application of which is a proof that the products are matching with the demands of technical regulations similar to the respective directives of New and Global approaches of the European Union²¹. The validity of the interstate GOSTs adopted before 1992 was cancelled by the aforementioned Law. The positive outcome of the Law’s adaptation was also cancellation of the necessity to fill and maintain card indexing of the funds: ISO, EN, IEC and GOST R, and also cancellation of the necessity to maintain numerated paper card indexes of national normative documents. The latter to outcomes significantly optimized the procedures of working with the standardization documentation and became possible due to applying IT-technologies.

Therefore, in the activities of the national standardization fund of Ukraine – **National fund of normative documents**²² (further – the NFND) – in the last years there have been a significant organizational, methodological and technical progress. By now the NFND includes more than 15 thousand national standards, out of which more than 11 thousand are harmonized with the international and European ones. NFND is maintained by Ukrainian agency of standardization (SE «UkrNDNC»; further – Agency). According to the above-mentioned Law some types of activities in the field of standardization have been assigned to the category of services. Consequently, the possibility for shaping of standardization segment of market of administrative services in Ukraine has been created. Grounding on that there is a part of standardization documentation that is disseminated by the NFND on the contract (paid) basis and it provides an opportunity for additional filling of budget basket to insure functioning of the NFND and its improvement.

A significant achievement in modernization of NFND is shifting from hard copies to electronic copies of the normative documents (further – the ND). In case of necessity the NFND is disseminating the official copies of the ND both in hard copies and in electronic copies. In order to get them you have to fill the respective application form (for physical persons and legal entities). For buying the electronic copies of the ND a client can use the services of the

²¹ <http://cons.parus.ua/map/doc/081XN93252/Pro-zatverdzhennya-metodichnikh-rekomendatsii--schodo-vprovadzhennya-polozhen-direktiv-Novogo-ta-Globalnogo--pidkhodu-levropeiskogo-Soyuzu-yak-tekhnichnikh-reglamentiv.html>

²² <http://uas.org.ua/ua/natsionalniy-fond-normativnih-dokumentiv/polozhennya-pro-natsionalniy-fond-normativnih-dokumentiv/>

Internet-shop²³, which is located at the Agency's portal. The same is applicable for the international standards. In particular, starting from October 2015 the NFND is disseminating the official copies of international standards ISO and the pricing is recommended in accordance with the Policy on dissemination of ISO publications and copyright ISO – ISO POCOSA 2012²⁴. By now the Agency has signed the treaties on cooperation and dissemination of standards with the German Institute of Standards (DIN), American Society for Testing and Materials (ASTM). Currently the rules of commercial dissemination of these standards are being analyzed and the respective procedures are being elaborated. The beginning of selling DIN and ASTM standards is planned for the autumn this year. Also, it is planned to sign the treaties on dissemination of standards with the International Electrotechnical Commission IEC and European Telecommunication Standards Institute, which assists in implementing the achievements of technical progress and development of the technologies, provides an opportunity to coordinate national technical policy in the field of standardization with the technical policies of the Ukraine's trade partners.

Table 1 – Total number of available standards for 2012-2017 (on August 31st)

2012	2013	2014	2015	2016	2017
n/a	n/a	n/a	n/a	n/a	21706

Table 2 – Total number of available standards for 2012-2017 (on August 31st) with division by category of standards

Category of standards	2012	2013	2014	2015	2016	2017
DSTU GOST (after 1992p.)	n/a	n/a	n/a	n/a	n/a	946
DSTU EN (IDT)	n/a	n/a	n/a	n/a	n/a	5301
DSTU ISO/IEC	n/a	n/a	n/a	n/a	n/a	5041
National standards (original)	n/a	n/a	n/a	n/a	n/a	19082
Other standards DSTU B	n/a	n/a	n/a	n/a	n/a	1298
RST	n/a	n/a	n/a	n/a	n/a	380

Table 3 – Number of European standards (EN standards) adopted as national standards in 2012-2017

2012	2013	2014	2015	2016	2017
n/a	n/a	n/a	n/a	n/a	307+37 changes and amendments

Table 4 – Number of international standards (ISO, IEC) adopted as national standards in 2012-2017

2012	2013	2014	2015	2016	2017
n/a	n/a	n/a	n/a	n/a	148+9

²³ <http://shop.uas.org.ua/>

²⁴ www.iso.org

4. European aspirations of Moldova, Georgia and Ukraine

4.1 Association Agreement and DCFTA with European Union

4.1.1 Republic of Moldova

The year 2014 has been of historical importance for the Republic of Moldova, as the country has signed with the European Union the Association Agreement. The Agreement enacts a Deep and Comprehensive Free Trade Area (DCFTA). The free trade agreement is "deep and comprehensive" since it is including a far-reaching regulatory approximation and market access liberalization, in line with the rights and obligations arising out of WTO membership of Moldova and EU.

The creation of the free trade area between Moldova and the EU directly involves standardization sector which is covered by Chapter 3 of Title V on Trade and Trade-Related Aspects (ALSAC) of the Association Agreement. This compartment largely reflects the provisions of the WTO Agreement on Technical Barriers to Trade. This implies the integration of the Moldovan standardization system into the European one. In this context, Moldova must: (1) progressively transpose the corpus of European Standards (EN) as national standards, including the harmonized European standards, the voluntary use of which shall give a presumption of conformity with Union legislation transposed into the legislation of the Republic of Moldova;²⁵ (2) at the same time simultaneously with such transposition, withdraw conflicting national standards;²⁶ (3) progressively fulfill the conditions for full membership of the European Standards Organizations (CEN, CENELEC, and in the case of ETSI - optional).

Taking into account the signing of the Association Agreement with the European Union, the Republic of Moldova has undertaken the responsibility to transpose an extensive number of directives and regulations and to make changes to the administrative procedures, which also have implications for the standardization system. Thus, the Institute for Standardization of Moldova (ISM), as a national standardization body of the Republic of Moldova is a member of CEN (since 2007) and of CENELEC (since 2014) and as well, an observer member of ETSI (since 2014).

In the framework of DCFTA, the Standardization body from Moldova should adopt by the end of 2018, 80% of European standards which means about 24 500 standards²⁷. Up to 2016, about 10.500 European standards have been adopted as national. At the same time, Moldova has committed to transpose 17 European Directives based on the principles of the New Approach and their associated 3491 harmonized EN standards. Moldova succeeded to adopt 100% of of harmonized EN standards.

Moreover, the Association Agreement provides the cooperation in the field for industrial products and the possibility of concluding mutual recognition agreements. Therefore, an Agreement on Conformity Assessment and Acceptance of Industrial Products (ACAA) is envisaged to be added as a protocol to the Association Agreement and is going to cover sectors that have been aligned and agreed upon, following verification by the Union, that the relevant sectorial and horizontal legislation, institutions and standards of the Republic of

²⁵ Association agreement EU-RM Art. 173, par. (5) let. (a).

²⁶ Association agreement EU-RM Art. 173, par. (5) let. (b).

²⁷ The number of European standards published on 01.01.2016

Moldova have been fully aligned with those of the Union. ACCA would offer the possibility to Moldovan producers to certify their products in the Republic of Moldova, certification which will have recognition at the European Union level. In more concrete terms, the trade between the Republic of Moldova and the EU with products in the sectors that ACCA covers will take place under the same conditions that are applied to EU member states. In this respect, the Ministry of Economy has adopted a Roadmap on 18th November 2016 for initiation negotiations on the ACCA. According to the adopted Roadmap, the signing of the ACCA between the Republic of Moldova and the EU and inclusion it as Protocol to the Association Agreement would happen in the 4th semester of 2022²⁸.

