

# REGIONAL INNOVATIONS

N4  
2016

ISSN 2273-2640

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DEMARCATIION, BORDER MANAGEMENT, CROSS-BORDER COOPERATION

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**ISSN 2273-2640**

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## About InterRegioNovation

**InterRegioNovation** is the International Association devoted to the transfer and exchange of knowledge and innovations at all regional levels (country, region, city, community etc.) between knowledge transfer professionals (business, research institutions, policy makers, government agencies, individuals, others) in all countries of the enlarged Europe, CIS countries and from other continents for stimulating and enhancing economic and social growth in the regions.

This is a policy and research association that brings together all knowledge transfer professionals who are interested in delivering efficient, flexible, innovative and cost-effective services across the private and public sectors. We work closely with business, research and educational institutions, government agencies, policy makers, NGOs, media, individuals and other stakeholders to promote the interests of their industries.

Our members understand the changing needs of the transfer and exchange of knowledge and innovations and through continuous professional development, marketing and networking opportunities offered in this association, we keep current with the latest knowledge trends and issues that challenge people in their work and life journey. We also offer expansive opportunities for partner connection through our networks.

Journal “Regional Innovations” is one of the Association’s tools for innovators and everybody who is interested in any aspects of innovation development.



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## About journal

On behalf of the Editorial Board, it gives us a great pleasure to welcome you to the forth and the last issue of 2016 of the Regional Innovations Journal. This is a thematic special issue dedicated to broad aspects of demarcation, border management and cross-border cooperation.

The Regional Innovations publishes original research papers, policy analyses, review papers and book reviews in order to establish an effective channel of communication between business, research institutions, policy makers, government agencies, and individuals relative to the analysis of various aspects of knowledge and innovations transfer and exchange within regional dimensions.

This is an independent, peer-reviewed, Internet-based international journal devoted to publishing original research papers of highest quality, sharing ideas and discussing innovation sector within regional dimensions. Normally, four issues are prepared each year. The journal welcomes to submit research papers by exceptional innovators, leading universities, globally recognized business, government agencies, policy makers and political leaders.

We intend that our readers will be exposed to the most central and significant issues in innovations development. We wish to publish papers that exemplify the highest standards of clarity, and that promise to have significant impact on existing front-line debates or to lead to new ones. The journal explores key priorities of the knowledge and innovations transfer and exchange in terms of critical aspects of human life (economy, law, science, business, health, education, culture etc.). We therefore welcome submissions not only from established areas of research, but also from new and emerging fields and those which are less well represented in existing publications, e.g. engineering studies, biomedical research etc.

We also strive to ensure that being under expert evaluation, each submission will receive developmental and supportive comments to enhance the article. Our refereeing process will involve that each submission will be reviewed by one or more specialists in the relevant field. Articles will be added to the volumes and the journal audience will receive e-mails updates to encourage them to the new articles.

We are delighted with, and immensely grateful to the large numbers of colleagues, both members of the Associations InterRegioNovation and FranceXP (France), representatives from many universities in France, Latvia, UK, Azerbaijan, China, Belarus, Ukraine and other institutions, who have supported the editorial process. And we are very proud of the expertise that they collectively bring, which we believe is unsurpassed by any contemporary innovative journal.

We are immensely grateful to our colleagues for their support and advice through the process of setting the journal up, and for the confidence they have placed in us in supporting this initiative at a time of economic uncertainty.

In the development of the Regional Innovations to date, we would like to enlist the support of a number of organisations who wish to promote this online journal to their experts. To ensure its sustainability, we would also like to invite other organisations, networks, conferences and meetings to associate themselves with the Regional Innovations. We therefore aim for the Regional Innovations to become the leading online forum to globally disseminate outstanding research papers on innovation sector in regional dimensions. Being an online periodical, the Regional Innovations is also a forum for exchange of imaginative ideas readers wish to share. Contributions of articles on innovations sector and your comments about this issue are very welcome.

To this end, if you lead, represent, or are a member of any such organisation, please contact us to offer your support and commit to promoting the Regional Innovations as a publication outlet for research undertaken by your experts.

We do hope you enjoy and benefit from the Regional Innovations! And many thanks for staying with us in 2016!

**Jean-François Devemy**  
**Publishing Director**

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LES NOUVELLES FRONTIÈRES NUMÉRIQUES ET PARTAGÉES DE LA FRANCE

### Résumé<sup>1</sup>

*Pour la mise en œuvre des politiques ayant un impact sur l'environnement, l'Union européenne a besoin de données géographiques à grande échelle. La directive INSPIRE répond à ce besoin, en demandant aux Etats membres de mettre à disposition dès 2018 ces données de façon interopérable. Les données requises par INSPIRE comprennent les lignes administratives de premier niveau c'est-à-dire les frontières entre Etats. En France le MEEM (Ministère de l'environnement de l'énergie et de la mer) est le point de contact national pour la mise en œuvre de la directive INSPIRE. En ce qui concerne les agences nationales de cartographie et de cadastre, la mise en œuvre de la directive est coordonnée par EuroGeographics au sein de la plateforme ELF (European Location Framework), qui a organisé en 2016 la création des premiers raccords entre les bases de données des pays voisins, ce qui implique le partage d'une ligne frontière unique. La mission IGN d'appui au CNIG (Conseil national de l'information géographique), structure de coordination pour la mise en œuvre de la directive INSPIRE en France, répond à l'objectif de création d'une ligne frontière nationale numérique et partagée avec les pays frontaliers.*

**Mots clés:** frontière, ligne partagée, Directive INSPIRE, interopérabilité, donnée numérique.

### Abstract<sup>2</sup>

*For its environmental issues, the European Union needs geographic data at large scale, the administrative first level lines are "between states", namely the boundaries. In France it is the responsibility of the Ministry of environment (MEEM) to enforce the INSPIRE Directive, which requires these data to be interoperable and made available by all European countries from 2018 onwards. Regarding national mapping and cadastral agencies (NMCA), the actual implementation of the Directive is coordinated by EuroGeographics within the ELF platform (European Location Framework), which organized in 2016 the first edge-matchings between neighboring countries. This implies the sharing of a single boundary line between them. The IGN mission supporting the CNIG, the French coordinating structure according to INSPIRE, meets therefore the goal of creating a digital and shared boundary line. After a brief history, this article presents the current revolution in the design of European borders and its effects on the French territory. The new inventory is not yet final, but the approach initiated can claim a permanent determining of those limits. It will only stand the two iconic questions of the metropolitan border that are the Mont-Blanc area and the mouth of the Bidassoa.*

<sup>1</sup> Cet article a initialement été publié dans la Revue XYZ, #148, 3 trimestre 2016. L'auteur a proposé de l'adapter (avec quelques modifications), avec l'accord de l'éditeur, en vue de sa publication dans le numéro thématique «frontières» de la revue «Innovations Régionales».

<sup>2</sup> This paper was already published in the Journal XYZ, # 148, 3 trimestre 2016. It was proposed by the author (with some modifications) with an accordance with the Editorial Board of the Journal XYZ, for its publication in this thematic issue on border management of the Regional Innovations Journal.

## LES FRONTIÈRES JUSQU'À 2015

### *Des textes*

La ligne frontière est héritée des Limes, les limites de l'arpentage, succédant aux marches et confins tous relatifs aux extrémités évasives de la souveraineté sur un territoire.

Le premier texte frontalier pour la France, est le Traité des Pyrénées, signé en 1659 à l'occasion du mariage de Louis XIV avec l'infante d'Espagne, sur l'île des Faisans restée depuis cette occasion l'unique condominium du territoire. Extrait :

*« les monts Pyrénées qui avaient anciennement divisé les Gaules des Espagnes seront aussi dorénavant la division des deux mêmes royaumes ... par la crête des montagnes qui forment les versants des eaux »*

Des conventions et accords de délimitations viendront préciser le détail de la division et les modalités d'abornement afin de matérialiser les descriptifs sur le terrain.

Par la suite, les autres frontières géographiques de la France seront aussi détaillées dans des textes au fur et à mesure des Traités (le dernier a été signé en 2012 avec Andorre). Ils sont la référence de la définition des frontières. Les documents associés aux traités sont d'autant plus imprécis que l'on remonte dans le temps et sont considérés comme des compléments.

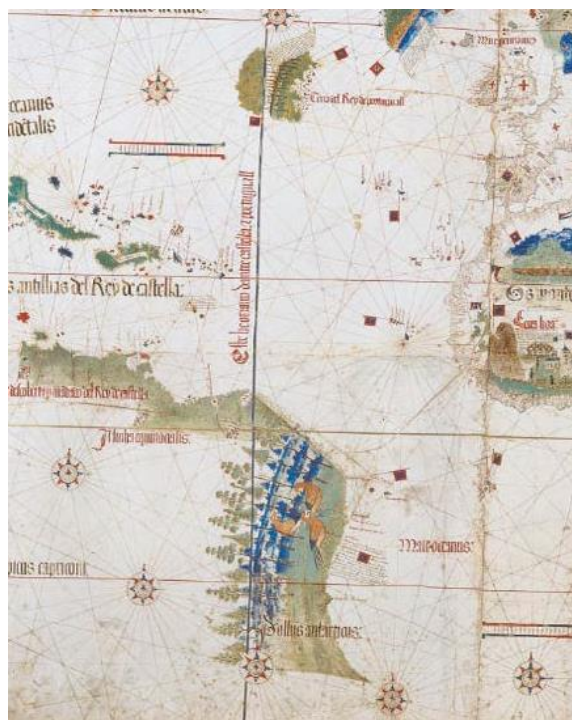
Les descriptions des Traités sont rédigées sous l'autorité des diplomates, avec l'appui technique des géographes, le respect de leur application étant délégué aux préfets des régions frontalières.

On retrouve aujourd'hui ces 3 niveaux dans les commissions mixtes réglant les questions frontalières.

### *Des représentations cartographiques*

Le premier partage frontalier cartographié juridique semble être en 1500 celui du traité de Tordesillas, partageant le monde entre portugais et espagnols. Les lignes frontières apparaissent sur les cartes vers 1600 avec la dislocation des seigneureries médiévales au profit des souverainetés, nouveau principe d'organisation en Europe.

C'est le début d'une très lente progression qui verra leurs tracés devenir de plus en plus précis.



**Figure 1. Carte du traité de Tordesillas**

Le mont-Blanc apparaît sur les cartes vers 1786, avec le début d'une cartographie détaillée des massifs montagneux, jusque-là représentés sous formes symboliques.

Malgré l'avènement des bases numériques, chaque pays possède encore sa propre représentation cartographique de la ligne frontière. Leurs divergences sur des petites zones pouvaient rester encore invisibles. Jusqu'en 2014, la représentation numérique française de la ligne frontière ne pouvait ainsi garantir une précision meilleure que 30 m sur 80% de sa longueur.

Et puis les échanges de données entre pays dans des formats compatibles sont devenus possibles. Avec la mise en place des systèmes géodésiques internationaux et la possibilité des transformations précises de coordonnées, ces écarts de tracés sont désormais devenus évidents en comparant les données numériques transfrontalières.

La mission CNIG (conseil national de l'information géographique <http://cnig.gouv.fr/>) de l'IGN, structure de coordination pour la mise en œuvre de la directive INSPIRE en France, a pris ce dossier en main avec pour objectif la création d'une ligne frontière numérique unique et partagée sur tout le pourtour du territoire national.

## LA LIGNE NUMÉRIQUE UNIQUE PARTAGÉE

### L'effet moteur de la directive INSPIRE

L'article 10.2 de la Directive INSPIRE en 2007, met pour la première fois en évidence la nécessité de constituer une ligne unique : «Afin de garantir la cohérence des données géographiques concernant un élément géographique qui englobe la frontière entre deux États membres ou plus, les États membres décident d'un commun accord, le cas échéant, de la représentation et de la position de ces éléments communs».

Chaque pays fait donc son possible pour être au rendez-vous en 2018, échéance affichée par le règlement pour la thématique des limites administratives.

Le projet *European Location Framework* (ELF : <http://www.elfproject.eu/>), coordonné par EuroGeographics, vise à mettre en œuvre la Directive Inspire pour ce qui concerne les agences nationales de cartographie et de cadastre, et demande à ses membres les plus actifs (dont l'IGN) de raccorder les bases de données limitrophes. Sans ligne numérique unique partagée, cela aurait été impossible.

### Les accords...

Autant à moyenne échelle sur les produits européens d'EuroGeographics (EBM, ERM), les divergences majeures n'apparaissent pas, autant à grande échelle, surgissent une quantité d'interprétations cartographiques différentes des textes. Sur chacun de ces points, une confrontation des arguments techniques a dû être débattue afin d'obtenir un accord bilatéral.

Les établissements nationaux (Centres du cadastre, Instituts géographiques nationaux, Instituts militaires) ont collaboré sur la définition technique d'une limite commune. Partant des textes descriptifs de la frontière, des mesures ont été effectuées de part et d'autre pour établir techniquement un tracé. Quand cela a été possible, ces rapprochements ont été initiés sous couvert des commissions bilatérales officielles, en tenant compte des responsabilités de chacun.

Ainsi, des lignes uniques à grande échelle sur toutes les frontières françaises ont été validées par divers types d'accords. Qu'ils soient oraux, temporaires, ou ratifiés par des conventions, les processus de validation sont en marche, s'appuyant sur un savoir technique (la mesure GPS, les restitutions photogrammétriques, les levés Lidar) dont la reconnaissance commune fait autorité.

Des premiers textes prenant en compte ces évolutions ont désormais été signés et reconnaissent la prééminence des coordonnées sur la matérialisation, même si le texte des Traités reste la référence absolue.

La certification juridique bilatérale sera lente dans certains contextes, mais le besoin partagé de ligne unique permet de lever les obstacles qui semblaient jusque-là incontournables. D'ailleurs, un à un, tous les responsables concernés en comprennent l'enjeu et la situation évolue très favorablement.

En absolu, la précision de la ligne frontière numérique unique s'appuie sur des mesures qui vont du cm (GPS) au métrique (de 1 à 5m :restitutions). Mais dans les conventions, les jeux de coordonnées, vont asseoir la ligne sur une position commune au millimètre qu'il sera difficile de faire bouger par la suite.

### ...et désaccords

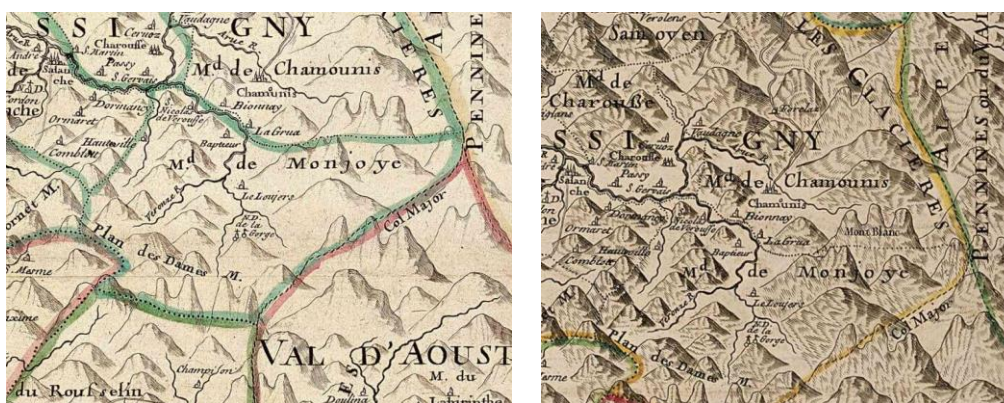


Figure 2. Apparition du mont-Blanc sur les cartes ? à gauche : 1691 Carte d'origine du Père Placide, ingénieur géographe, mais corrigée et augmentée... à droite, en 1792 par Dezauche, géographe d'après les ouvrages de Guillaume Delisle (1675-1726)

En métropole, il y a deux zones de désaccords diplomatiques historiques : elles ont été éliminées d'office lors des transactions pour ne pas devenir des obstacles aux échanges techniques et négociations : le secteur du mont-Blanc et l'embouchure de la Bidassoa.