4.1.2 Georgia

By signing the Association Agreement, Georgia has expressed readiness to implement and promote the values which have been long established in the EU. The Association Agreement concluded between Georgia and the EU is an ambitious and innovative, a New Generation Agreement. It covers the Deep and Comprehensive Free Trade Area (DCFTA) and envisages significant individual mechanisms of EU approximation. Establishment of a Deep and Comprehensive Free Trade area between the EU and Georgia is provided by the Title IV of the Association Agreement. It embraces mutual liberalisation of trade between parties through the elimination of Tariffs and Non-Tariff Barriers.

Elimination of NTBs is provided through comprehensive action on harmonization of the legislation and practices in a wide range of areas, which include but are not limited to national treatment and market access for goods; technical barriers to trade, standardization, metrology; sanitary-phytosanitary measures; customs and trade facilitation, etc.

In the process of the DCFTA implementation, the most important objective is to open all possibilities for Georgian goods and services to reach the EU market. This objective should be attained through minimisation of the Non-Tariff Barriers (NTB), through legal and regulatory approximation and through mutual recognition (by the parties) of measures in the areas of industrial goods and food products. It is necessary to develop adequate quality infrastructure and provide the important part of industries with laboratories, verification, inspection, market surveillance mechanisms.

Most important tasks to achieve necessary conditions by Georgia are:

- Efficient work of the Government services (adequate qualification of personnel, plans and coordination mechanisms);
- Identification of priority areas and development of a long list of actions;
- Secure availability of financial and human resources;
- Conducting intensive Communication activities to raise awareness of stakeholders and general public;

According to AA, with a view to integrating its standardization system, Georgia shall use best practices to ensure that its standards body:

²⁸ Ministry of Economy of the Republic of Moldova, „The Roadmap for Initiating Negotiations on the Evaluation Agreement Conformity and Acceptance of Industrial Products AECA)” Order of the Ministry;

- (a) progressively transposes the corpus of European standards (EN) as national standards, including the harmonized European standards, the voluntary use of which shall give presumption of conformity with Union legislation transposed into Georgian legislation;
- (b) simultaneously with such transposition, withdraw conflicting national standards;
- (c) progressively fulfill the other conditions for full membership of the European standards organizations²⁹.

The EU also provides financial as well as technical assistance to this end. Currently, the Comprehensive Institutional Building (CIB) program is being implemented by the support of the EU, which aims at modernising the Agency's equipment and infrastructure, as well as personnel training.

4.1.3 Ukraine

On September 16, 2014, the Verkhovna Rada of Ukraine and the European Parliament simultaneously ratified the Association Agreement between Ukraine and the European Union³⁰, which envisaged the establishment of number of political institutions aimed at development of cooperation and partnership as well as establishment of deep and comprehensive free trade area (DCFTA). The parties confirmed their rights and obligations foreseen by the World Trade Organization regulations (WTO) on technical trade barriers (TTB), and also have undertaken the obligation to enhance technical cooperation in the field of normative and legal issues, enhance relations with the respective organizations, which are in charge of the issues of metrology, standardization, testing, market oversight, certification and accreditation. The Agreement foresees participation of Ukraine in the activities of the respective international organizations, support in development of the efficient infrastructure of systems of standardization, metrology, accreditation, assessment of compliance and market oversight.

According to the Decree of the Cabinet of Ministers of Ukraine (Cabinet) dated by September 17, 2014 #847-p³¹ Implementation Action Plan of this Agreement for 2014-2017³² has been implemented. Also, Ukraine committed to implement European standards as national gradually alongside with cancelling national standards that violate the EU's standards.

There tasks for Ukraine are foreseen by:

- Article 56 of Annex III of Association Agreement (which explicitly says that it is necessary to implement European standards as national standards, in particular harmonized European standards, voluntary implementation of which will correspond with the legislative demands);
- Articles 85 and 124;
- Annex XVII-3 (which refers to harmonization of standards necessary for ensuring exchange of e-documents with the electronic signature between Ukraine and the EU

²⁹ EU-Georgia Association Agreement. Retrieved from https://eeas.europa.eu/sites/eeas/files/association_agreement.pdf

³⁰ http://zakon2.rada.gov.ua/laws/show/984_011

³¹ With the amendments approved by the Decree of a Cabinet #1401-p dated by 30.12.2015 and № 217-p dated by 18.02.2016; Decree of the Cabinet #160 dated by 24.02.2016 and #950 dated by 14.12.2016; Decree of the Cabinet #92-p dated by 08.02.2017; Decree of the Cabinet #57 dated by 08.02.2017

³² <http://zakon3.rada.gov.ua/laws/show/847-2014-%D1%80/print1452597195988612#n12>

member states (with the consideration of the respective Directive³³ of the European Parliament and Council dated by December 13, 1999 on electronic signatures which is applied in the EU) and electronic flow of documents);

- Article 355, Annex XXIX (which refers to the improvement of energy statistics aimed at harmonization with the European and international standards within the new component D "Support of cooperation in the field of statistics" of "INOGATE" Project aimed a harmonization of energy statistics of Ukraine with the European and international standards etc.).

Ukraine actively participates in the activities of the international and European organizations which are in charge of shaping and implementation of system of technical regulations and also takes the measures to fulfill the demands for gaining full-fledged membership in the European organizations of standardization. In this regard Ukraine in accordance with the Decree of the Cabinet of Ministers of Ukraine dated by August 19, 2015 #844-p adopted the Strategy of development of technical regulation system until 2020³⁴.

Therefore, the political and normative impact of the Agreement on the process of European standards implementation and the development national standardization system is significant if not vital.

The mentioned Strategy says that the necessity of further reformation of system of technical regulation to a great extent is invigorated by the combination of the following factors:

- elimination technical barriers to trade between the EU and Ukraine;
- commitments undertaken by Ukraine upon WTO accession;
- necessity to modernize the economics by increasing the number of investment and level of compatibility of national products at the world market.

Thus, the result of the implementation of European standards in Ukraine should be modernization of the economics and ensuring compatibility of national products by means of gradual integration of Ukraine into the EU market, elimination of technical barriers in trade between Ukraine and the EU and strengthening Ukraine's position at the world marker which will be caused by recognition of the Ukrainian system of technical regulation at the European and international level.

Among the key dimensions of the implementation of the aforementioned Strategy are clearly defined and are directly connected to the standardization activities:

- adaptation of the legislation of Ukraine in the field of technical regulation to the EU's legislation;
- adopting for the further implementation of the European standards as the national standards of Ukraine with simultaneous cancellation of the validity of GOST;
- ensuring of full compliance of the system of technical regulation of Ukraine to the EU demands;
- enhancing cooperation of the central governmental bodies, enterprises, institutions and organizations with the European and international organizations of standardization, metrology, accreditation, compliance assessment and state's market oversight.

³³ http://zakon3.rada.gov.ua/laws/show/994_240

³⁴ <http://zakon3.rada.gov.ua/laws/show/844-2015-%D1%80>

The Agency's plan of activities for 2017 corresponds with the Strategy's provisions. Hanna Lisina, Director General of the Agency says that "[...] this year it is planned to harmonize over a thousand of standards and to fulfill the obligation on unpublished standards the number of which is reaching 1126. Also, it is planned to work on membership of Ukraine in European telecommunications standards institute (ETSI), harmonization of standards for military equipment in accordance with NATO standards, agreements on dissemination of international and regional standards – primarily standards of International Electrotechnical Commission, – European standards of CEN and CENELEC and German standards of DIN"³⁵

Summarizing, the implementation of the Strategy's tasks will ensure high level of safety of Ukrainian production, increase its compatibility and will assist in innovational development, which consequently will provide access to the EU market for the Ukrainian producers on the same conditions with the producers from the EU member states. Also as the result of creation of supportive regulative and business environment with no extraordinary and duplicated demands, foreign investors will only have to deal with the regulations and demands applied in the EU.

4.2 Towards European standards: benefits and challenges

4.2.1 Republic of Moldova

European standards have numerous benefits for the sustainable growth of the Moldovan economy. Resulting from voluntary cooperation between business environment, public authorities, civil society and other interested parties, European standards are designed to respond to a large array of society needs. In fact, the European standards includes all the best areas in a specific area mainly because they enclose the collective expertise of the participating stakeholders.

Moreover, the European standards facilitated the creation of the internal market for goods and therefore enabled the productivity growth, trade and overall economic growth at the level of all the EU member states. The Moldovan Government admits that the European standardization is an extremely important opportunity for modernizing and developing the national economy but also for a proper functioning of education sector, a high level of consumer safety, and more innovation and social inclusion.

To put it simply, the European standardization in Moldova will bring only benefits for the Moldovan society. A sum of these benefits would be:

- ✓ Access to the EU Single Market for Moldovan products and services;
- ✓ Access to the most innovative solutions;
- ✓ Improvement of the performance and quality for the final consumers;
- ✓ Facilitation of the technological transfer and its cost-decreasing effect.

Eventually, the European standardization will facilitate the European integration of the Republic of Moldova by aligning with the EU regulations, standards, practices and, accreditation, conformity assessment procedures etc.

³⁵ <http://uacrisis.org/ua/52057-natsionalnij-organ-standartizatsiyi>

At the same time, the European standardization process is rough for the Republic of Moldova. Although, the level of transposing and adoption of the European standards is quite high, their implementation by the business sector is very low. This undesirable situation is caused by poor understanding of the importance of the European standards to the detriment of the GOST standards wherewith the Moldovan enterprises are already accustomed. Also, the implementation of the EN standards require huge efforts, financial resources and constant research and interest mainly because this domain is in a fast changing and adapting landscape. Moldovan producers are not ready to implement the voluntary European standards and are reluctant in giving up to the GOST standards.

To overcome these challenges and to support Moldovan small and medium enterprises in implementing the standards and in accessing the EU Single Market, the European Commission provides substantial financial and technical assistance. Due to this, the EU has become the most important trading partner of the Moldova given that 63% of Moldovan exports go to the EU and around of 50% of Moldovan imports comes from the EU³⁶.

4.2.2 Georgia

Implementation of European standards is more difficult than GOSTs, as they aim at higher quality thereby requiring more efforts and resources. The cost of implementing these standards is one of foremost issues in this regard. Consultation service, as well as implementation of respective certificate require financial resources. In addition, European standards need to be adjusted along with technology which is related to further investments from the side of companies.

Another associated issue is the lack of qualified personnel. Specifically, following to implementation of standards, a certified manager should take over responsibility of controlling production process. As European standards appear to be new for most of stakeholders, there is a lack of certified managers. Furthermore, quality management audit, which would be responsible for controlling the quality in companies, is nonexistent in the country. Therefore, companies independently create consultation groups and invite foreign quality management audits for inspection, which is also costly.

Finally, 39% of Georgian export is linked to CIS countries, which is more accessible for local companies. Access to new markets is difficult and requires huge experience, as well as financial and production resources. Besides, readjusting to new market is risky in economic terms, which appears to be another obstacle.

Despite challenges, implementing European standards brings important benefits for several reasons. Firstly, it increases the quality of production, thereby offering better products to customers. In addition, it creates an opportunity for producers to explore new markets and expand their production capacities. Eventually, this process contributes to European integration of the country by incorporating it into the institutional and economic space of the EU.

³⁶ Association Implementation Report on the Republic of Moldova, European Commission, Brussels, 10.03.2017 can be accessed at https://eeas.europa.eu/sites/eeas/files/association_implementation_report_on_the_republic_of_moldova_2017_03_10_final.pdf;

4.2.3 Ukraine

In general, the study of these issues and consultations with experts in the field of standardization are bringing us to the following generalizations. Ukraine introduces and uses predominantly international (ISO) and European (EN) standards as national ones that are identical with international and European standards. They differ from the national standards (DSTU), but they have a number of significant advantages both for the economy of the country and for the average consumer. New standards make it possible to produce a wider range of products which also have more predictable quality indicators. Ukrainian producers are able to participate in national and international tenders on the same terms as foreign manufacturers. Moreover, they are reducing energy costs and improving the environmental situation in the country.

However, the overwhelming majority of international and European standards apply to control methods. There are a few standards in regards to the product. And such standards are basically found on the level below the directives. That is, they are a presumption of compliance with the requirements of the EU Regulations and Directives. Therefore, in order to fully harmonize the international and European standards as national ones, Ukraine needs first of all to accelerate the process of harmonization of national legislation.

A significant challenge for Ukraine is the process of implementing the international and European standards not only at the level of their availability and access of customers to them, but also at the level of production of goods and the provision of services in accordance with these standards, as on the part of big business, as well the middle and small one. The organization of such a transition requires not only legislative, institutional, organizational or methodological support. There is a necessity for successful serious (that means intensive, extensive and long-term) educational and training activities, dissemination in the business environment of an understanding of the benefits and feasibility of such a transition from one culture of production and trade to another, which is characterized with the higher quality. This relation of different cultures conceals the mental essence of the challenge of the current technological, industrial and business modernization of Ukraine.

Specialists of the National Agency of Standardization of Ukraine and the representatives of the Ministry of Economic Development and Trade of Ukraine draw attention to the two another significantly problematic issues relevant to the implementation of European standards, which must be successfully resolved in one way or another. First and foremost, there are drawbacks in legislation which cause problems with the financing of the works upon harmonization of national standards. One of the main problems when drafting national normative documents (ND), harmonized with international and European ones, is the application of the norms of the current legislation on the use of budget funds, in particular of the legislation on public procurement. This problem is not resolved at the moment and is turning into essential issue, despite the fact that standardization activities in Ukraine seem to be regulated enough sufficiently.

Above we were talking about the following: the law of Ukraine "On Standardization" (Article 15) and DSTU 1.14 stipulate that national NDs in Ukraine are developed by the technical committees of standardization (TC). Each year, in accordance with the Article 9 and Article 19 of the Law of Ukraine "On Standardization", on the basis of TC's proposals, the Agency

prepares and publishes for the consideration of the interested parties the National Standardization Working Program for the current calendar year. The Agency sets tasks for implementation, namely, defines standards to be harmonized, performers to carry out works – a TC or a WG (Working Group) in the absence of TC, as well as a timeline of their implementation. For the effective use of the state budget funds directed at standardization works, a special Methodology is used. This Methodology ensures the definition of the value for each harmonized standard and enables the formation of a specific contract for each executor (TC) in accordance with its field of activity. The abovementioned points out that all requirements for the implementation of drafting standards works are clearly defined.