Outremer, des divergences frontalières subsistent aussi : le Suriname revendique près de 10% de la Guyane, côté sud-ouest, entre Litani et Marouini.

Pour l'île de Saint-Martin, les Pays-Bas ont demandé une régularisation à partir d'un texte non délimité sur le terrain en 2016. Une confrontation est en cours à propos de l'étang aux Huîtres que revendiquent les Néerlandais sur toute sa surface.

Avec Andorre, aucune description écrite de la frontière ne préexistait. Des échanges de territoires ont été l'occasion de mettre à plat les divergences et depuis 2015 le traité délimitant la frontière est entré en vigueur, après approbation par le Sénat et par l'Assemblée Nationale.

Les échanges et constructions d'ouvrages, les ententes cadastrales lors de poses de bornes ou de remembrements ont permis ponctuellement des mises en accord sur les frontières.

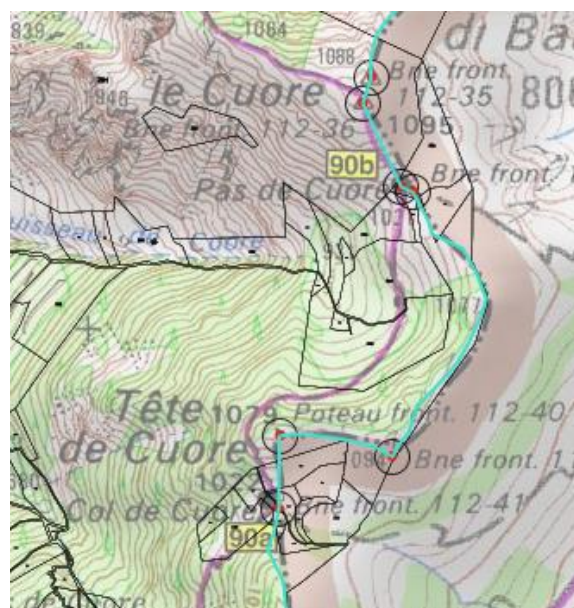
Les divergences créent des « no man's land » où tout est possible : freins au développement structurel...ou prétexte à de nouveaux types d'accords transnationaux. C'est sans doute par des intérêts économiques communs que les Etats finiront par résoudre leurs gros désaccords.

### ***Le concept de ligne temporaire***

Avec l'évolution du numérique, chaque citoyen peut accéder à l'information géographique et en constater la fidélité. Chacun est à même de consulter des territoires représentés à une échelle toujours plus grande et assemblés le plus précisément possible. La rapidité de cette révolution culturelle bouscule les organisations historiques.

Pour la ligne, les pays peuvent être amenés à s'entendre sur un accord temporaire en attendant mieux. Voici deux exemples pour comprendre les méandres du processus :

Dans les Pyrénées, la ligne a été créée à partir d'un consensus entre les restitutions photogrammétriques. Cependant elle doit être cohérente avec les coordonnées des bornes qui matérialisent jusqu'à présent la frontière. Seule la moitié ayant été mesurée, il a été admis bilatéralement que le caractère définitif de la ligne en ces endroits attendrait les mesures GPS. De plus, une dizaine de points douteux resteront à visiter dans les années à venir, afin de trancher techniquement sur le passage de la ligne de partage des eaux.



**Figure 3. Le cadastre débordant encore les lignes frontières**

Le long des nombreuses rivières qui suivent la frontière belge, les 4 tracés respectifs des deux cadastres et des deux IGN se révèlent enlacés, ceci étant dû à l'héritage des positionnements à moins grande échelle, sans compter le contexte arboré peu favorable à la restitution photogrammétrique ainsi qu'aux mesures satellitaires.

Pour dessiner le tracé de la ligne frontière numérique, une seule version de l'hydrographie a été choisie, en attendant que des mesures plus précises permettent de conférer un statut plus pérenne aux coordonnées du tracé de ces cours d'eau.



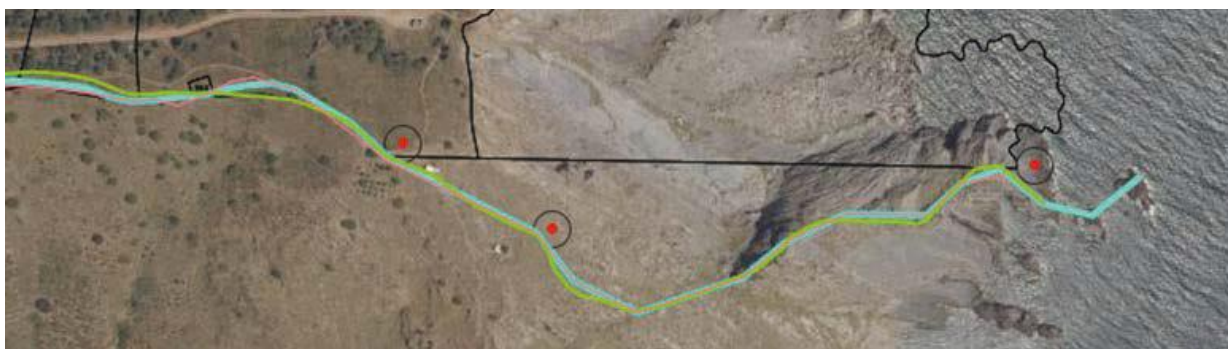


Figure 4. En bleu, la ligne franco espagnole validée, à son arrivée sur la Méditerranée



Figure 5. Extrait de frontière franco-belge dans ses 4 versions initiales

### L'argument technique

Il est entendu que toute demande justifiée par une argumentation technique pourra être présentée en commission mixte, ou à ses appuis techniques (IGN, DGFIP). Elle sera d'autant plus aisée à soumettre que la validation juridique bilatérale n'aura pas encore été signée.

L'accès visuel aux lignes en cours de validation (voir photo ci-dessus) se fait sur le site du CNIG : <http://cnig.gouv.fr/APIGeoportail/PageAPI.php>

### Etat des lieux

Un rendez-vous annuel a été fixé pour mettre à jour ces nouvelles lignes frontières partagées dans les bases du Référentiel grande échelle (RGE®) de l'IGN et à terme, dans celle des portails européens : les modifications introduites en décembre dans la BDUni de l'IGN, sont répercutées sur les autres bases de données et produits.

décembre 2015 : Belgique, Luxembourg, Allemagne, Andorre, Espagne.

décembre 2016 : Suisse, Italie.

En ce qui concerne d'autres frontières moins prioritaires, le travail est en cours.

- Pour Monaco, les partages du cadastre ont été opérants jusqu'à présent même si un besoin de définition à très grande échelle existe.
- Pour la Guyane, la description cartographique à moyenne échelle est suffisante pour l'instant.
- Quant à l'île antillaise de St Martin, les discussions sont en cours entre le Ministère de l'Outremer et les Pays-Bas.

A noter que la Suisse, Andorre, le Brésil, le Suriname, et Sant Marteen, la partie néerlandaise de l'île de St Martin, ne sont pas dans le périmètre de l'Union Européenne.

## Types d'accord obtenu pour une ligne numérique unique grande échelle :

Pays	Partenaire	Source la plus précise	Accord	Type	Validation CMA
Belgique	IGN-Belge	Ligne du cadastre belge corrigée sur les grands écarts + Hydro IGN belge	oral	temporaire	Non
Luxembourg	Adm cadastre	Cadastre luxembourgeois	oral	temporaire	Non
Allemagne	BKG	Lignes des 3 Länder	oral	temporaire	Non
Suisse	SwissTopo	Ligne de Swisstopo	CMA	temporaire	Oui
Italie	IG Militare	Restitutions franco-italienne	CMA	définitif	Oui
Monaco	Cadastre local	Cadastre	/	temporaire	/
Andorre	IDE Andorra	Restitutions franco-andorrane	décret	définitif	Oui
Espagne	CG Ejercito	Restitutions franco-espagnole	CMA	temporaire	Oui
S.Marteen	Cadastre local	Cadastre	CMA	en attente	/
Brésil	PCDL	RGG (restitution française)	?	/	Oui

Tous les processus d'accord ont été lancés dans le but d'obtenir à terme une validation bilatérale sur la ligne numérique unique. La reconnaissance juridique de la ligne numérique frontière avec les pays du nord sera programmée par le ministère de l'Intérieur, qui est responsable de l'organisation des Commissions mixtes.

Dès 2016, la première échéance du projet ELF concerne la nécessité de pouvoir raccorder les données de l'IGN France avec les données de l'IGN Belgique et de l'IGN Espagne. Par la suite il faudra que cela soit généralisé sur toutes les frontières européennes pour répondre à la directive INSPIRE.

### CE QUE CELA VA CHANGER

#### *En Europe*

Les nouvelles lignes frontières vont prendre un poids, une reconnaissance administrative qui confirmera leur tracé au fur et à mesure de leur utilisation. En effet, elles sont stockées par le BKG (Bundesamt für Kartographie und Geodäsie, homologue allemand de l'IGN), l'organisme chargé dans le cadre de la plateforme ELF de centraliser les frontières numériques à grande échelle. Il faut s'attendre à un affichage dès 2017 au sein de la plateforme ELF puis dans le portail européen INSPIRE.

#### *Pour le cadaster*

La ligne frontière numérique unique étant la seule reconnue des deux côtés de la frontière, elle va acquérir un statut incontournable de ligne commune. La DGFIP prendra en compte cette ligne pour ce qui concerne les limites des parcelles frontalières dans le cadre de la RPCU. On peut estimer qu'en 2026, toutes les limites cadastrales seront interopérables avec les cadastres des pays voisins.

#### *Dans la gestion des frontières*

Les prescriptions de la directive INSPIRE ont généré une formidable mobilisation visant à reconnaître un tracé commun de la frontière. Ce travail, entrepris depuis 2007, s'est achevé cette année avec l'Italie. En 3 ans, avec l'Espagne, les 60 points de divergence (de 30 à 500m) ont pu être réduits à 1 seul. Avec nos autres voisins, le relief est moins défavorable à la qualité géométrique du plan cadastral et les écarts sont moins importants.

Les responsabilités dans l'administration française des frontières sont partagées historiquement entre diplomates, préfets, militaires et géographes. Une circulaire précisant ces répartitions est toujours en cours d'étude, la documentation sur les différentes matérialisations doit en effet devenir plus accessible. Malgré cette apparente dispersion, la participation active des trois ministères dans le processus de reconnaissance de la frontière numérique est devenue un élément moteur qui permet une évolution substantielle des conventions internationales.

En phase avec les mutations de la société, l'accès à l'information du positionnement de la frontière change à grande vitesse par le biais des géolocalisations. Les smartphones transforment les usages et l'information numérique se substitue peu à peu aux autres signalisations matérialisées sur le terrain.

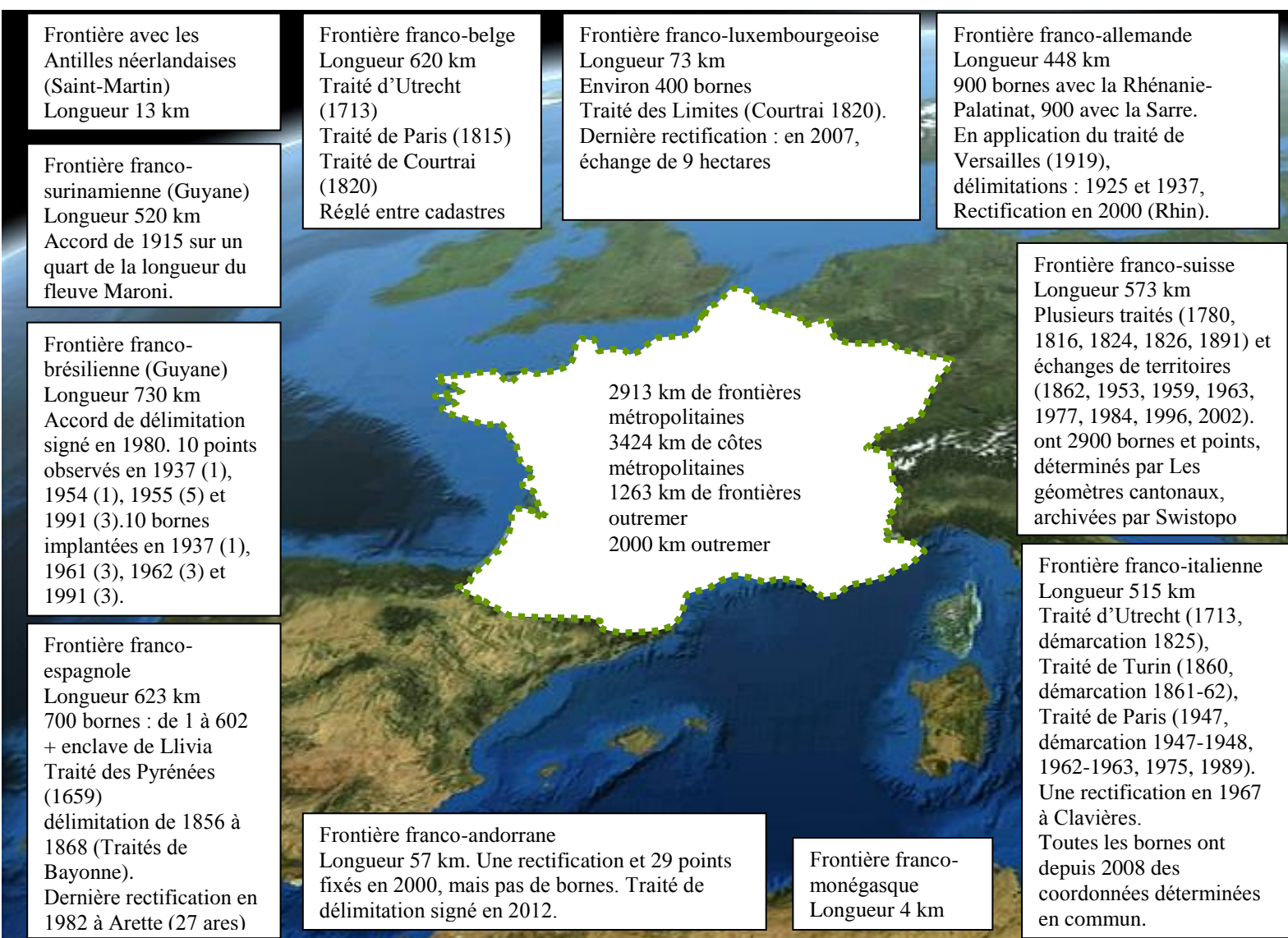
De nombreuses bornes isolées pendant des siècles voient passer les randonneurs et les véhicules tout terrain attirés par les zones reculées. Leur stabilité et leur fiabilité s'en trouve remise en cause. A terme elles intégreront le patrimoine culturel local, gage de sensibilisation à leur entretien.