However, the provisions of the Law of Ukraine “On State Procurement” question the results of the application of the above Methodology, as well as the normative and procedural compliance of the Law “On Standardization”. It defines the scientific research as services, sets various kinds of constraints and classifies all activities in the field of standardization as one of a variety of services. This creates a significant problem when concluding contracts with the developer for works on the development of harmonized standards.

The procedural and methodological unity of standardization is interpreted (falsely, as we consider) as the sole subject of procurement for quite different NDs which relate to various objects and areas of application of standardization that are covering various branches of industry and a significant part of services industry. Each national ND is an independent document with its markings and scope of implementation and, therefore, as a rule, is a separate subject of procurement that cannot be identified with another national ND. The documents of international and European standardization organizations in the leading countries of the world do not apply tenders in public procurement procedures for the development of standards or their adoption.

The above shows that it is expedient to develop national NDs on a noncompetitive basis, and the service for their development can be provided only by a certain performer (participant of the procurement procedure). The implementation of procurement procedures in accordance with the Law “On State Procurement” in any case delays the work on harmonization of standards at least for the quarter and requires additional efforts, resources, costs, and does not improve the final result.

The following difficulties in fulfilling tasks related to the harmonization of national standards with international and European occur each year. This problem can be characterized as systemic and cyclic. It is reoccurring every year, starting with the delay in signing the passport of the budget program, and consequently, the untimely financing of the works stages. Further delay in public procurement procedures causes the time pressure development of ND by the developer and the same time pressure with an assessment of the quality of such a development. Another negative consequence of such a state of affairs is often disputes with performers who under the time pressure violate the terms of the contract, primarily in terms of compliance with the quality of the product of the ND. Such disputes require more efforts and time in order to solve them in the administrative and legal terms.

In general, the aforementioned problem involves the risks of timely and complete implementation of the tasks of harmonizing national ND with international and European ones.

Another problem pointed out by the Agency and the Ministry is the slow implementation of the new standards for the replacement of the abolished ones. In 2015, more than 15,000 GOSTs that were adopted before 1992 were canceled. The abolition of these Soviet GOSTs was one of the commitments that Ukraine has undertaken signing the Association Agreement with the EU. Despite the fact that these standards were abolished in 2015, a transitional period of 2017-2019 was given for the development of the necessary NDs for their replacement. As the reality shows, work on the development of national normative documents, harmonized with international and European standards, is inadequate, and the deadlines are expiring. Responsible Ministries do not plan enough expenses and do not allocate necessary funds for this work; as a rule, ministries finance only the so-called priority development. And the responsibility for replacing the old standards with the new ones is assigned to the Agency.

In addition, it is not always possible to find standards within international and European ones that would replace GOSTs (in particular, in terms of the standards of the *Uniform System of Constructor Documentation* and the *Uniform System of Technological Documentation*). The problems associated with standardization activities in Ukraine can also be attributed to the institutional strengthening of the Agency: at present, the main processes of standardization are not automated; inadequate automation of standardization dissemination processes is still visible; a large number of standards remains unpublished; TRADOS translation software does not work properly; the lack of staff qualification and proficiency in foreign (especially English) languages is tangible, etc. The work of the Agency is burdened with excessive amount of TCs, many of which are working poorly. The imperfection of the fundamental standards for standardization activities is hindering the Agency's functioning as well. One of the sensitive issues in the Agency's work is the low level of entrepreneurs' awareness of standardization prospects and, consequently, the low interest of business entities in financing standardization work. It is obvious that at the current stage of development the Agency needs political, business and public support, as well as a moderate assistance from experienced European partners. Therefore, the two-year Twinning Project (2018-2019) is very relevant for the Agency. Within its framework it is planned to resolve a number of the listed institutional problems.

The Agency's cooperation within the framework of the Project "Strengthening the Role of Civil Society and Small and Medium Enterprises in the Implementation of European Standards in the Eastern Partnership States" will promote the business entities awareness of standardization issues and will play a positive role in enhancing the society's awareness of the importance and significance of these issues.

4.3 Implementation of European standards in industrial and agro-food sectors: Where do we stand?

4.3.1 Republic of Moldova

Construction sector

The Republic of Moldova, as well as the other CIS countries, after the declaration of independence in 1992, has inherited the entire complex of Soviet norms and standards

(normative documents in construction SNiP - over 200 documents, GOST standards in construction - over 1300 standards).

During 1992-2008, this system of norms and standards evolved insignificantly, with only the periodical updating of Soviet norms and standards by the Russian Federation and their subsequent adoption by the CIS countries (including the Republic of Moldova), within the interstate cooperation between CIS countries³⁷.

In 2008, the Republic of Moldova took the first step for transposing the Council Directive no. 89/106/EEC of 21 December 1988 on the approximation of the laws, regulations and administrative provisions of the Member States relating to construction products. Thus, the Government Decision no. 226/2008 "For the approval of Technical Regulation on construction products", has been approved, by implementing the concept of "New Approach" in the field of construction in the Republic of Moldova. Through this Government Decision, the ministry responsible for construction was empowered to draw up a list of "related"³⁸ standards to this technical regulation.

The first list of "related" standards to this technical regulation was approved in 2008 and contained 604 standards (mainly GOST) of which only 31 European and international standards. In 2010, the list was completed with another 242 GOST standards, and in 2014 with other 453 standards, of which 434 European and international standards. As a result, by 2014 the list of "related" standards for the technical regulation on construction products already contained 1399³⁹ standards, of which 465 European and international standards.

In 2016, the European Union's Regulation (EU) No 305/2011 of the European Parliament and of the Council of 9 March 2011 "*laying down harmonized conditions for the marketing of construction products*" was partially transposed into the legislation of the Republic of Moldova by Government Decision no. 913/2016 "On the approval of the Technical Regulation on minimum requirements for the marketing of construction products" (with its entry into force in 2018). Later, in order to implement the corresponding harmonized European standards, the Ministry of Regional Development and Construction approved by Order no. 39/2017 the List of Harmonized Standards to this technical regulation, which contains 442 harmonized European standards and fully corresponds to the list published by the European Commission in the Official Journal of the European Union.

Considering that the Government Decision no. 913/2016 will enter into force in 2018 and is establishing a transition mechanism from the application of GOST standards to the application of harmonized European standards, the Ministry of Regional Development and Construction approved by Order no. 38/2017 the List of related standards for construction products for use in the transition to harmonized standards, which contains 250 GOST standards.

At the same time, the Ministry of Regional Development and Construction annually revises over 50 normative documents in construction, promoting their harmonization with European and international standards in the field of construction.

³⁷ The cooperation agreement between the governments of the CIS countries was signed on 9 September 1994. More information can be obtained here: <http://www.e-cis.info/page.php?id=25737>;

³⁸ Until 2016, the Moldovan standards included in the standard lists of technical regulations were called "related standards". In 2017, by amending Law no. 420/2006 "On technical regulation activity", the term "related standard" has been replaced by "harmonized standard";

³⁹ There are only 442 harmonized standards for construction products in the European Union, the list of which has been published in the Official Journal of the European Union.