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### Annex 1.

#### Eventuel Tableau récapitulatif des frontières





**Abstract**

*Border areas in Ukraine are characterized by considerable unevenness of development. To finance the investment in the border areas by the Government of Ukraine provided the use of international technical assistance and resources of international financial institutions (such as government borrowing) which could be channeled for the implementation of investment projects through state banks. However the peculiarities of state banks in Ukraine pose an additional burden on the debt sector. The article examines the changing risks related to the state debt, due to the impact factor of the capitalization of state banks by issuing T-bonds. The spectrum of risks regulated by "On Approval of the Procedure for monitoring the risks associated with the management of the state (local) debt" decree from 01.08.2012 №815 issued by the Cabinet of Ministers of Ukraine is analyzed. It is shown that during 2008-2016 years capitalization carried through T-bonds of state banks led to 88.1 billion UAH of borrowing and the need for expenditure in the amount of 39.87 billion UAH aimed at servicing securities. The last factor increased the budget risk and provoked the emergence of "debt spiral": annual increase in expenditure on maintenance capitalization of government T-bonds in those volumes increased size of the budget deficit and growth of further government borrowing. In addition to the above, from 2016 begin repayment capitalization bonds, it will cause additional impact on debt refinancing risk.*

*With a view to easing the budgetary risk due to impact of maintenance capitalization of T-bonds it is proposed, similar to the approach in the provision of state guarantees to business entities, to develop a mechanism of partial (or complete) compensation of securities service by profits of state banks. In addition to the above, from 2016 begin repayment capitalization bonds, it will cause additional impact on debt refinancing risk.*

**Key words:** capitalization of state banks; the public debt risks; compensation mechanism of refund the bonds maintenance

Border areas in Ukraine today are characterized by unevenness of development, the growth of inter-regional social and economic disparities, considerable differentiation of regions and cities long time featured with simultaneous decline in economic activity and a decrease in population. To solve these urgent problems the State Regional Development Strategy for the period until 2020, approved by the Cabinet of Ministers of Ukraine dated August 6, 2014, № 385 was developed. One of the important objectives of the

Strategy is to develop border infrastructure and cooperation between local communities of neighboring countries through the development and implementation of joint cross-border social,

humanitarian, economic, cultural, and environmental projects. Substantial investments are needed to achieve this goal. One of the sources for investment in the Strategy is the state budget, which will be transferred on places as part of decentralization.

Another source is the use of international technical assistance and resources of international financial institutions (such as government borrowing), which may be directed to implementation of investment projects through state-owned banks. Lets analyze the risks of using the latter mechanism given the peculiarities of state banks in Ukraine, and their role as debt creating factor.

During the years 2014-2016 the debt burden in Ukraine exceeded the level of 60% of GDP, which is defined as marginal in the Budget Code of Ukraine. At the end of 2016 the ratio of state and state guaranteed debt could reach 86.0% of GDP. Service of the state debt burdens increasingly burdens the expenditure side of the State Budget of Ukraine: in 2016 the corresponding planned expenditures may reach 15.8% of the revenue part of the budget. In these circumstances, the urgent task is to study burden-making factors and risks which they form, and develop measures that would help to reduce the state burden and the costs of servicing the state debt. One of such factors is the capitalization of state banks, funded by government borrowings.

In foreign scientific literature the impact of the financial and the banking system in particular on the development of state debt, as well as compensatory reimbursement mechanisms of state aid provided during crisis of 2008-2009 are thoroughly analyzed [1, 2]. However, approaches to solving this problem are not fully formed.

In Ukraine several works are dedicated to the issue of state-owned banks efficiency, peculiarities of their interaction with the Ministry of Finance of Ukraine and the National Bank of Ukraine, including [3]. Regarding the aspect of impact of the ongoing capitalization of these banks to leverage and explore

of the possibilities of reducing it, no research conducted enough.

The purpose of this research is to study the scope of state debt risks related to exposure to the state banks capitalization, and study of proposals for debt management policy, which would allow reducing these risks.

Review of the complex of instruments of state support for the banking sector during the last financial crisis points to two main varieties of such aid: the capitalization of banks, or providing them with liquidity [1, 2]. The last of these is widespread; however, such aid is effective only for a short period of time.

Table 1 shows the information on the total amount of state aid to the banking sector in the EU member states and some other countries during 2007-2011, and amounts of money spent on the capitalization of banks at this time. The last column contains information on IMF growth of general government debt sector during this period [6].

As the table shows, the largest amount of state aid to financial institutions has been granted in Ireland (80.1% of GDP), Iceland (44.2% GDP), Greece (27.3%). These countries are the leaders of state aid given to banks in the form of capitalization 40.7; 26.1; 23.0% of GDP respectively.

**Table 1**  
*The volume of state aid given to financial institutions in some countries during 2007-2011*

Country	Capitalization, % GDP	The total amount of state aid, % GDP	Changes of debt burden in the general government sector, % GDP
Austria	2,9	4,9	12,0
Belgium	5,8	6,0	14,4
Denmark	2,7	3,1	12,4
France	0,5	1,0	22,1
Germany	1,7	1,8	16,3
Greece	23,0	27,3	57,9
Hungary	0,1	2,7	13,5
Iceland	26,1	44,2	70,1
Ireland	40,7	80,1	80,1
Italy	0,3	0,3	17,0
Kazakhstan	2,4	3,7	5,0
Latvia	3,1	5,6	30,0
Luxembourg	4,2	7,7	14,2
Mongolia	4,2	4,2	0,0
Netherlands	6,6	12,7	20,9

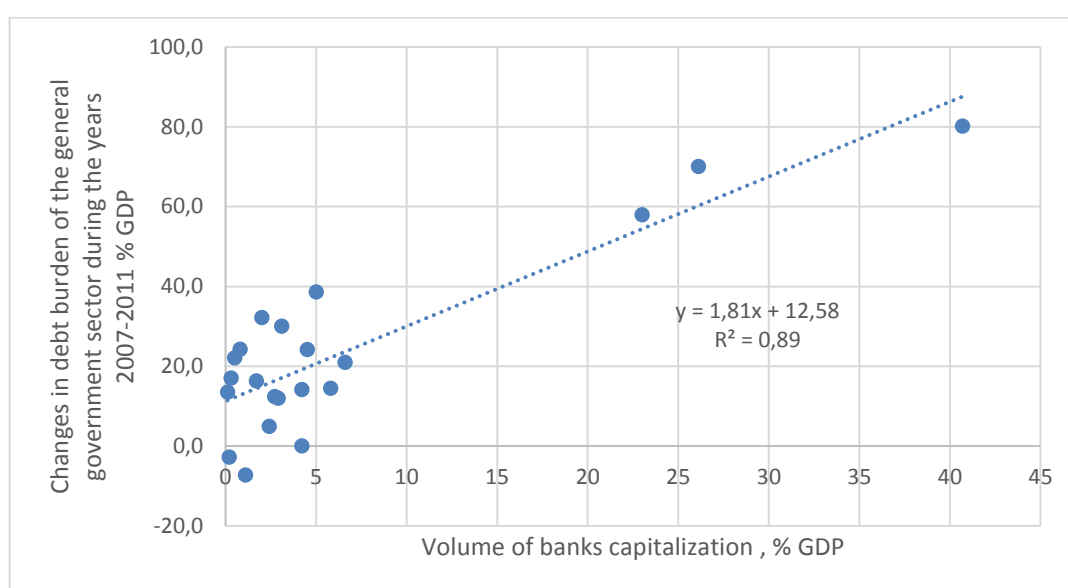
<b>Slovenia</b>	0,8	3,6	24,2
<b>Spain</b>	2,0	3,8	32,2
<b>Sweden</b>	0,2	0,7	-2,8
<b>Switzerland</b>	1,1	1,1	-7,3
<b>Ukraine</b>	4,5	4,5	24,2
<b>The United Kingdom</b>	5,0	8,8	38,6

Source: [4,5,6]

State support for the bank sector and, above all, capitalization, determine the allocation of significant financial resources often by increasing state debt. Explore the relationship between the change in the

debt burden of the general government sector (y) and the amount of capitalization (x) carried out during the period 2007-2011 (Table 1).

Simulation results are presented in Figure 1.



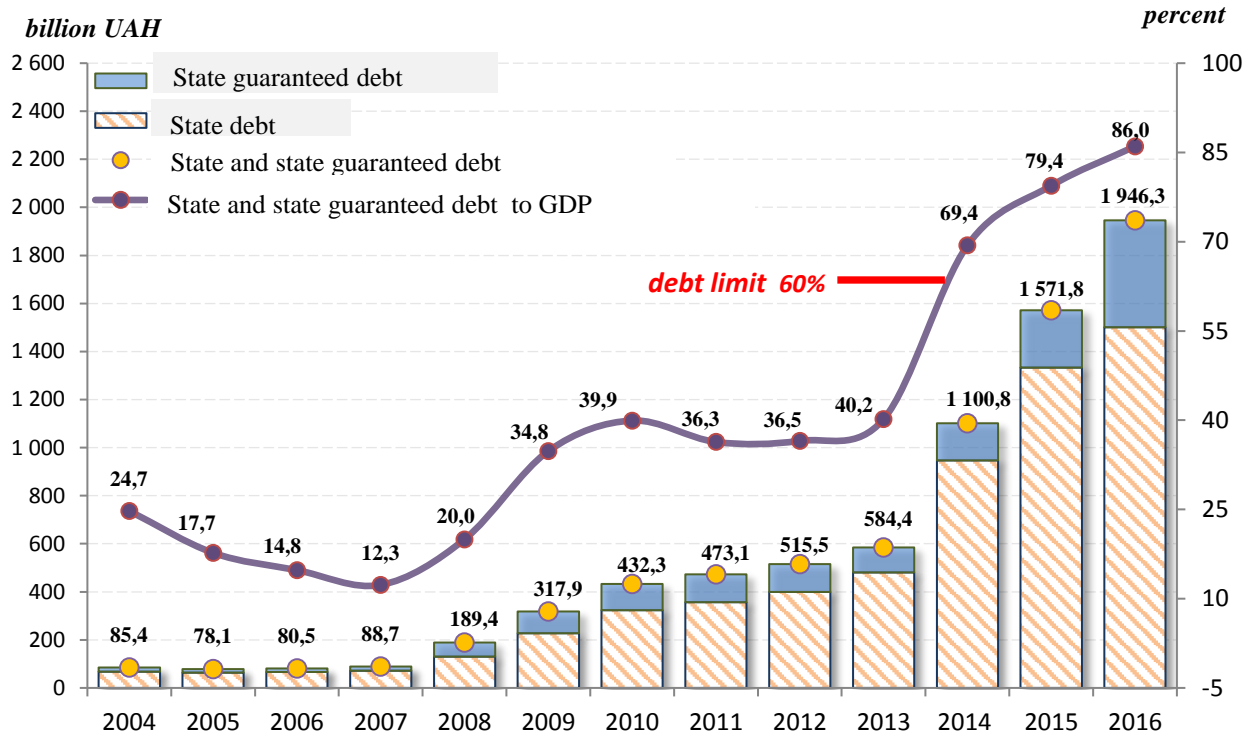
**Fig.1. Dependence of changes in debt burden of the general government sector of the world countries during the years 2007-2011 and the volume of capitalization of financial institutions.**

Source: author calculations

The initial construction of the linear-factor econometric model generally allowed to confirm the presence of close relationship (with a coefficient of determination  $R^2=0,754$ ) in the form of mathematical dependence  $y=1,88x+11,25$ . The model is adequate, but heteroscedasticity was found in this model. Carrying out appropriate procedures eliminated this disadvantage, and the dependence transformed to the form  $y=1,81x+12,58$  with coefficient of determination  $R^2=0,886$ . Autocorrelation is absent in the latest models. The high coefficient of determination confirms the unique dependence between the debt burden of the general government sector in the world

countries during 2007-2011 years and activities in capitalization of financial institutions. This may indicate that the capitalization of banks can be a significant debt-making factor, and this relationship should be explored in more detail for each country.

Fig. 2 shows the dynamics of state and state guaranteed debt of Ukraine, and the debt burden over the years 2004-2016. Apparently, the most rapid growth in debt burden occurred in 2014 (from 40.2 to 69.4% of GDP), further its rate decreased, but the trend has not changed. At the end of 2016 expected debt burden is 86.0% of GDP.



**Fig.2. The dynamics of state and state guaranteed debt of Ukraine.**

Source: Ministry of Finance of Ukraine [7], State Statistics Committee [8], author calculations

Let's analyze how the capitalization of state banks can influence the debt risks.

In Ukraine risks control is associated with the management of the state (local) debt regulated by the Cabinet of Ministers of Ukraine "On the Approval of the Procedure for monitoring the risks associated with the management of the state (local) debt" from 01.08.2012 №815) [9]. Procedure defines system of current debt risks. Among the most important, in particular, the budget risk, currency risk, refinancing risk, interest rate risk, credit risk, liquidity risk and others.

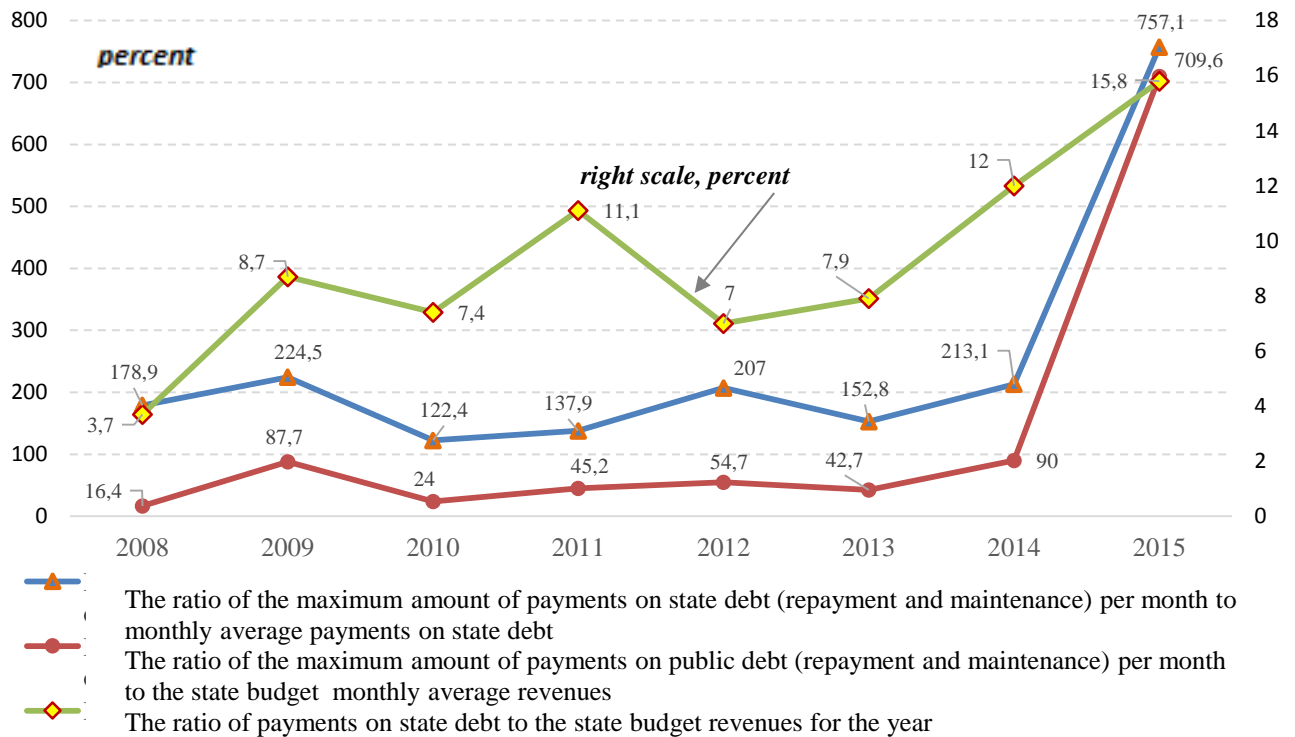
Regarding *budgetary risks*, the important indicators, that characterize it, are indicators of the uniformity debt payments ensuring, which are the ratio of the maximum amount of the repayment and servicing of public debt to average monthly revenues; and the ratio of the maximum amount of the repayment and servicing of state debt to monthly expenses to repay and state debt service, and related payments on state debt to government revenues, which shows how "costly" state debt is to the community.

Analysis of these indicators for years 2008-2015 shows that the debt burden considering the parameters of the state budget of Ukraine was uneven (Figure 3).

This was especially noticeable during the acute financial crisis in Ukraine in 2009 and during the years 2014-2015. Thus in 2009 the ratio of the maximum amount of monthly expenses on repayment and servicing of state debt to average monthly cost of repaying and servicing the state debt during the year was 224.5 percent, and the ratio of the maximum amount of payments on state debt a month before the monthly income of the state budget was 87.7 percent. In 2014 these figures were respectively 213.1 and 90 percent, and up to 2015 - 757.1 and 709.6 percent. The sharp increase in these ratios was the result of the debt restructuring in 2015. The corresponding operation carried out in November 2015, was a key element of cooperation between Ukraine and the IMF Extended Fund Facility program. Completed restructuring allowed to reduce Ukraine state debt about 3 billion US dollars and postpone payment of 8.5 billion US dollars of principal amount of debt, expected maturity at the end of 2018.

As for the cost of debt service to government revenues, it is worth noting that after 2008 there was a steady growth trend of this ratio. If this ratio in 2008 was 3.7 percent, in the coming fiscal years it has changed as follows: in 2009 - to 8.7 percent, in 2014 -

12.0 percent, and in 2015 - to 15.8 percent (Figure 3). This is an indication that the scope of debt factors every year more and more influence on balancing the budget in Ukraine.

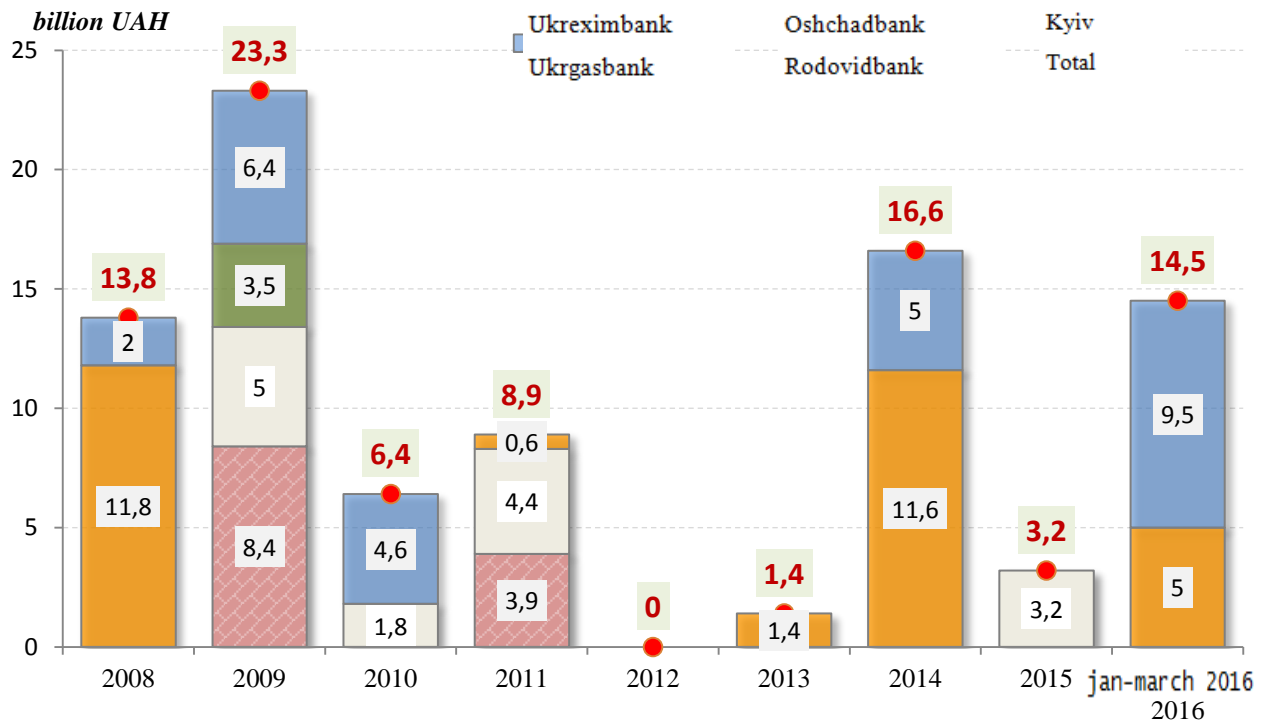


**Fig. 3. Analysis of debt risk for 2008-2015 years**  
 Source: [7, 8,10], author calculations

Let's check operations of support of the state banks in the course of capitalization through the issuance of government bonds in this trend. Figure 4 shows the dynamics of replenishment of the state banks statutory funds by issuing T-bonds nominated in local currency. In 2008 13.8 billion USD were given to the «Oshchadbank» and "Ukreximbank". The largest

volume of capitalization of state banks was about 23.3 billion USD observed in 2009. In that period, the greatest amount has been allocated to "Rodovidbank" and "Ukreximbank". During 2010, the capitalization of state banks was about 6.4 billion, and in 2011 - 8.9 billion UAH.





**Fig. 4. The dynamics of replenishment of the state banks statutory funds by issuing T-bonds nominated in local currency (during 2008- the first quarter of the 2016 years)**

Source: [7, 11]

During 2012 the following measures by the Cabinet of Ministers of Ukraine did not take place. In 2013, through the issuance of government bonds were capitalized only PJSC "Oshchadbank" in the amount of 1.4 billion UAH.

In 2014 the 38.2 percent of total state debt, which is 123,3 billion UAH, was used to replenish the authorized capital of such institutions as JSC "Oshchadbank", JSC "Ukreximbank", support "Fund Deposit Guarantee" and "Naftogaz Ukraine". The volume of capitalization of JSC "Oshchadbank" amounted to 11.6 billion UAH, and JSC "Ukreximbank" - 5 billion.

During the 2015 replenishment of the authorized fund of government bonds affected only "Ukrgasbank" in the amount of 3.2 billion UAH. During January-May 2016 to replenish the authorized capital of state banks borrowing was made in the amount of 14.5 billion UAH, including for JSC "Oshchadbank" - 5.0 billion UAH, and for JSC "Ukreximbank" - 9, 5 billion.

Table 2 shows the dynamics of capitalization of state banks and the amount of servicing government bonds, due to which the capitalization carried out.

As the table shows, with the increase in government borrowing made in connection with the capitalization of banks, state budget expenditures aimed at servicing these bonds are also becoming larger. So, if in 2009 the total amount of maintenance capitalization bonds was 2.45 billion UAH, in future it increased by 1.4 billion UAH and amounted to 3.85 billion UAH. If you take into account the need to service the loans received in early 2016 (0.69 billion UAH) to continue the process of recapitalization of state banks, the cumulative amount of payments on such bonds at the end of 2016 will be about 39.87 billion UAH.

Thus, over the past eight years, the capitalization of state banks to 88.1 billion UAH through government bonds necessitated budgetary expenditures on maintenance of capitalization bonds in the amount of 39.87 billion UAH.

**Table 2**  
**State budget expenditures to service loans made for the capitalization of state banks in 2008-2016, billion UAH**

Years	The amount of capitalization	The costs of servicing government bonds									Total
		2008	2009	2010	2011	2012	2013	2014	2015	2016 forecast	
2008	<b>13,8</b>		1,34	1,34	1,34	1,34	1,34	1,34	1,34	1,34	10,72
2009	<b>23,3</b>		1,11	2,21	2,21	2,21	2,21	2,21	2,21	2,21	16,58
2010	<b>6,4</b>			0,3	0,61	0,61	0,61	0,61	0,61	0,61	3,96
2011	<b>8,9</b>				0,42	0,85	0,85	0,85	0,85	0,85	4,67
2012	<b>0,0</b>					0	0	0	0	0	0,0
2013	<b>1,4</b>						0,07	0,13	0,13	0,13	0,46
2014	<b>16,6</b>							0	1,17	1,17	2,34
2015	<b>3,2</b>								0,15	0,304	0,454
2016	<b>14,5</b>									0,69	0,69
<b>Total</b>	<b>88,1</b>		<b>2,45</b>	<b>3,85</b>	<b>4,58</b>	<b>5,01</b>	<b>5,08</b>	<b>5,14</b>	<b>6,46</b>	<b>7,30</b>	<b>39,87</b>

Source: [7, 10, 11], author calculations

Figure 5 shows the dynamics of payments to service the state debt and the impact of capitalization bonds to the total amount of securities servicing.

It is seen that in years when borrowing for the capitalization of state banks were not implemented or implemented on a small scale, the volume of budget expenditures on services remained at approximately the same level. For example, in 2012 and 2013 capitalization by issuing government bonds was under 0.0 and 1.4 billion, and the cost of servicing these bonds accounted for about 5 billion UAH.

And after the implementation of state borrowing in 2014 in the amount of 16.6 billion UAH, in 2015 service provided for costs of around 6.46 billion UAH. The largest expenses are planned in 2016: 7.3 billion UAH.

Figure shows that issuing the bonds are held for the capitalization of state banks and did not meet the general principle of temporal uniformity of debt burden. These operations led to large peak burdens, as for the state budget, and in the sphere of finance in general, since payments to service these debt instruments required considerable resources, but to refinance debt the significant amounts of debt was taken. As it is noted in 2016 particularly the amount of maintenance of capitalization bonds will be about 7.3 billion UAH. This is the largest amount of

maintenance costs of these bonds for the period 2008-2016 years.

Overall, the increase in spending on maintenance of capitalization bonds leads to a "debt spiral": increasing spending on maintenance of capitalization bonds in these amounts increases the size of the budget deficit. In turn, rising budget deficits necessitates a further increase in government borrowing. That there is a "chronic dependency", which does not form an effective debt policy.

Another important risk is the *risk of a debt refinancing*. It is determined by the probability that the debt will need to be refinanced with high costs or, in extreme cases, be completely impossible to refinance. To assess this risk usually the share of public debt is defined, that must be refinanced in the particular period in the total sum of state debt. The result determines the need of state for borrowing over the next year, defining the level of uncertainty about future interest rates and, consequently, the cost of servicing the state debt. Analysis of this indicator is an important task for the debt risk assessment system, because it can help controllers to get information about sharing the debt burden over time (eg annually). If the structure of state debt is dominated by or have a significant share of short tools, this will form the need in more frequent release of government on domestic financial market to borrow to refinance their debt.

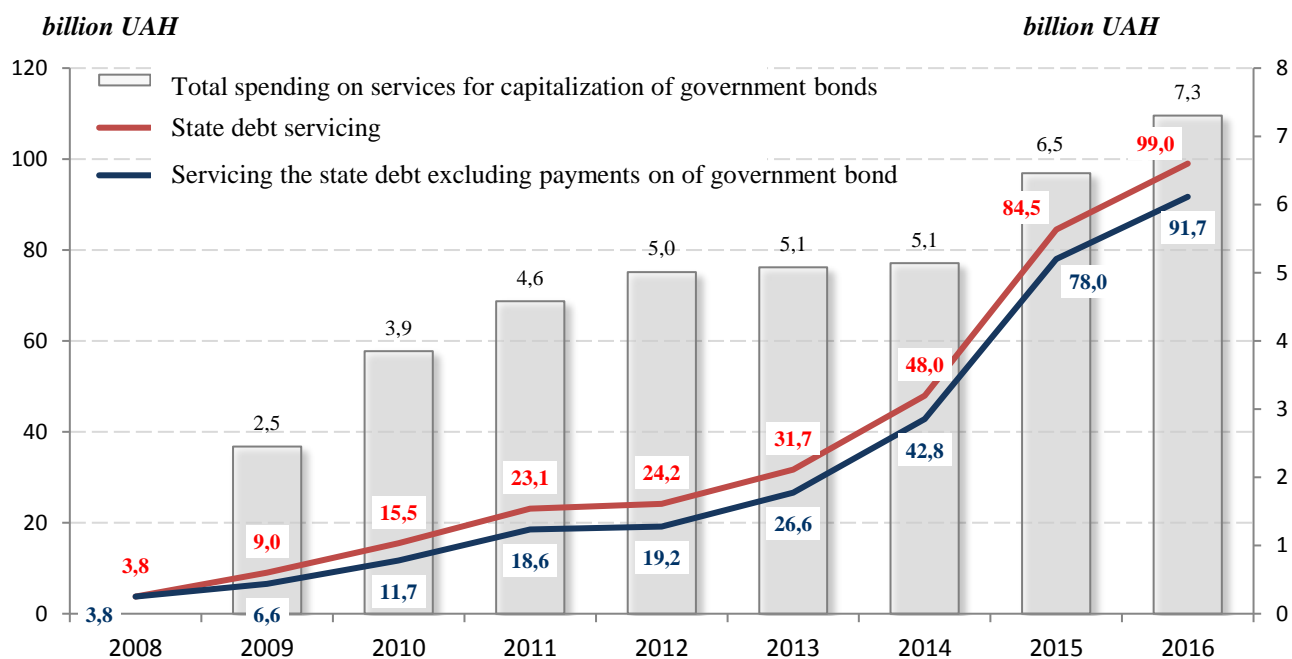


Figure 5. Dynamics of servicing the state debt and the impact on the total amount of servicing securities issued for the capitalization of state banks

Source: [10, 11], author calculations

During the years 2008-2015 the largest amount of long debt instruments amounted to 120.3 billion

UAH, and the lowest was recorded in 2012 and amounted to 8.6 billion UAH (Table 3).