Agro-food sector

The implementation of European standards in the agro-food sector has a number of particularities:

- There are no European standards at the European level that would set requirements for agro-food products, the quality of which is regulated by legislation (as a rule, by European Commission Regulations);
- All European standards related to test methods for different characteristics of agro-food products;
- Traditionally, in the Republic of Moldova (and in all CIS countries) the quality of agro-food products was regulated by GOST standards. Currently the quality assurance system for product is no longer complying with European practices.

Implementation of European legislation in the field of agro-food products started in the Republic of Moldova in 2006-2008, when the first technical regulations were approved for different categories of agro-food products, being partially harmonized with the relevant European legislation.

Simultaneously with this transposition, the authorities in the field maintained the application of GOST standards by approving lists of standards related to technical regulations in the field of agro-food products. The applicability of a mix of European regulations and GOST standards has created confusion and was misleading local producers with regard to product quality requirements. The practice has shown that although normative acts with quality requirements for different agro-food products were implemented, manufacturers, certification bodies and test laboratories preferred to apply GOST standards as they were perceived as being clearer and more familiar. Practically, two systems of quality requirements for agro-food products - mandatory technical regulations (based on European legislation) and GOST standards - were applied in the Republic of Moldova in parallel during 2014-2016.

This determined the Institute for Standardization of Moldova in 2014-2017 to withdraw GOST standards contradictory to legislation on agro-food products. In cooperation with the Ministry of Agriculture and Food Industry and consultations with the producers from the main sectors, over 570 of GOST standards were identified and withdrawn. The Ministry of Agriculture and Food Industry in its turn abolished a series of its documents that were making reference to GOST standards and facilitated their application in parallel with legislation.

Several testing laboratories for agro-food products have been able to implement European and international standards for product testing methods. With the support of the development partners, the main testing laboratories in the field of agro-food products were equipped with modern equipment, which allows analyzes and tests to be performed based on European and international standards.

In 2016, the Law no. 420/2006 "On technical regulation activity" has been changed, by excluding from the scope of agro-food products, and by eliminating the "related/harmonized standards" in the agro-food sector⁴⁰. This amendment clarified the status of agro-food standards and strengthened the role of normative acts establishing quality requirements for these products.

⁴⁰ This concept applies to industrial products (for more details, to be seen the "New Approach" concept).

Currently, the process of withdrawal of GOST standards contradicting the legislation continues.

Energy efficiency sector

The Republic of Moldova imports about 94% of the resources needed to cover the country's energy consumption. In the absence of its own energy resources, promoting energy efficiency and capitalizing on the available renewable energy sources in the country are the best ways to reduce the dependency and a key condition for the sustainable development of the economy. In addition to import dependence, increased energy intensity is an essential impediment to the development of the economy and greatly reduces the competitiveness of national industry.

In recent years, demand for electricity in the Republic of Moldova has shown an upward trend. If in the past electricity was mainly used for lighting, consumers are currently using electricity to operate household appliances (washing, cleaning, air conditioning, communication etc.) as well as for other purposes. In this situation, promoting the use of household appliances and more energy-efficient products is imperative.

Another sector with the highest energy consumption is the building sector. Buildings are estimated to consume up to 40% of all national energy consumption. Under these circumstances, the promotion of modern, energy-efficient construction solutions, technologies and products is one of the national priorities. Improving energy efficiency and increasing the use of renewable energy sources is a strategic objective that is set in the Energy Strategy of the Republic of Moldova until 2030, approved by the Government Decision no. 102/2013. In order to address the complex and sustainable issue of increasing energy efficiency, the Government of the Republic of Moldova, by Decision no. 833/2011, approved the National Energy Efficiency Program 2011-2020.

The aim of this Program is to increase energy efficiency by implementing energy efficiency measures in all sectors of the national economy. A special place for this program is to promote the use of household appliances and energy-efficient products that meet European energy efficiency standards, as well as to promote the increase of energy performance of new and existing buildings.

By Law no. 151/2014 "On ecodesign requirements for energy –related products" and Government Decision no. 1003/2014 "For the approval of regulations on the energy labeling requirements of energy-related products", has been transposed in national legislation the Directive 2009/125/EC of the European Parliament and of the Council of 21 October 2009 "Establishing a framework for the setting of ecodesign requirements for energy-related products". In order to facilitate the implementation of this Directive, a number of European standards⁴¹ have been approved at European Union level covering the energy efficiency of different types of appliances.

⁴¹ https://ec.europa.eu/growth/single-market/european-standards/harmonised-standards/ecodesign_en

Energy product	Number of European standards	Number of adopted European standards as Moldovian standards
Air conditioners	6	5
Circulators	3	3
Computers	8	8
Dishwashers	1	1
Domestic ovens, hobs and range hoods	5	3
Electric motors	2	2
Power supplies	1	1
Refrigerating appliances	1	1
Standby and off mode	4	3
Transformers	2	2
Tumble driers	1	1
Vacuum cleaners	6	4
Waser-driers (combined)	1	1
Washing machines	3	2
TOTAL	44	35

Promoting the increase of energy performance in buildings started in the Republic of Moldova in 2014, with the adoption of Law no. 128/2014 "On the energy performance of buildings", which transposes into national legislation Directive no. 2010/31/EU of the European Parliament and of the Council of 19 May 2010 "On the energy performance of buildings".

At the level of the European Union, the implementation of Directive no. 2010/31/EU is supported by a package of 52 European standards⁴², describing the methodological framework for establishing minimum energy performance requirements for buildings, calculating the energy performance of buildings, certifying their energy performance and systems inspection heating and air conditioning in buildings.

The implementation of these European standards in the Republic of Moldova took place through the Government Decision no. 896/2016 "On the approval of the Regulation on the

⁴² To be seen CEN/TR 15615:2008 Explanation of the general relationship between various CEN standards and the Energy Performance of Buildings Directive (EPBD). Umbrella document

procedure for the certification of the energy performance of buildings and of building units", Government Decision no. 1325/2016 "For the approval of the Regulation on the periodic inspection of heating systems in buildings" and by 2 normative documents in construction: NCM M.01.01:2016 "Energy Performance of Buildings. Minimum Requirements for Energy Performance of Buildings" and NCM M.01.02:2016 "Energy Performance of Buildings. Methodology for calculating the energy performance of buildings".

4.3.2 Georgia

Construction sector

During Soviet times, construction issues were regulated under so called - "SNIPs" (СНИП – Строительные нормы и правила), which established obligatory construction rules and norms. These rules were adjusted to the requirements of Soviet system, where state had undertaken all of responsibilities⁴³. After the dissolution of the Soviet Union, Georgia alike the other Soviet countries inherited SNIPs, which are allowed by law unless they are replaced by new technical regulations or contradict Georgian legislation or international agreement⁴⁴. Nevertheless, to some extent SNIPs are outdated and incompatible to the model of market economy.

In order to correspond new realities, Georgia started to approximate its construction sector to the European model. In 2006, then Georgian Government adopted a law, which has allowed for full-fledged use of technical regulations (including in construction sector) of European Union, member countries of Organisation for Economic Co-operation and Development and particular economic partners of Georgia⁴⁵. In addition, the Ministry of Economy started to translate and contribute to the implementation of Eurocodes⁴⁶, which consists of ten sets of rules specifying how structural design should be conducted within the European Union (EU)⁴⁷. This served to replace old Soviet standards of constructions. However, transition period was quite procrastinated, which puts quality of current or completed constructions under question.