Table 3  
Dynamics and structure of state debt considering government bonds for the capitalization of state banks in 2008-2015, billion UAH

Name / Year	2008	2009	2010	2011	2012	2013	2014	2015
<b>General Fund</b>	26,6	113,9	65,5	70,3	103,0	150,9	300,3	507,8
<b>Internal debt</b>	21,2	58,1	33,6	48,4	64,2	109,0	209,6	99,0
• long	17,5	45,0	13,3	21,8	8,6	14,4	120,3	45,3
including the capitalization of state banks	13,8	23,3	6,4	8,9	0	1,4	16,6	3,2
• medium	3,1	3,8	7,4	14,2	44,8	82,9	73,2	29,8
• short	0,64	9,4	13,0	12,4	10,8	11,7	16,1	23,9
<b>External debt</b>	5,4	55,7	31,9	21,9	38,8	42,0	90,6	408,8
• long	5,4	18,8	15,8	21,9	30,8	18,0	52,5	321,3
• medium	0	36,9	16,1	0,0	8,0	24,0	38,2	87,4

Source: [8, 11], authors calculations

For state debt management system it is considered to be the most favorable even distribution of amounts repayment of debt, so the implementation of peak borrowings in significant quantities results in increased refinancing risk in subsequent periods. It should be borne in mind that repayment of these large-volume loans may reflect the redemption of others, as large-sized loans received in previous years. This match of maturities will significantly increase the risk of refinancing the state debt.

Long instruments are an important element of the debt policy because they help the government to reach certain stabilization in the financial markets and to make its members' steps more predictable.

As shown in Figure 6 ratio of long debt to the amount of internal state debt was essential in 2008-2009, respectively 82.5 and 77.5 percent. However, in subsequent years, except in 2014, this ratio did not exceed 50 percent.

Thus the government bonds issued for the capitalization of state banks since 2008 has not affected the refinancing risk, as the fall of maturities starting from the fourth quarter of 2016. During this period it is planned the repayment of government bonds that were issued in 2008 for the capitalization of JSC " Oshchadbank" in the amount of 11.8 billion UAH and JSC "Ukreximbank" of 2 billion UAH. To refinance these loans Ministry of Finance of Ukraine in 2016 will be required to enter the primary debt market and get the resource volume 13.8 billion UAH.

In 2017 the Ministry of Finance government borrowing program already provides volume almost twice the amount of borrowings in 2016 to refinance debt, formed by operations to ensure the capitalization of state-owned banks - 23.3 billion UAH. This significant amount of repayment of state debt in 2017 significantly increases the risk of refinancing. Thus, since 2016 the influence of capitalization bonds on the formation of refinancing risk will only increase. Note that when assessing the analysis of refinancing risk also take into account additional factors, including the structure of refinanced debt in terms of sources of borrowing capacity and overall condition of the financial markets.

Averaged integral indicator for risk assessment to calculate the refinancing is the weighted average of state debt maturity, which is obtained by weighing the timing for each obligation in the amount of these obligations. It should be noted that the eight-year long-term government bonds used for the capitalization of banks, significantly influenced the

increase in the average maturity of state debt, as their total volume amounted to nearly 90 billion UAH.

*Interest rate risk* is determined likely to increase the cost of debt due to changes in interest rates due to the impact of factors that shape the conditions for domestic and foreign financial markets. Changing interest rates for debt instruments both in national and foreign currencies affect the cost of debt service (if the rate is floating) and the cost of future borrowing.

As a result, short-term debt or debt with a floating rate, usually considered more risky than long-term debt with a fixed rate, as the latter depends weakly on changes occurring in financial markets.

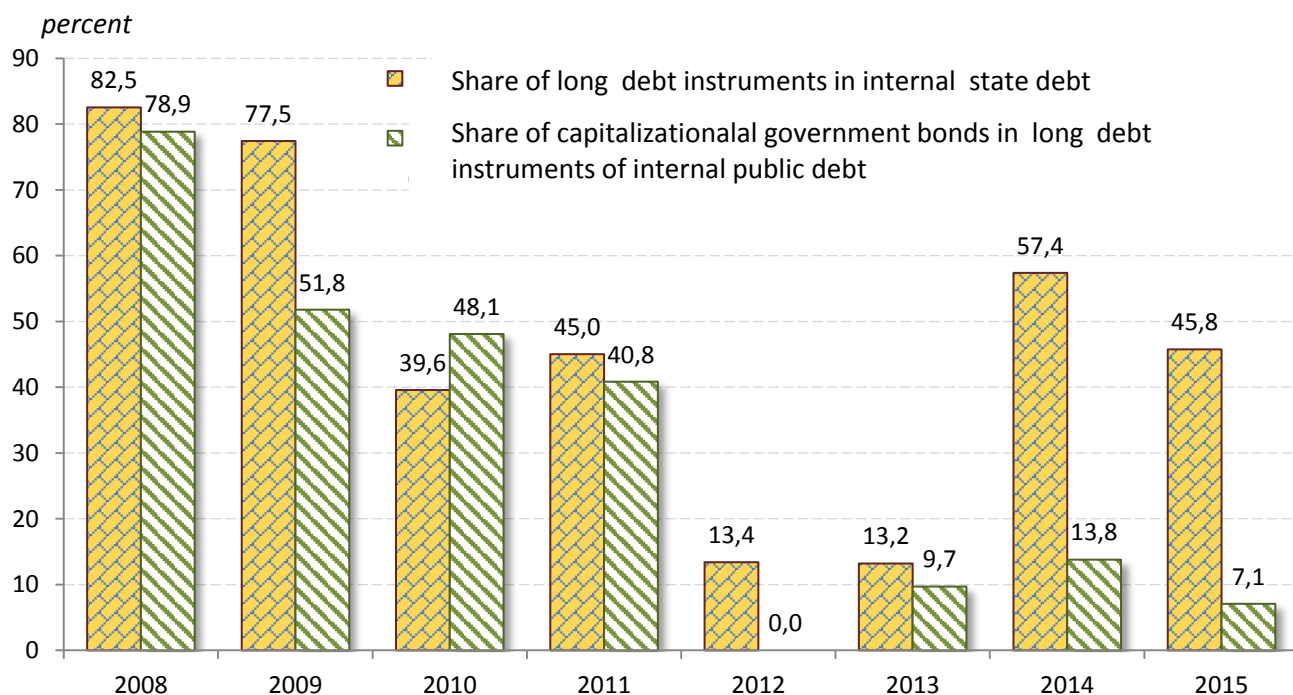
Given that the interest rate risk by definition is associated with an increase in floating rates, for its evaluation it is commonly used data on the amount of state and state guaranteed debt to which such rates apply. The share of public debt with floating interest rates reflects the level of uncertainty of the future cost of servicing the public debt in the future, and therefore the extent of the risk of increasing costs.

During the years 2008-2015 the share of debt with floating rates has been constantly changing. Thus in 2008 and in 2009 this ratio was the largest in the range of 2008-2015 and were respectively 45.1 percent and 46.9 %, while it's lowest level was recorded in 2013 as 19.5 %.

It should be noted that the capitalization of state banks used only bonds with a fixed rate. In these circumstances, we can say that the issue of debt instruments did not influence the increase in interest rate risk. The decision to use debt instruments with variable rate in large volumes can be considered quite risky since in the crisis times volatility of these instruments in the financial market is growing.

All debt instruments used for the capitalization of state banks, denominated in Ukrainian hryvnia, the rate at which borrowing were taken is 9,5-9,75%. Due to this, the realization of foreign exchange risk is impossible. Thus, increasing the share of debt instruments using capitalization bonds in local currency decreased the level of currency risk; and increase of share of loans with a fixed rate reduced the level of interest rate risk in the total Ukraine debt portfolio.

Other risks associated with government debt, and defined by the CMU from 01.08.2012 № 815. «On approval of the control of risks associated with the management of the state (local) debt" [9], are not amplified by the capitalization of state banks.



**Fig. 6. Long-term debt instruments as a share of internal State debt during 2008-2015**

Source: [7,10], author calculations

To reduce debt risks related to the production and maintenance of capitalization bonds, it is advisable to develop new reasonable legal and economic mechanisms. One of them may be linked to the compensation made by banks in favor of the state budget on servicing these securities using the expense of profits. Indeed, capitalization of state banks by government bonds is carried out on non-market terms. This distorts competition in the financial market.

To correct the situation it is possible to start at least by analogy with the provision of state guarantees.

Table 4 shows the information on the rates for reimbursement for providing state guarantees to entities in the EU. Apparently the price for guarantees is differentiated depending on the amount of financial resources, such as principal (legal entity for which the guarantee) and the risk level. As noted in [12], the most common size guarantees rates range is between

1-2 percent per annum. This is rarely applied rate based on a full risk assessment.

We believe that state banks could compensate the state budget maintenance costs for bonds capitalization through its profit at least at the rate of 1-2%. For example, according to Government Resolution "Some Issues of Public Joint Stock Company of "State Savings Bank of Ukraine [Oshchadbank]"[13] The bank's profit after taxes and other compulsory payments is to be distributed according to the decision of the Supervisory Board in the manner and terms determined by law.

Therefore if a bank owned by the state makes a profit, it will be possible to use it for reimbursement of expenses incurred by the state budget for the payment of interest payment on bonds for the capitalization of this bank.

Table 4

## Levels of evaluation on the financial capacity and rate for state guarantees to entities in the EU

Condition of the financial system	Standard & Poor's	Fitch	Moody's	Minimal annual rate
Top quality and level of solvency	AAA	AAA	AAA	0,4
Very high potential of payment	AA + AA AA-	AA + AA AA-	Aa 1 Aa 2 Aa 3	0,4
High potential of payment	A + A A -	A + A A -	Aa 1 Aa 2 Aa 3	0,55
Sufficient capacity of payment	BBB + BBB BBB -	BBB + BBB BBB -	Baa 1 Baa 2 Baa 3	0,8
Payment is vulnerable to adverse conditions	BB + BB BB -	BB + BB BB -	Baa 1 Baa 2 Baa 3	2,0
The ability to pay may be affected in the event of adverse conditions	B + B B -	B + B B -	B 1 B 2 B 3	3,8 6,3
Orlat depends on favorable conditions	CCC + CCC CCC -	CCC + CCC CCC -	Caa 1 Caa 2 Caa 3	No safe level of certain
In default or close to it				No safe level of certain

Source: [12]

### Conclusions

The influence of the operations of government bonds for the capitalization of state banks in the system of debt risks is analyzed. It is shown that substantial impacts from such loans were made to increase the risk budget and since 2016 it will apply refinancing risk. For other important types of debt risks such effects are not observed.

Our calculation shows that at the end of 2016 the total volume of government borrowing for the purpose of capitalization of state banks amounted to almost 90 billion UAH. Expenditures for capitalization bonds maintenance during the 2009-2016 is about 39.9 billion UAH. This causes in particular increase of budget risk. As the dynamics of changes in the ratio on spending on service the state debt to government revenues shows, this ratio in 2009 was 8.7 percent, and up to 2015 it was 15.8 percent. Some contribution to this dynamic expenditure on maintenance capitalization bonds also made: in 2009 they accounted for 2.5 billion UAH in 2015 reached 7.3 billion UAH.

Overall, the increase in spending on capitalization bonds maintenance provoke "debt spiral": increase of spending on recapitalization bonds maintenance increases the size of the budget deficit. In turn, rising budget deficits necessitates a further increase in government borrowing. That is why there is a "chronic dependency", which does not allow to form an effective debt policy.

With a view to easing the budgetary impact factor of risk due to capitalization bonds maintenance it is proposed to develop a mechanism of partial (or complete) compensation banks servicing such securities from its profits similar to the approach in the provision of state guarantees to business entities.

Only if state banks in Ukraine are return in the principles of the market, they will be an important factor in public policy, and may be effectively used for debt financing of important public investment projects, particularly in border areas.

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INTERACTION OF THE DEPENDENCE OF CHINA'S ECONOMIC DEVELOPMENT  
ON IMPORTED PETROLEUM AND INTERNATIONAL RELATIONS

## 中国经济发展对进口石油的依赖与国际关系的相互影响

### Abstract

Foreign economy and diplomatic route of China in recent years are related to China's energy demand to a very large degree. Along with rapid development of industrialization and sustained economic growth, China has become a great power of energy consumption. Since 2015, it has exceeded America and become global largest country in respect to petroleum import volume. In 2015, petroleum consumption of China broke through 540,000,000t, over 60% of which were imported. Along with the expansion of petroleum trade, the scope of diplomatic activities has also been expanded and petroleum trade has been expanded to the countries in Central Asia, America and Africa. With the increase of purchased petroleum volume, China has also enhanced the friendly cooperative relations with petroleum output countries in diplomacy, imposed significant impacts on international regional economy through petroleum trade, and played a more and more important role in changing world economic pattern.

In addition, China is the second largest economic community in the world. It has the political views different from Europe & America in international relations and diplomatic affairs and has become the competitor of America and other developed countries in international trade and geopolitics. International conflicts often occur due to petroleum economics. It's of significant reality & urgency to analyze and learn about the interaction of China's economic development between international petroleum trade and international relation.

### 摘要:

中国近年的对外经济和外交路线很大程度上与中国的能源需求有关。随着工业化的快速发展和经济持续增长，中国已成为能源消耗大国，2015年开始，超过美国成为石油进口量世界第一大国，2015年中国石油消费量突破5.4亿吨，其中有60%以上来自进口。随着石油贸易的扩大，外交活动的范围也在扩大，将石油贸易从中东扩大到中亚、美洲和非洲国家。随着中国石油购买量的增加，外交上加大了与石油输出国的友好互助关系，通过石油贸易对国际区域经济产生重要影响，在改变世界经济格局中扮演越来越重要的角色。

**Key words:** China's economy, energy dependence, petroleum monopoly, economic diplomacy, future trend

**关键词:** 中国经济、能源依赖、石油垄断、经济外交、未来趋势



## 1. Rapid development of China's economy has enlarged the dependence on petroleum import.

Along with the growth of economic index, China's petroleum demand is on the rise. Since 2015, petroleum consumption of China has broken through 540,000,000 t, over 60% of which have been imported. China has exceeded America and become world No. 1 in imported petroleum volume: in April 2015, daily imported crude oil of China reached 7,370,000 barrels, accounting for 15% of world petroleum import volume. However, daily imported crude oil of America was only 7,200,000 barrels in the corresponding period. According to relevant data, foreign-trade dependence of China's crude oil approached 60% in 2013, and foreign-trade dependence of natural gas exceeded 30%. Petroleum trade becomes the key factor affecting national economic development of China. At present, more than ten countries in the world have petroleum trading relations with China, including Russia, Kazakhstan, Tajikistan, Congo, Angola, Libya, Brazil, Venezuela, etc. Traditionally, China mainly imports petroleum from the Persian Gulf, for example, Saudi Arabia, Iran, Iraq, Oman, etc.