Nowadays, the standardisation process in this sector is guided by the standardisation committee of "Construction and Objects of High Danger". As of today, 914 international/European standards and 4 national standards are registered in the construction sector, which operate together with Soviet norms and standards. The signing of DCFTA has created new incentives in this direction. Specifically, it allocates resources for Technical and Construction Supervisory Agency (TACSA) to contribute to approximation of Georgian legislation to the European through providing expertise, research, exchange of experience and knowledge, etc.⁴⁸.

However, serious challenges remain on the ground. In the first instance, the Government lacks strategic vision, while the normative base in this sector is not uniform and harmonised. As a result, construction activities lack clarity and predictability. On the other hand, huge

⁴³ <http://ioce.ge/?p=1246>

⁴⁴ <https://matsne.gov.ge/ka/document/view/2195713>

⁴⁵ <https://matsne.gov.ge/ka/document/view/2422>

⁴⁶ <http://www.economy.ge/?page=projects&s=24>

⁴⁷ <http://eurocodes.jrc.ec.europa.eu/showpage.php?id=13>

⁴⁸ <http://tacsa.gov.ge/pages.aspx?id=7>

discrepancy between rules and practices appear very concerning. A construction boom during recent years, resulted in a chaotic process, where standards were often compromised for business interests⁴⁹. In this regard, a significant achievement would be a new Construction Code, which would bring increased clarity in this sector through implementing important changes, such as establishing technical supervision and safety engineer as mandatory. The new code is yet to be approved by parliament in 2017.

Agro-food sector

As of today, 173 International/European standards are registered as Georgian standards in agricultural sector. In addition, upon requirements of DCFTA, Georgia legislation is being approximated to European legislative framework. This process contributes to the adoption of European standards in Georgian legislation. Technical regulation of a particular product is developed and adopted in accordance with international standards. In other words, international standards or practices of production is reflected by Georgian legislation and hence, are obligatory. For instance, technical regulation for dairy production is elaborated through Codex Alimentarius. Therefore, Georgian law directly reflects the requirements, which are recognised and used as international standard and norm.

It is noteworthy that within DCFTA, 39 normative acts were adopted in the agricultural sector. Each of them consist of different EU regulations. It is hard to measure the number of GOSTs in the agricultural sector, as GOSTs are not registered as Georgian standards. Therefore, exact statistics are unavailable. However, 39% of Georgian exports are linked to CIS countries and seemingly, GOSTs in this field is still in active usage. At least in the case of enterprises, which export in CIS countries⁵⁰.

Efforts from the side of the Government to develop European standards in agricultural sector is noteworthy. For example, enterprises which are funded through different projects of Ministry of Agriculture, should meet international standards. As a result, these efforts are translated into a dynamic process of standardization in this sector.

Energy efficiency sector

On 21st April, the Parliament of Georgia unanimously voted in favour of endorsing the agreement to join the Energy Community. By signing the Energy Community treaty, members commit to implement key EU regulations and rules on electricity and gas networks, environment, renewable energy, energy efficiency, oil and recording energy statistics. Furthermore, on 10th March, the EU launched the project The EU4ENERGY Governance. It is a €6.8 million programme for Eastern Partnership countries which aims to improve the legislative and regulatory framework of the country.

Increasing energy efficiency (EE) is the main path to developing the sector and also saves on finances. Energy efficiency also improves quality of life and contributes to the development of the economy. One of the examples is the consumption of the biomass in Georgia. Biomass plays a major role in Georgia's energy supply as solid biomass is the second largest domestic energy source in Georgia. Its share in the National Energy Balance in 2014 was 11%. The main

⁴⁹ <https://www.radiotavisupleba.ge/a/construction-and-security/27314224.html>

⁵⁰ http://www.geostat.ge/?action=page&p_id=133&lang=geo

consumer of biomass is the residential sector and the share of biomass consumption in total energy sector by residential area is 38%. In the residential sector biomass is mainly used for heating. The main issues in the sector leading to high biomass consumption, reduction of forest resources as well as environmental and economic damages can be associated with uncontrolled illegal wood cutting across Georgian regions and poorly insulated buildings causing high heat losses.

Currently, regarding energy efficiency, Georgia has obligations under the Energy Community Treaty (previously it was written in the Association Agreement) to implement the EU Directive 2009/28/EC of the European Parliament and of the Council of 23 April 2009 on the promotion of the use of energy from renewable sources⁵¹ and Directive 2006/32/EC of the European Parliament and of the Council of 5 April 2006 on energy end-use efficiency and energy services. The most recent directive is that of 25 October 2012 – Directive 2012/27/EU of the European Parliament and of the Council on Energy Efficiency, which, overtime, will repeal Directive 2006/32/EC. Under the directive, countries are required to use energy more efficiently during all stages of the energy chain from its production to its final consumption.

In 2016, with EBRD financial support Georgia has developed the first National Energy Efficiency Action Plan (NEEAP). Although NEEAP has not yet been approved by the Ministry, according to the latest draft an establishment of the Energy Efficiency Fund (Agency) is planned. The goal of the Fund is to support faster implementation of successful energy efficiency programs and the promotion of investments. The Agency will also focus on private actors including industries and power sector companies for EE improvements and audits. According to NEEAP, the agency should start operating in 2017, however without approving the NEEAP itself, it will be hard to predict when the new fund will be established and implement its mandate. As of today, 808 International/European standards are registered in this field in Georgia.

4.3.3 Ukraine

Construction sector

Statistical assessment of the developments (implementation of European standards) in the field of constructions is the following: there are 187 normative documents adopted in the construction sector, 145 normative documents in the field of construction materials and 42 normative documents in the field of civil construction.

Significant milestone in implementation of European standards was reached in 2017. On 17 January the Parliament of Ukraine amended a law which improves the classification of buildings and structures from a construction perspective and which consequently influences the procedure for obtaining construction permits⁵². Previously, the buildings and structures were classified in five categories determined by their complexity, where simple buildings and structures were assigned to category I and the most compound objects to category V. Commencement and commission of the buildings and structures in categories I – III was carried out on a declarative principle by means of submission of a respective declaration. At

⁵¹ The timeline of implementation will be submitted to the Association Council no later than three years after the entry into force of the Treaty.

⁵² <http://zakon2.rada.gov.ua/laws/show/1817-19>

the same time, developers who constructed buildings and structures falling under categories IV – V had to first obtain a construction permit and certificate for their commission upon completion of construction.

Such classification was not in line with settled EU practice. The Law replaces the five categories of an object's complexity with the three classes of consequences. Project design organisations, with the approval of developers, will determine the object's classification based on criteria specified in the Law, as well as relevant construction standards and regulations. Besides, on August 19 the Cabinet of Ministers of Ukraine has approved a bill on the main requirements to structures and the conditions for the marketing of construction products. The bill is intended to implement the EU Regulation No. 305/2011 laying down harmonised conditions for the marketing of construction products.

The bill sets the key requirements to structures and the construction materials technical approbation rules for marketing them, as well as to the entities that take part in the technical approbation and declaration in the construction sphere. The bill introduces a rule for determining the essential characteristics. The bill also describes obligations of manufacturers marketing their products on the construction materials market. Manufacturers shall draw up a declaration of performance.