At present, Angola is the country exporting the most petroleum to China. According to the data issued by General Administration of Customs of the People's Republic of China on Monday (October 24), China imported 4,190,000t crude oil from Angola in September with daily average import of 1,020,000 barrels and the increase of 46% on a year-on-year basis. Angola has become the largest petroleum supplier of China for the second time following July. Iraq just followed Angola and China imported 4,070,000t crude oil from Iraq with the rise of 58% on a year-on-year basis. Russia is the third largest petroleum supplier of China. In September, China imported 3,960,000t crude oil from Russia with the decrease of 2.1% on a year-on-year basis. Saudi Arabia and Iran are the 4<sup>th</sup> and 5<sup>th</sup> largest petroleum suppliers of China respectively. In the same month, China imported 3,900,000t crude oil from Saudi Arabia with the decrease of 1.3% on a year-on-year basis and 2,020,000t crude oil from Iran with the rise of 18% on a year-on-year basis. Angola becoming the largest petroleum import country of China reflects the diversification of crude oil import of China, which has provided guarantee for macroeconomic stability & national security.

China becomes the largest crude oil import country in the world, which is the result of economic development, and also the result of strategic reserve made for national security on the other hand. At present, decline of petroleum price has provided a good

## 1, 中国经济的快速发展增加了对石油进口的依赖

随着经济指数的增长 中国对石油需求呈上升趋势。从 2015 年开始, 中国石油消费量突破 5,4 亿吨, 其中有 60% 以上来自进口。每年进口石油量超过美国居世界第一位: 2015 年 4 月中国日进口原油达到 737 万桶, 占世界石油进口量的 15%。美国同期为 720 万桶。数据显示, 2013 年中国原油对外依存度接近 60%, 天然气对外依存度超过 30%。石油贸易成为影响中国国民经济发展的关键因素。目前世界上有十几个国家与中国有石油贸易关系: 俄罗斯、哈萨克斯坦和塔吉克斯坦、刚果、安哥拉、利比亚、巴西、委内瑞拉等。传统上中国主要从波斯湾国家进口石油, 如: 沙特阿拉伯、伊朗、伊拉克和阿曼等国。

目前向中国出口石油量最多的国家是安哥拉。根据中国海关总署周一(10 月 24 日) 发布数据显示, 中国 9 月从安哥拉进口原油 419 万吨, 日均进口 102 万桶, 同比大增 46%。这是继 7 月之后, 该国第二次成为中国最大供油国。伊拉克则紧随其后, 来自该国的进口原油为 407 万吨, 同比上升 58%。俄罗斯为中国第三大供油国。中国 9 月从俄罗斯进口原油 396 万吨, 同比下降 2.1%。沙特和伊朗则分居第四和第五。当月从沙特进口原油 390 万吨, 同比下降 1.3%。从伊朗进口原油 202 万吨, 同比上升 18%。安哥拉成为中国最大的石油进口国反映了中国原油进口的多元化, 这为宏观经济的稳定和国家安全提供了保障。

中国成为世界最大的原油进口国, 是经济发展的结果, 另一原因是为了国家安全而做的战略储备的结果。当前石油价格走

opportunity for crude oil reserve of China. To prevent petroleum crisis, some Western countries with developed industrialization have also legislated successively to ensure strategic reserve of petroleum. For example, America has stipulated *Energy Policy and Protection Law*, Germany has formulated *Petroleum and Petroleum Products Reserve Method*, France has compiled No. 58-1106 *Laws on Industrial Petroleum Reserve Stock Structure*, and Japan has also issued *Petroleum Reserve Law*, all of which have stipulated reserve objective & scale explicitly. With governmental reserve and folk reserve, petroleum reserves of America, Germany, France and Japan are equivalent to petroleum consumption of 158 days, 117 days, 96 days and 169 days of these countries respectively. China is accelerating the legislation of strategic petroleum reserve and strives to realize that China's petroleum reserve can reach safe consumption of 180 days several years later.

In international petroleum trade, China also exports its drilling technologies and equipment to petroleum producing countries. For example, China Petroleum Technical Import & Export Company has set up overseas agencies in global 27 countries to export China's petroleum exploitation equipment & petroleum products to European, African, Asian and Middle East countries. It has exported 184 sets of drilling machine, 456 sets of workover rig equipment and over 5,000km oil pipelines accumulatively with annual signing amount of more than 2 billion dollars. At present, 8 countries including America, Sudan, Indonesia, Brazil, etc. have 4 assembly factories and 6 equipment repair factories established by China. Plenty of imported petroleum has increased business opportunities for oil refining enterprises and petroleum deep processing industry. While importing petroleum, Chinese enterprises also invest in overseas petroleum industry. Except Yaxing Chemical, Zhenghe Industrial Group and Meidu Holdings, listed companies such as Guanghui Energy, Fengfan Power Equipment Co., Ltd., etc. also begin to invest in overseas petroleum projects this year. In the overall background of domestic industrial transformation and national encouragement on overseas investment, private enterprises purchasing oil & gas resource projects overseas will be increased continuously. At present, the largest state-owned enterprises of China—Sinopec and PetroChina are cooperating with Myanmar for petroleum exploitation projects. China has built Sino-Myanmar petroleum transmission pipelines and petroleum from the Middle East can be transmitted to China by way of Myanmar. Imported petroleum of China is mainly used in four aspects: energy consumption, industrial raw material, strategic reserve and refined oil product. China is a great power of refined oil product refining industry. At present, China

低为中国原油储备提供了良机。为预防石油危机，工业化发达的一些西方国家还先后立法以确保石油的战略储备。如美国制定了《能源政策与保护法》，德国有石油及石油制品储备法》、法国制定了《关于工业石油储备库存结构的 58-1106 号法》，日本也有《石油储备法》，都明确规定了储备目标和规模。政府储备加上民间储备，美、德、法、日的石油储备量分别相当于本国 158 天、117 天、96 天和 169 天的石油消费。中国正加快战略石油储备的立法工作，力争在几年之后中国的石油储备能够达到 180 天的安全消费量。

在国际石油贸易中，中国也将自己的钻探技术和设备出口到产油国。例如，中国石油技术进出口公司已在全球 27 个国家设有海外机构，将中国石油开采设备和石油产品出口到欧洲、非洲、亚洲和中东国家。累计出口 184 台钻机、456 台修井机设备、5000 多公里的输油管道。年签约额超过 20 亿美元。目前在美国、苏丹、印尼、巴西等 8 个国家有中国组建的 4 家组装工厂、6 家设备维修厂。大量进口石油为炼油企业和石油深加工行业增加了商机。进口石油的同时，中国企业也在向国外石油产业投资。除亚星化学、正和股份、美都控股，今年还有广汇能源、风范股份等上市公司开始投资海外石油项目。在国内产业转型和国家鼓励海外投资的大背景下，到海外收购油气资源项目的民营企业将继续增加。目前中国最大国有企业中石化和中石油正与缅甸合作石油开采项目。中国已经建成中缅石油输出管道，来自中东的石油可以经过缅甸输到中国。中国进口石油的用途主要有 4 个方面：能源消费、工业原料、战略储备、成品油。中国是成品油提炼产业大国。目前成品油

ranks in the second place in terms of annual export volume of refined oil products. According to the latest data released by General Administration of Customs, during January-October 2016, export volume of refined oil products of China reached 38,110,000t with the increase of 37.4% on a year-on-year basis, which has exceeded the total volume in the past year. It's predicted that before 2021, new petroleum refining projects or petroleum refining expansion projects will reach 142,500,000t/year. Though export of refined oil products doesn't profit at present, the purpose of occupying international market by a low price has been realized.

According to relevant data, in the premise that China keeps annual GDP growth rate of 7% by 2020 and petroleum use efficiency of China is unchanged, by 2020, China will consume 849,000,000t petroleum, which is equivalent to petroleum consumption of America in 2011 (833,000,000t). Considering that petroleum consumption level is decreasing, while its petroleum output is increasing, in such case, China will be the largest petroleum consuming country and also the largest petroleum import country in the world at that time.

It can be inferred that China will have larger influence and more right of speech in international petroleum trade in future. On the one hand, world economy will be more stabilized due to stable development of China's economy. In addition, China's economic development will also intensify the complication of international relations.

## 2. Petroleum trade and international conflict.

China is playing a more and more important role in international affairs by diplomatic strategy and foreign trade policy carried out by it centering on petroleum trade in recent years. China's increasing demand on petroleum year on year is of great significance for maintaining economic stability of petroleum export country. Besides, in future global trade, China and petroleum supplier countries will form an international union with China as the core due to close cooperation in economic field. More countries will keep consistent with China in international affairs due to economic interests, for example, some African and American countries. However, America, Japan, etc. will also enhance diplomatic suppression on China.

Except for international petroleum trade, protection of petroleum resources will also become the primary mission of China in diplomatic activities. For example, the South China Sea dispute troubling China at present. Rich petroleum and natural gas reserves make South

年出口量占世界第二位。海关总署最新发布的数据显示：2016年1月至10月份，中国成品油出口量达到3811万吨，同比增长37.4%，已经超过去年全年总量。预计2021年之前，中国新建或扩建炼油项目将达到14250万吨/年。虽然目前成品油出口并不盈利，但以低价占领国际市场的目的已经达到。

数据表明，在到2020年中国保持GDP年均增速7%的前提下，中国的石油使用效率不变，那么到2020年中国将消费8.49亿吨石油，这相当于美国2011年石油消费量（8.33亿吨）。考虑到美国石油消费水平在下降，而自身石油产量上升，在这种情境下，中国届时既是世界第一大石油消费国也是第一大石油进口国。

可以推断，中国在未来国际石油贸易中会有更多的影响力和话语权。一方面，世界经济会因为中国经济的稳定发展而增加稳定性，同时，中国经济发展对石油资源的依赖也将加剧国际关系的复杂化。

## 2. 石油贸易与国际冲突

中国近年来围绕石油贸易展开的外交战略和对外贸易政策使中国正在国际事务中扮演重要角色。中国对石油逐年提升的需求，对维持石油出口国的经济稳定具有重要意义。同时，在未来全球贸易中，中国与石油供应国之间会因为经济领域的紧密合作而形成以中国为核心的国际联合阵营，在国际事务中会因为经济利益而有更多国家与中国保持一致，如：一些非洲和美洲国家。而美国、日本等国也加紧对中国实施外交围剿。

除了国际石油贸易，对所属石油资源的保护也成为中国外交活动的主要任务。例如；目前困扰中国的南海争端问题。丰富

China Sea issue become very sensitive. China has had maritime conflicts with the Philippines and Vietnam for many times. The interference of America, Japan, etc. makes South China Sea issue more complex. Though oil fields at the South China Sea are of crucial economic significance, China always advocates peaceful settlement and common development in South China Sea dispute, and keeps self-restraint attitude for a long term, which is the main reason for South China Sea failing to become the second Middle East so far. In addition, China endeavors to seek for new petroleum supplier partners in America, South America and Central Asia, which has guaranteed energy demands for China's economic development.

According to detection results, total petroleum reserve stored in the South China Sea can rival with the Persian Gulf (the proven petroleum reserve of Persian Gulf is more than 49 billion tons, accounting for half of worldwide petroleum reserves, while petroleum reserve of the South China Sea is about 30 billion tons). Except for the countries surrounding the South China Sea such as Vietnam, the Philippines, etc., without China's approval, America, Japan, Russia and some Western petroleum companies have begun to carve up the oil fields at South China Sea. Now over 200 international petroleum companies have carried out exploitation operation in oil fields at South China Sea with total well drilling quantity of over 1,000 sets. In addition, early in the 1980s, the Soviet Union has had cooperated with Vietnam to exploit petroleum at the South China Sea of China, and has developed 8 oil fields successively. The Soviet Union has 50% of the profits from petroleum sales of Vietnam. In the 1980s, the reason why Soviet Union became one of worldwide petroleum producing countries was mainly related to petroleum exploitation at the South China Sea.

Petroleum trade intensifies Sino-USA economic interest conflicts. Though China and America do not have direct petroleum trading relation, dollar is closely associated with petroleum. China is the largest creditor of America, the second largest economic community, and the largest petroleum import country and the second largest refined oil product export country, while America is the largest refined oil product export country and the second largest petroleum import country. These complex factors convert their own trading behaviors into their competition directly. One belt & one road international cooperation model of China will objectively affects geopolitics & economic interests of America directly. Especially, RMB settlement trend of China in international market and the establishment of AIIB will affect the dollar's influence directly. America and European countries get used to considering China's rise as challenge or threat. Therefore, as the response, diplomatic thoughts &

的石油和天然气储备让南海问题变得十分敏感，在中国和菲律宾之间，中国与越南之间多次发生海上冲突。美国、日本等国家的干涉让南海问题变得更加复杂。尽管南海油田对中国有至关重要的经济意义，但在南海争端中中国一直主张和平解决共同开发，并长期保持克制态度，这是至今南海地区没有成为第二个中东的主要原因。同时，中国尽力在非洲、南美洲和中亚寻找新的石油供应伙伴，保障了中国经济发展的能源需求。

据探测结果，南海储藏的石油总量可与波斯湾媲美（波斯湾已探明的石油储量约为490多亿吨，约占世界石油储量的一半，南海约为300亿吨）。除越南、菲律宾等南海周边国家，在未经中方同意情况下，美国、日本、俄罗斯和一些西方石油公司已开始瓜分南海油田，现有200多家国际石油公司在南海油田进行开采作业，钻井总数在1000台以上。而早在80年代苏联就已同越南合作在中国南海开采石油，先后开辟出8座油田。苏联拥有越南石油销售的50%利润。80年代苏联所以成为世界产油大国之一，主要与南海石油开采有关。

石油贸易加剧中美经济利益冲突。虽然中美之间没有直接的石油贸易关系，但美元与石油密切相关，中国是美国最大债权国，又是第二大经济共同体，是最大石油进口国和第二大成品油出口国，而美国是第一大成品油出口国和第二大石油进口国。这些复杂因素让各自的贸易行为直接转化为彼此的竞争。中国推行的一带一路国际合作模式客观上直接影响美国的地缘政治和经济利益，尤其中国在国际市场中人民币结算的趋势和亚投行的成立都直接影响了美元的影响力。美国和欧洲国家习惯把中国的崛起视为挑战或威胁。因

actions of European & American countries often have striking aggressivity & pertinence. Along with the expansion of international petroleum trade of China, America imposes larger and larger diplomatic pressure on China through surrounding countries of the South China Sea of China. For example, diplomatic relations between China and the Philippines, Japan, Australia & Vietnam are strained all the time. However, these international disputes will be settled due to China's strength. Forced by the temptation of China's economic interests and military expenditures, the Philippines has begun to make peace with China. As to the dispute over the island, China always advocates to lay the dispute aside, which is for winning time to realize powerful military affairs.