Agro-food sector

The achievements in implementation of the European standards in the field of agriculture are the following: there are 193 normative documents adopted in the field of agriculture and 156 normative documents related to the production of food products. According to Association Agreements it aims to reach a 'common understanding' on animal welfare standards. In February 2016 agreement was reached between Ukraine and the European Commission on the contents of the Comprehensive Strategy, which is a list of roughly 255 EU regulations and directives. This sets out the implementation schedule for each regulation or directive. Audits are conducted by the EU to verify that sanitary and phytosanitary conditions (SPS) are being met and correspond with the Regulation 854/2004/EC on rules for the organization of controls of products of animal origin. This Regulation goes on to establish comparable rules for approving establishments in third countries for the purpose of exporting to the EU market. These arrangements are currently being used by Ukraine and will remain in force while the provisions of the Agreement are implemented.

A significant number of Ukrainian agro-food enterprises producing commodities of animal origin are already recognized for exporting to the EU in compliance with its SPS requirements. This mechanism can effectively continue to be used and expanded alongside entry into force of the Agreement, since its requirements are the same as those in Art. 69.2-5. Total SPS compliance for the whole of the territory of Ukraine is a long-term objective. Currently there are separate procedures for those enterprises willing and able to comply with export certification for the EU. This is an important element of effective flexibility in the Agreement and can help avoid excessive costs of compliance. Besides, there are provisions within the EU to exempt small scale production from various SPS requirements (Regulation 853/2004/EC on hygiene rules). For example, hygiene rules do not apply to production for private domestic consumption, or small quantities supplied to local retail establishments and markets. Ukraine

remains free to apply similar exemptions for local markets. Costs for the producers can also be lowered through easier trade procedures, including fewer import permits and inspections.

Much less suspicious products will be subject to physical inspections. Some small producers will be hit by higher costs, but under EU regulations the authorities retain considerable flexibility in defining how local markets and traditional regional specialties may be exempted from full compliance with SPS standards. Moreover, in the next few years before the new SPS regime is fully established in Ukraine, there remains the possibility for individual export-oriented enterprises to be recognized by the EU as SPS-compliant. Ukraine's 2020 agriculture strategy prioritizes the expansion of the number of enterprises individually recognized in this way. Although the most promising markets for export expansion may well be in Asia rather than Europe, approximation of EU standards becomes a brand asset for accessing many world markets.

Energy efficiency sector

In accordance with the provisions of the Association Agreement between Ukraine and the European Union, the European Atomic Energy Community and their Member States, Ukraine pledged to bring domestic legislation to the acquits of the EU, *inter alia* in the sphere of energy and energy efficiency. The parties to the Agreement have agreed to continue and strengthen existing cooperation in the energy sector in order to increase energy efficiency. In the sphere of energy efficiency there are 107 normative documents adopted in the field of power engineering and heating engineering.

The country has undertaken the obligations to implement 2006/32/EU directive on energy end-use efficiency and energy services. The interim goal of the national plan in 2017 is the reduction of domestic energy consumption at the level of 5% of the average indicator for energy consumption in 2005-2009. As for specific actions that must be taken, according to the provisions of Directive 2006/32/EC, one of the priority objectives of the state is to achieve energy savings of 9% of the total public index for the ninth year of application of the Directive. In particular, energy distributors or retail energy sales companies should reach 1.5% of energy savings per annum by implementing energy efficiency measures.

New government regulations and standards have been adopted in the area of design and construction. In particular, changes were applied to the State construction norms (DBN) V.2.6.-31:2006 "Thermal insulation of buildings", which bring the standards essentially closer to EU requirements. The classification of buildings is being implemented according to their energy efficiency grading from A to F, where A is the highest class and F is the lowest. In the project assignment the energy efficiency class of the building must not be less than class C. New standards for maximum heating costs for residential and public buildings are being set. On 1 January 2016, the new State Standard BA-2.2.12:2015 "Energy efficiency of buildings. The method of the energy consumption calculating for heating, cooling, ventilation, lighting and hot water" came into effect. On 22 June 2017, a milestone law "On the Energy Efficiency of Buildings"⁵³ was adopted. Its goal is to set a new regulatory framework for energy efficiency that will apply to the majority of the buildings in the country. The framework correlates with the standards set out by the EU Directive 2010/31/EU on the energy performance of buildings. The Law will come into force on July 23, 2018 whilst certain provisions (for example, the ones

⁵³ <http://zakon2.rada.gov.ua/laws/show/2118-19>

related to mandatory energy efficiency certification) will come into effect even later – on 01 July 2019.

In order to gradually improve energy efficiency standards, the Law provides for the development of a national plan to increase the number of so-called “nearly zero-energy buildings”. Such plan shall be submitted to the Energy Community and should correspond with the respective acts of the EU legislation and the Energy Community.

5. Multi-stakeholders partnerships in European standardization process

5.1 Republic of Moldova

The added-value of the European standards is the fact that they are co-created voluntarily by industry, public authorities, civil society and other interested parties collaborating within a system founded on openness, transparency and consensus. A unique and innovative aspect of this cooperation among all interested parties in creating standards is the increasing number of European standards that most of them encloses the collective expertise of the participants and therefore they respond to the needs and expectations of their beneficiaries. One of the main challenge of Standardization body from Moldova was how to involve a wide number of stakeholders in the standardization process. The most important working platforms and communication channels between stakeholders and standardization body are the technical standardization committees.

The technical standardization committees are working entities established at the request of stakeholders (manufacturers, sellers, small and medium-sized enterprises, research and development institutions, design institutions, educational institutions, testing laboratories etc.) in various areas of the national economy, in the support and for the benefit of the users of standards, to carry out standardization work at national level. By the end of 2016, 26 technical standardization comities were framed, 43 working meetings were held that involved 112 experts from different sectors⁵⁴. Standardization body from Moldova is deeply engaged in involving in the standardization process the Universities and vocational education institutions. In this regard, at the institutional level there are partnership agreements with 9 education institutions.

Also, in order to facilitate the communication with different stakeholders, Institute for Standardization of Moldova managed to develop friendly support guides for Academia, private sector, consumers. Also, the institution has a communication plan which is a strategic document that guides the activities of the institution in channeling the information about the benefits of standards and standardization activities and procedures. For newly, the institution launched an innovative project, called the Academy of Standardization, with the aim of ensuring effective communication, information and training of the stakeholders interested in standardization process, as well as promoting the standardization work in the academic environment. Thus, the objective is to reach as many as possible actors from different economic sectors.

⁵⁴ Institute for Standardization in Moldova Report 2016 <http://www.standard.md/libview.php?l=ro&idc=272&id=2493&t=/Biblioteca-online/ISM-in-cifre/Succesele-anului-2016-in-cifre>

Up to date the biggest challenge of ISM was to involve the NGOs in the standardization processes and also to have their critical and constructive involvement as “watch- dogs of standardization process”. The explanation resides in the technical content of the sector and as well in the lack of technical expertise related to DCFTA, harmonization of EU legislation and standards. Since signing the Association Agreement and DCFTA, to be responsive towards current and new stakeholders needs and to maintain itself as the driver in the standardization process, the ISM has to take significant steps in improving its capacity about communicating on the advantages of European standards and thus, launch a variety of tools to enhance the role of national stakeholders in standardization process.

In order to get closer to stakeholders, the ISM launched a FB page, which is daily updated with most important information and which is followed by about 1000 followers. In 2016, the Standardization institution managed to draft and translate 19 information materials to a wide number of stakeholders (academia, SME, experts, consumers, NGOs etc). Also, there were launched 141 news and releases, which were distributed to a number of 2710 recipients.