### **3. China promotes multilateral diplomacy by virtue of petroleum trade.**

Traditionally, China's main petroleum import countries are in the Middle East and Persian Gulf regions. Due to marine transport, over 70% of imported petroleum is transported to China by way of Strait of Malacca. This lifeline has become the throat for hostile countries to strangle China, and also made China in passive position in international political conflicts & military conflicts. Along with the promotion of economic strength and military strength, China is paying great attention to the security of petroleum transportation in a positive attitude. In the past several years, China assigned warships to the Gulf of Aden for escort aiming at Somali pirates. Since the petroleum imported from Persian Gulf countries by China is also transported by way of the South China Sea waters, petroleum resources reserved in the South China Sea make China become tougher gradually in South China Sea dispute, and it's a new policy of China for foreign trade to expand petroleum import channels and reduce petroleum dependence, more than ten countries have exported petroleum to China at present. Except Saudi Arabia, Iran and Oman, Brazil, Venezuela, Angola, Kazakhstan, Turkmenistan, etc. have also signed petroleum and natural gas trade agreements with China. China's strategy of importing petroleum from many regions and many countries have enhanced China's initiative in international petroleum trade and international relations. Especially, it has established China-Myanmar petroleum pipelines, China-Kazakhstan petroleum pipelines and China-Russia western front petroleum pipelines, and relieved the threat of locking of marine transport line.

Petroleum trade has become the cold war tool of great powers and an important factor for changing international relations. In the Cold War period, the Soviet Union caused deadly strike to China's economy by stopping supplying petroleum to China and cracking

此, 作为反应, 欧美国家的外交言行常具有明显的攻击性和针对性。随着中国国际石油贸易的扩大, 美国通过中国南海周边国家向中国施加的外交压力也越来越大, 如;中菲、中日、中澳、中越的外交关系一直紧张。但这些国际争端将因中国的强大而和解。迫于来自中国的经济利益的诱惑和军费压力, 菲律宾已经开始与中国和好。对争议岛屿问题中国一贯主张搁置争论, 这是为军事强大赢得时间。

### **3, 中国通过石油贸易推行多边外交**

传统上中国的主要石油进口国在中东和波斯湾地区, 由于海上运输, 有 70%以上的进口石油是通过马六甲海峡运往中国的。这一条生命线成为与中国敌对国家扼杀中国的咽喉, 也使中国在国际政治冲突和军事冲突中处在被动地位。随着经济实力和军事实力的提升, 中国正以积极态度关注石油运输的安全问题。前几年针对索马里海盗派出军舰到亚丁湾护航。由于中国从波斯湾国家进口的石油也要经过南海水域, 加之南海蕴藏的石油资源使得中国在南海问题争端中逐渐变得强硬。同时, 扩大石油进口渠道、减少石油依赖是中国对外贸易的新政策。目前向中国出口石油的国家发展到十几个, 除沙特、伊朗、阿曼等国, 先后有巴西、委内瑞拉、安哥拉、哈色克斯坦和土库曼斯坦等国与中国签订了石油和天然气贸易协定。中国从多地、多国进口石油的战略, 大大增加了中国在国际石油贸易和国际关系中的主动性。尤其建立了中缅甸石油管道、中国萨克斯坦石油管道和中俄西线石油管道, 缓解了海上运输线被封锁的威胁。

石油贸易成为大国之间的冷战工具和改变国际关系的重要棋子。冷战时期, 苏联通过停止供应石油制裁中国, 给中国经济造成致命打击。出于当前新的国际关系的需

down on China. Due to the demands of new international relations at present, Russia becomes China's strategic partner again, and bilateral trade has been expanded ceaselessly. Russia has become an important petroleum output country of China. In June 2013, China signed 25-year petroleum trade agreement with Russia, and China would purchase petroleum valuing 270 billion dollars from Russia during the 25 years. Due to the pressure of international economic sanction, Russia needs economic support from China urgently, and petroleum trade makes international relations between China and Russia show warming tendency. In return, Russia also carries out cooperation with China in diplomatic, cultural & military fields. Besides, in significant international issues, China and Russia always hold the same standpoint. For example, in respect to Iraq issue, Libya issue, Iran issue and Syria issue, China and Russia contend against America and Western union jointly. What's not coincidental really is that countries sanctioned and struck by America in military field in recent years are exactly those countries having close economic cooperation with China and Russia, for example, Syria, Libya, etc.

During the 1960s-1970s, China's foreign economic behaviors were impelled by political interests, and it once assisted some socialist countries free of charge, for example, Vietnam, Cuba and Albania, and also assisted Tanzania & Zambia to build railways freely. Besides, China once also exchanged diplomatic cooperation by petroleum export and began to export petroleum to some countries since the 1960s, for example, political partners North Korea, ASEAN countries and Panama. Since the 1970s, China also begun to export petroleum to Japan. However, since the 1980s, China exported petroleum mainly for the purpose of getting foreign exchange in return. Till the middle period of the 1990s, over 70% of foreign exchange of China was realized by petroleum exchange. In recent years, a certain quantity of petroleum exploited from oil fields in China's territory with Australia & America jointly is exported to America and Australia. China has also guaranteed petroleum supply of Hong Kong all the time. China is considering economic interests as the starting point of diplomatic policy and changing traditional political economy into economic politics & economic diplomacy. Especially in recent years, China's policy of loan-petroleum exchange carried out in Venezuela, etc. has not only helped some petroleum output countries get out of economic plight, but also won the initiative of petroleum trade and promoted China's diplomatic influence in these regions. In international affairs of the Middle East, the Persian Gulf, etc., diplomatic selection of China is also established on the basis of its own economic interests. In the past several years, America proposed economic sanction to Iran and EU countries carried out oil embargo to Iran, but China

求，俄罗斯又重新成为中国的战略合作伙伴，双边贸易不断加大。俄罗斯成为中国重要的石油输出国。2013年6月，中国同俄罗斯签署了25年的石油贸易协定，中国在25年间将向俄罗斯购买2700亿美元的石油。由于国际经济制裁的压力，俄罗斯急需中国的经济支持，石油贸易让中国同俄罗斯的国际关系呈现加温的态势。作为回报，俄罗斯也同中国开展外交、文化和军事领域的合作。并在重大国际问题上中俄持有同样的立场。如：在伊拉克问题、利比亚问题、伊朗问题和叙利亚等问题上中国与俄罗斯一起抗衡美国和西方阵营。而并非巧合的是，美国近年制裁和军事打击的国家也正是与中国和俄罗斯有紧密经济合作的国家。如：叙利亚、利比亚等。

从六十年代到七十年代末，中国的对外经济行为是受政治利益驱使的，曾无偿援助一些社会主义国家，如：越南，古巴和阿尔巴尼亚，并无偿援建坦桑尼亚和赞比亚铁路。中国也曾通过石油出口换取外交合作，60年代就开始向一些国家出口石油，如：政治伙伴北朝鲜、东盟国家和巴拿马，70年代初开始也向日本出口石油。但从80年代开始，中国出口石油主要为换取外汇，直到90年代中期，中国的外汇70%以上是靠石油换来的。近年中国在自己领海与澳大利亚和美国联合开采的油田也有一定数量是出口到美国和澳大利亚的。中国也一直保障了香港的石油供应。中国正在把经济利益作为对外政策的出发点，将传统的政治经济改变为经济政治和经济外交。尤其近几年中国在委内瑞拉等国实行的贷款换石油的政策，即帮助了一些石油输出国摆脱经济困境，也赢得了石油贸易的主动性，提升了中国在该地区的外交影响力。在中东和波斯湾等国际事务中，中国的外交选择也是建立在自身经济利益之上的。前几年，美国提出对伊朗经济制裁，欧盟国家对伊朗实行石油禁运。中国坚持从伊朗进口石

insisted on exporting petroleum from Iran and relieved Iran's economic pressure. The stable petroleum policy carried out by Iran for China in recent years has also relieved China's energy crisis. In addition, Angola becomes China's petroleum output country, which is not only based on economic development demands of China, but also the demands of international relations. Angola has sought for financial assistance from China for many times. The president of Angola requested China to extend its loan repayment period for two years or a longer time during the visit to China in June 2015, and also hoped to get new credit extension. Before this, Reuters had reported that similar to Venezuela, Angola bound petroleum output and early-stage loan agreement, and started to increase petroleum export to China to repay the loan since February of this year. To maintain the income and expenses, Angola has sold crude oil to other countries in a large scale. According to OPEC data, as of September, Angola had become the country of the largest export volume of crude oil in Africa for 6 months continuously with daily average export of 1,775,000 barrels. By virtue of crude oil import & export trade, China has satisfied the demands of economic interests, and also strengthened international partnership with cooperative countries. In recent years, China has also exported refined oil products to surrounding countries such as Malaysia, the Philippines, Australia, Singapore, etc. Due to price advantage, these countries have great dependence on the demands of China's refined oil products. China has been intensifying its great power status in geopolitics by virtue of petroleum economy.

Petroleum crisis has facilitated the adjustment of world economic pattern. Dependence on imported petroleum forces China to pay attention to new energy development. In recent 30 years, China has built several large-scale hydroelectric power stations and thermal power stations successively, and begun to develop wind power generation, solar power generation & nuclear power generation projects in recent years. As to Germany, France, etc. of wind energy technology & nuclear energy technological advantages and other countries of renewable energy technological advantages, China is the potential cooperative partner.

China needs to make improvement in high-efficiency energy utilization. For example, the energy consumed by Germany to produce automobiles of the same model and quantity only accounts for 60% of that consumed by China. Many Chinese enterprises damage more precious ecological resources while creating economic benefit. In respect to social behaviors, Chinese people still lack sufficient environmental consciousness & public consciousness. Many people possess German cars, but lack traffic awareness and national quality of Germans. It's not enough to possess automobiles merely but no automobile culture. Eastern and Western

油，缓解了伊朗的经济压力。多年来伊朗对中国的稳定的石油政策也缓解了中国的能源危机。而安哥拉成为对中国的石油输出国即是基于中国经济发展需求，也是国际关系的需求。安哥拉曾多次向中国寻求资金援助。该国总统去年6月访华期间曾请求中国将其偿还贷款的期限延长两年或更长时间，同时希望获得新的授信。路透此前报道，与委内瑞拉类似，安哥拉将石油产出与先期贷款协议捆绑，今年2月开始增加对华石油出口以偿还贷款。为维持收支，安哥拉大规模对外出售原油。据OPEC数据，截止9月，该国已连续6个月成为非洲原油出口量最多的国家，日均出口177.5万桶。中国通过原油进出口贸易满足了经济利益需求，同时也加强了与合作国的国际伙伴关系。近些年，中国也向周边国家如：马来西亚、菲律宾、澳大利亚和新加坡等国出口成品油。由于价格优势，使这些国家对中国成品油需求产生依赖。中国通过石油经济在地缘政治中不断强化自己的大国地位。

石油危机促进了世界经济格局的调整。对进口石油的依赖迫使中国关注新的能源开发。在最近30年间，中国先后修建了数个大型水利发电站、火力发电站，近年开始发展风能发电、太阳能发电和核能发电项目。对于拥有风能技术和核能技术优势的德国、法国等国以及其它有再生能源技术优势的国家，中国是潜在的合作伙伴。

在高效利用能源方面中国还有待改进，如：生产同等型号和数量的汽车所消耗的能源德国只占中国的60%。很多中国企业在创造经济效益的同时在破坏更宝贵的生态资源。在社会行为上中国人还缺少足够的环保意识和公共意识。很多人拥有德国的小汽车，但缺少德国人的交通意识和国民素质。仅拥有汽车而没有汽车文化是不够的。东西方文化差距为中国与欧洲

cultural gap has provided wide prospects for close cooperation of China and European developed countries in cultural education field.

#### **4. China's dependence on petroleum trade will be transformed into world economy's dependence on China.**

In globalized today, world economic development is interactive. Though international petroleum output and demand-supply relation have huge influence on China's economic development, since China's economic rise has also driven prosperity of world economy, China is an indispensable link in world economic chain. The dependence of China's economy on petroleum trade will be projected into international market by virtue of the influence of China's economy. China imports petroleum and also exports refined oil products in quantity. The exported industrial products contain plenty of petrochemical synthetic materials. For example, raw materials of tires, plastic products, clothing, etc. exported by China mainly come from petroleum, for example, synthetic rubber, PE and chemical fiber. Lack of petroleum means that China will reduce the production of industrial products related to petroleum raw materials. These products occupy important shares in international market, for example, output of chemical fertilizer: 67,406,000t, accounting for 35% of total output in the world; output of plastics: 55,500,000t, accounting for 20% of total output in the world; output of chemical fiber: 30,900,000t, accounting for 42.6% of total output in the world. Other products of China closely related to petroleum energy also occupy significant shares in international market: computer output: 246,000,000 sets with year-on-year growth of 35% and accounting for 68% of total output in the world; output of color TV: 118,000,000 sets with year-on-year growth of 19.5% and accounting for 50% of total output in the world; refrigerator output: 73,000,000 sets with year-on-year growth of 23% and accounting for 65% of total output in the world; output of air conditioners: 109,000,000 sets with year-on-year growth of 35% and accounting for 80% of total output in the world; output of mobile phones: 998,000,000 sets with year-on-year growth of 61% and accounting for over 70% of total output in the world.

Export volume of refined oil products of China is rising year by year. In June 2016, total export volume of finished fuel products of China increased by 38% on year-on-year basis and reached 4,200,000t with daily average export of about 1,020,000 barrels. According to the data released by General Administration of Customs of the Peoples' Republic of China on July 21, gasoline export volume of China doubled in June and set a new record of 1,100,000t or daily average export of 312,000 barrels. In the first half year of 2016,

发达国家在文化教育领域的紧密合作提供了广泛前景。

#### **4, 中国对石油贸易的依赖将转化为世界经济对中国的依赖**

在全球化的今天，世界经济发展是相互制约的。虽然国际石油产量和供需关系对中国经济发展有巨大影响力，但由于中国经济崛起也带动了世界经济的繁荣，中国在世界经济链中是不可或缺的环节。中国经济对石油贸易的依赖会通过中国经济的影响力投射到国际市场中。中国进口石油，也大量输出石油产品。出口的工业品中，包含大量石化合成材料，如：中国出口的轮胎、塑料制品、服装等产品使用的原材料主要来自石油：如：合成橡胶、聚乙烯、化纤。缺少石油，意味着中国会减少生产与石油原料有关的工业产品，这些产品在国际市场占有重要份额，如：化肥产量：6740.6 万吨，占世界总产量的 35%，塑料产量：5550 万吨，占世界总产量的 20%，化纤产量：3090 万吨，占世界总产量的 42.6%。与石油能源有密切关系的其它中国产品也在国际市场占有重要份额：计算机产量：2.46 亿台，同比增长 35%，占世界总产量的 68%，彩电产量：1.18 亿台，同比增长 19.5%，占世界总产量的 50%，冰箱产量：7300 万台，同比增长 23%，占世界总产量的 65%，空调产量：1.09 亿台，同比增长 35%，占世界总产量的 80%，手机产量：9.98 亿部，同比增长 61%，超过世界总产量的 70%。

中国成品油出口量逐年上升。今年 6 月，中国成品燃料总出口量同比飙升 38%至 420 万吨，每天出口接近 102 万桶。中国海关总署 7 月 21 日发布的数据显示，中国 6 月汽油出口同比翻了一倍至创纪录高位 110 万吨，或者每天 31.2 万桶。2016 年上半年，柴油出口量增长逾两倍，至



export volume of diesel oil increased by over double times and reached 6,600,000t. In June 2016, China processed about 11,000,000 barrels of petroleum every day and gasoline output increased by 8.7% to historical highest level. By the end of May, commercial gasoline inventory set a new record to 7,830,000t. Import & export trade of petroleum products makes China's petroleum industry become an indispensable constituent part of world economic development. So to speak, China's industrial development and world economy are on the same boat.