The communication and communications tools situation is presented below:

	Number of events, including the trainings	Number of participants	Number of information materials distributed	Communication tools used for distribution
2014	13	74	170	Facebook, www.standard.md
2015	16	276	720	Facebook, www.standard.md ,
2016	27	540	1700	MailChimp,
2017	15	230	650	Google+, issuu.com, Twiter.com, Linkedin.com

Benefits:

The main benefits of different stakeholders in the standardization process are following:

- A more transparent and accountable process of developing standards.
- Getting involved in standards development brings different stakeholders’ concerns and needs to bear on a process that will affect that can affect them in the future.
- The possibility of implementing the standards requirements from the drafting phase of its developing.
- Getting involved in this process can bring significant advantages to the business sector by giving them early access to information that could shape the market in the future, a voice in the development of standards, by helping to keep market access open.
- New know-how that complements stakeholders’ knowledge.

The challenges that exist are twofold - targeting the Moldovan National Standardization Body on one side, and the national stakeholders on the other side:

Moldovan standardization body:

- To communicate in a fair and transparent manner to interested parties when work on new standards is initiated and subsequently on the progress of their development;
- The ISM has the responsibility of ensuring that their technical standpoint is established taking into account all interests concerned at national level;
- To ensure integrity of national standardization body for stakeholder engagement and consensus decision making. The credibility of these national processes is vital to ensure the credibility of the resulting standards and, ultimately, of the standard brand in the marketplace;
- To reach as many stakeholders as possible. In this regard, all relevant national stakeholders should be given equal access to information and equal opportunity to provide input;
- To identify potential stakeholders. In addition to any internal processes, advertisements and general meetings, ISM needs to seek input on potentially relevant stakeholder, other organizations, governmental agencies, user/consumer groups that can complement the ISM knowledge. This is especially the case in a new field for standardization;
- Engage consumers (through their associations, entities responsible for protecting their rights) in the process.

National stakeholders of standardization process:

- The insufficiency of English knowledge of TCs members or potential TCs members, which hinders the examination of drafts of European and international standards, as well as participation in meetings of European and international technical committees;
- Limited interest of local actors in engaging in the standardization process, due to the fact that the participation in the activities of the technical committees is unpaid, unlike the practice existing in the former Union.
- Reluctance towards European and international standards due to fear of changes, new challenges and the need to invest in equipment etc. as a result of the implementation of the requirements of European and international standards.

5.2 Georgia

Civil society represents an important bridge between the Government and the SMEs. Georgian civil society has become active and is best placed to play a constructive role in stimulating implementation of the DCFTA objectives. The main function of civil society (CSO) is to monitor the implementation of DCFTA and to engage in a working discussion with the Government and to provide expertise as needed. Access to information remains a problem. To avoid an existing knowledge gap, the Government and the CSO should share views (including plans) frequently and even on permanent basis. The formats established up to now are not sufficient to reach a satisfactory level. It is still necessary to develop a new, comprehensive format of cooperation of the Government with the Civil Society.

Regarding, the technical standardisation process, the technical committees create an effective framework for engagement. Each committee brings together relevant representatives of the public sector, SMEs, CSOs and academia to discuss and approve

specific standards, with a view of recommending relevant European and international standardisation organisations and national legislative frameworks. For instance, the technical committee for “Food Products” has 35 members, including representatives of state authorities, limited liability entities, research institute etc. Other technical committees respectively bring together relevant stakeholders and the information about their activities is open and accessible for everyone.

5.3 Ukraine

Although the partnership between civil society organizations, academic institutions, business representatives, state bodies and national standardization body in the field of implementation of European standards has significant potential, it is not used to a full scale. The Agency is open to cooperation of that type if it is initiated by civil society institutions. However, the obstacle to cooperation is limited willingness of the representatives of SME to cooperate. Psychological barriers, exaggerated perception of risks related to costly shift to European standards, lack of understanding of advantages of European standards provide a lot of space for establishing further cooperation.

An efficient platform for setting cooperation with the interested stakeholders among NGOs, business representatives and state structures are the Technical committees (TC) which include all the interested stakeholders. If there are such options the representatives of the Agency also participate in trainings organized by different institutions and enterprises within different EU-funded projects, although the main goal of such cooperation is training of specialists. This year, for example, the representatives of the Agency attended the seminars within the project “Association 4U”, which were related to approximation of Ukrainian legislation to European (the organizer was the Ministry of Agriculture), and also cooperated with the Swedish trade council – participated in the seminar “Good regulatory practices and the assessment of the regulatory influence” and participated at forum related to the issues of technical regulations.

Another format of cooperation is participation in the exhibitions. Although state institutions and the Agency are limited in their resources and can only participate in the events where there are no participation fees, in May they participated in the activities of III National forum of export support organized by Chamber of Commerce and Kyiv city state administration there was an exhibition-presentation of the production of Kyiv enterprises named “Made in Kyiv”. The event was one of the elements of dialogue between the government, the EU and Ukrainian enterprises on export, investment and innovations. There were more than 160 enterprises from all the districts of the capital, working in the fields of machinery, construction, chemistry, health care, pharmaceuticals, polygraphs etc. More than 40 scientific institutions of Kyiv demonstrated their achievements, technologies and materials. National standardization body presented the selected relevant standards, which are currently important instruments of development of modern business and communicated with the participants of the exhibition.

It is noteworthy that most of the examples of cooperation are related either to activities within the TCs or different events. However, there is a lack of common initiatives on promoting European standards, conducting studies on the advantages and shortcomings of such standards, comparative analyses on the situation in the countries shifting to European standards – first and foremost Georgia, Moldova and Ukraine.

6. Conclusions and recommendations for EaP countries

This comparative study has discussed different aspects of European standardisation in three EaP countries: Moldova, Georgia and Ukraine. As analysed and concluded, the standardisation process has a positive track of development, especially in the last several years. The signing of the Association Agreements and DCFTAs has instigated this process by offering new incentives and opportunities, which, together with the adoption of European standards, have led to the diminution of technical barriers to trade and the extension to the European market. For instance, Georgia's and Ukraine's exports to the EU currently represent more than one third of their total exports, while in Moldova the share of the EU is higher (around 63% of Moldovan exports are sent to the EU).

The experience obtained by the Republic of Moldova, Ukraine and Georgia -, as well as the common problems faced by these countries during the implementation of European standards, allow us to make the following conclusions and recommendations that would facilitate this process:

- 1) The implementation of European standards and the transition to the European system of technical regulation and standardization requires a complex approach. The effective transition to the new European standards can only take place when this process is well designed, is carried out in collaboration with the regulatory authorities and the national standardization body, and taking into account the real situation in the sector.
- 2) Implementation of European standards requires the establishment of a transition period to provide stakeholders with sufficient time to adjust capabilities, processes and technologies to the new requirements.
- 3) The implementation of European standards, including the setting of the transition period from GOST standards, must be done in a transparent and predictable manner.
- 4) A large stakeholder consultation is needed to facilitate the effective implementation of European standards and to reduce reticence.
- 5) For the transition period from GOST standards to European standards, it is necessary to establish and formalize a mechanism for the application of GOST standards canceled during this period. Particular attention should be given to accreditation and conformity assessment rules/procedures, where this possibility should be introduced.
- 6) The adoption of European standards must take place in parallel with the cancellation (withdrawing) of national standards (in particular GOSTs) that conflict with European standards.
- 7) The process of implementing European standards needs to be supported by a consistent information campaign, especially to promote the benefits of European standards.

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