The complexity of petroleum trade and city haze arising from fuel oil & gas facilitate China to popularize electric automobiles in big cities. China has new R&D achievements in car battery field. For example, Yinlong battery developed by China Zhuhai Yinlong New Energy Auto Manufacturing Company has the service life of 30 years, can be fully charged by 6 minutes, and can keep normal operation for 500km at the temperature range from 60°C to -50°C. It has opened up a new way for world new energy industry.

#### **5. Introspection on sociology brought by petroleum economy.**

Economic construction of many countries nowadays is still in barbarous development state. Once the dependence of macroeconomic development on petroleum trade is larger, the government is required more to carry out ration control of petroleum industry, otherwise, it can't guarantee healthy & stable economic development of the country, nor guarantee the reputation in international trade. National monopoly has ensured that fluctuation of petroleum price always keeps consistent with national macroscopic interests and considers the stability of international market. It can avoid the phenomenon that petroleum oligopoly controlled macroeconomy appearing in Russia at the early stage of the 1990s. According to the demands of international energy market and domestic economic development, China's petroleum industry will be nationalized for a long term. As a matter of fact, rapid development and gradual maturity of China's petroleum industry mainly benefit from enterprise nationalization. Except for petroleum enterprises, other industries involving in national basic strategic security are also operated by state enterprises, for example, electronic industry, communication industry, traffic industry, electric industry, etc. It's an important factor for the success of China's reform & opening-up policy to nationalize important core industries in China. Since only nationalization can guarantee capital demands of enterprise development and guarantee due social responsibility of state-owned enterprises during the development. In the society with unsound laws, economic behaviors of private enterprises often escape

660 万吨。今年 6 月，中国大约每天加工 1100 万桶石油，汽油产出增长 8.7% 至有史以来的最高水平。截止 5 月底，商业汽油库存升至创纪录高位 783 万吨。石油产品的进出口贸易让中国石油产业成为世界经济发展不可缺少的组成部分。可以说，中国工业发展与世界经济在同一条船上。

石油贸易的复杂性和燃油燃气引发的城市雾霾促使中国在大城市推广电力汽车。在车用蓄电池领域有新的研发成果，如：中国珠海银隆新能源汽车制造公司研发的银隆电池，使用寿命 30 年，6 分钟充满电，高温 60 度，零下 50 度内保持正常运行 500 公里。为世界新能源产业开辟了一条新路。

#### **5, 石油经济带给社会学的反思:**

当今很多国家的经济建设还处在野蛮发展状态，宏观经济发展对石油贸易的依赖越大，越是需要政府对石油产业进行理性控制，否则无法保证本国经济的健康、稳定发展，也难以保证在国际贸易中的信誉。国家垄断确保了石油价格的波动总是与国家宏观利益保持一致，并兼顾到国际市场的稳定。避免 90 年代初期在俄罗斯出现的由石油寡头控制宏观经济的现象。根据国际能源市场和国内经济发展的需求，中国石油产业将长期国有化。事实上，中国石油行业的快速发展和日趋成熟主要得力于企业的国有化。除石油企业，其它涉及国家基本战略安全的行业也是由国家企业经营。如：电子、通讯、交通、电力等行业。将国家重要核心行业国有化是中国改革开放成功的重要因素。因为国有化才保证了企业发展的资本需求，也在发展中保证了国企应有的社会担当。在法律不健全的社会，私企的经济

from social supervision and have illegal business phenomena. Important industries which are allowed to carry out private operation by China such as real estate and mining have become industries of extravagant profits and endangering social interests since they're out of control of the government. However, economic behaviors of state-owned enterprises will accept social inspection from the perspective of international environment and national interests. State-owned enterprises have larger high-tech R&D platforms and are more attractive to sophisticated talents. These factors enable state-owned enterprises to have huge industrial competitiveness.

Employing Western successful economic & political theories shall combine with social reality and educational level & cultural awareness of the public. Economic backwardness in Soviet Union period and before the 1980s of China is not only due to productivity backwardness, but also related to detachment of economic policy and social reality. Economic achievements of China's reform & opening-up policy lie in that decision makers have found out appropriate joint point between economic theory and backward social reality.

China's huge potential in petroleum economy makes Western countries alert. *The Globalist* in America published an article on December 15 declares, "world pattern is changing from America challenge to China challenge and China becomes the new leader of globalization". In case China's rise is the challenge to the world, such challenge is distinguishing: America dominates world pattern with EU countries and developed countries such as Japan, South Korea, etc. as strategic partners to make developed countries have more international discourse right. However, China's partners are mainly some developing countries in Africa, Asia & America, most of them are still in the stage of getting rid of poverty, and the public lacks education, including that China itself still fails to form cultural values corresponding to the economic influence. In global awareness and mainstream culture, China doesn't have dominant position. Therefore, China still doesn't have the comprehensive national strength challenging America from the perspective of the gap in cultural soft power and scientific & technological level. But the statements of "China challenge" and "China is a new leading country" will be confused with China threat theory easily. It's excluded as a kind of publicity strategy.

Many scientists and entrepreneurs have made contributions to the progress of petroleum industry and their efforts make petroleum bring wealth for human beings. However, human weakness embodied in petroleum getting method and petroleum economy of

行为常常会逃避社会监管存在非法经营现象。中国允许私营的重要行业如房地产、矿山开采都由于政府失控而成为危害社会利益的暴利产业。而国有企业的经济行为是从国际环境和国家利益出发接受社会检验的。国有企业有更大的高科技研发平台，对尖端人才有更大的吸引力。这些因素让国企有巨大的行业竞争力。

采用西方成功的经济学和政治学理论要与现实结合，与民众的教育水平和文化意识相结合。苏联时期和中国 80 年代以前的经济落后，不仅是因为生产力落后，也与经济政策同现实相脱节有关。中国改革开放的经济成就在于决策者在先进的经济学理论与落后的现实之间找到了恰当的结合点。

中国在石油经济中的巨大潜力令西方警觉。美国《全球主义者》12月15日发表文章，称：“世界格局正从美国挑战到中国挑战。中国成为全球化的新领军者”。如果中国崛起就是对世界的挑战，那这种挑战是有区别的：美国是以欧盟国家和日本、韩国等发达国家为战略伙伴主宰世界局势，让发达国家拥有更多的国际话语权。而中国的合作对象主要是非洲、亚洲和美洲一些发展中国家，他们中大多数处在摆脱贫困的阶段，民众缺少教育，包括中国自身也没有形成与经济影响力相应的文化价值观。在全球意识和主流文化上中国没有主导地位。因此，从文化软实力和科技水平等差距上看中国还不具有挑战美国的综合国力。而“中国挑战”中国是新的领军国家“这样的说法很容易与中国威胁论混为一谈。不排除是一种宣传战略。

很多科学家、企业家为石油工业的进步作出了贡献，他们的努力让石油为人类带来财富。但人类获取石油的方式和在石油经济中体现的人性的弱点是不值得尊敬

human beings are not respectable. Further, before petroleum was discovered, human civilization had existed for several thousand years. However, petroleum human civilization and world economy have been kidnapped: petroleum industry has gathered all achievements of modern science & technology of human beings and drawn the attention of all politicians & careerists, but doesn't embody due wisdom of human beings merely. In terms of fundamental interests of human beings, what's the most important in future isn't how to use or get extravagant profits of petroleum by high-tech means, but how to learn the wisdom of avoiding dog-eat-dog and getting well along with each other from historical lesson.

Now that petroleum resources have brought so many problems and disasters for human beings, why don't we select other ways? Now that rapid development of science & technology has exceeded the cultivation speed of moral self-consciousness of human beings, as to human weakness exhibited in front of material wealth, we shall try to establish the approaches for getting rid of realistic difficulties from the perspective of spiritual values.

Social progress needs spiritual energy more. In the long run, it's key to develop education to improve human moral quality. While introducing in overseas energy, China shall introduce humanistic thoughts & legal concept of developed countries actively. Both real great power and great nation need great spirits. In case human beings only make scientific & technological progress rather than growth of the heart, it's not progress, but degradation.

#### **Conclusion:**

1. Dependency on energy will make China become the competitor of European & American countries in international petroleum trade in future, and therefore it will intensify the complexity of international relation. Due to risks of marine transport, China will establish stable & good partnership with petroleum output countries beyond Persian Gulf region. To maintain these relations, China will provide economic support for these countries by means of capital output.

2. Constant improvement of petroleum import volume of China also means that export volume of industrial products with petroleum as raw materials is also increased gradually. The dependence of China's economic development on petroleum resources will be transformed into world economy's dependence on China's manufacturing partially. Along with gradual increase of China's investment in international petroleum industry and increase of China's petroleum

的。进一步说, 在没有发现石油之前, 人类文明已存在数千年。而由于石油人类文明和世界经济都已被绑架: 石油工业凝聚了人类现代科技的所有成果, 吸引了所有政治家和野心家的眼球, 却唯独没有体现出人类应有的智慧。对人类的根本利益而言, 未来最重要的不是如何利用, 高科技手段去获取石油暴利, 而是如何从历史的教训中学到避免自相残杀和友好相处的智慧。

既然石油资源为人类带来这么多问题和灾难, 为何不选择其它出路? 既然科学技术的快速发展超过人类道德自觉的培养速度, 在物质财富面前展示出的人性的弱点, 我们应该尝试从精神价值观出发建立摆脱现实困境的途径。

社会进步更需要精神能源。长远看, 发展教育提高人的道德素质才是关键。在引入国外能源的同时, 中国应该积极引入发达国家的人文思想和法制观念。真正的强国和伟大的民族都需要有伟大的精神。人类若只有科技的进步而没有心灵的成长这不是进步而是退化。

#### **总结:**

1, 对能源的依赖会使中国在未来国际石油贸易中成为与欧美国家竞争的对手, 因而会加剧国际关系的复杂化。由于海上运输的风险性, 中国将同波斯湾地区之外的石油输出国建立稳定而良好的伙伴关系, 为维持这些关系中国将以输出资本的形式对这些国家给予经济支持。

2, 中国石油进口量的不断提升也意味着以石油为原料的工业产品出口量的逐步增长, 中国经济发展对石油资源的依赖会部分的转化为世界经济对中国制造的依赖。随着 中国在国际石油产业的投资逐渐增加, 以及中国石油开采, 设备出口量的增

exploitation & equipment export volume, China's capital will be joined in more overseas oil field exploitation projects. Except for the export of refined oil products, China will transform into petroleum output country from petroleum import country due to possessing oil producing shares of overseas oil fields. On the one hand, confronted with fierce international energy dispute, China will concentrate on developing new investment projects and avoid head-on confrontation with America & Japan. On the other hand, rapid improvement of China's military strength will enhance China's tough attitude in settling territorial sea dispute.

3. As to the country, petroleum industry needs government's control. However, from the perspective of global security and world economic interests, international petroleum industry shall break the monopoly: several petroleum crises are manipulated by a minority of petroleum monopolizing countries. Helping more petroleum producing countries to get rid of great power's monopoly is an important factor to guarantee petroleum industry and world economic stable development.

4. China's demand on green energy has provided cooperative prospects for those countries with relevant scientific & technological advantages, for example, Germany and France. It's convinced that in the near future, China will widely popularize the new energy substituting petroleum and become new energy export country.

5. Descartes says, "the ability of management aptitude is more important than aptitude itself". The same principle is also applicable to economic behaviors & power domination of human society today. Human tragedy is really just as what Descartes says, human beings have had much before learning how to dominate their own spiritual wealth & material wealth. Rich petroleum resources make human beings crazy on the contrary. Wish human beings can dominate their own wealth & wisdom rationally during the process of pursuing social utility.

加，中国资本将会加入到更多的国外油田开采项目中，除了成品油出口，中国将因拥有国外油田的产油份额而由石油进口国转为石油输出国。一方面，面对国际能源激烈争端中国会把精力用在开辟新的投资项目上而回避同美国和日本的正面冲突；另一方面，中国军力的快速提升会增加中国在解决领海争端中的强硬态度。

3，对于国家而言，石油产业需要政府的把控，但从全球安全和世界经济利益考虑，国际石油行业却应该打破垄断：几次石油危机是由少数石油垄断国家操控的。让更多的石油生产国脱离大国垄断，是保证石油产业和世界经济稳定发展的重要因素。

4，中国对绿色能源的需求为那些有相关科技优势的国家提供了合作前景，如：德国和法国。相信不久的将来中国会广泛普及替代石油的新能源并成为新能源的出口国。

5，笛卡尔说：“拥有管理才能的能力比才能更重要”。同样的道理也适用于今天人类社会的经济行为和权力支配。人类的悲剧真的如笛卡尔所言，还没有学会如何理性的支配自己的精神财富和物质财富，就已经拥有了很多，丰富的石油资源反而让人类变得疯狂。但愿人类在追求社会功利的过程中能理性的支配自己的财富和智慧。

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CROSS-BORDER COOPERATION BETWEEN REPUBLIC OF BELARUS AND  
REGIONS OF MEMBER COUNTRIES EU, EAEU AND UKRAINE: COMPARATIVE  
ANALYSIS OF MANAGING MECHANISM

### **Abstract**

*In this article the characteristics and specifications of borders of Republic of Belarus with Poland, Lithuania, Latvia, Ukraine and Russia were carried out. There was analyzed the managing mechanism of cross-border cooperation between Belarus with regions of member countries EU, EAEU and Ukraine, and recommendations on extension of cross-border relations and improvement of cross-border cooperation policy Republic of Belarus have been developed.*

**Key words:** borders, cross-border relations, cross-border trade, cross-border cooperation mechanism, euroregions, local authorities.

### **I. Introduction**

There are several approaches to define the borders as an area of cross-border cooperation: traditional, which determines cross-border territory as criterion of vehicle access (15-20 km); flawed, when the size of cross-border territories corresponds to special coverage solving problems; administrative. The administrative approach is applied in the practice of cross-border cooperation of Belarus. This means, that cross-border regions of Belarus are administrative-territorial units (districts and regions), which have common border with one or several neighboring states.

In Belarus there are five regions. Brest, Grodno and Vitebsk regions share borders with Poland, Lithuania and Latvia – members of the European Union (EU); Gomel and Brest regions share borders with Ukraine; Vitebsk, Mogilev and Gomel – with Russian Federation – the main EAEU partner.

The main work objective is to define cross-border cooperation and find differences in existing mechanism and instruments of managing. It is useful to submit cross-border cooperation extension trends as factor of further integration of Belarus into the world economy, as well as part of EAEU regional cooperation.

### **II. Condition and problem development of cross-border relations of Republic of Belarus**

Table 1 reflects key figures that shows borders peculiarities on the border of Belarus with Poland, Lithuania, Latvia, Russia and Ukraine.

**Belarusian-Russian border** is composed of 6 regions: Vitebsk, Mogilev, Gomel regions (Republic of Belarus), Pskov, Smolensk, Bryansk regions (Russian Federation) which consists of 139 administrative districts. 34 administrative regions join to the Belarusian-Russia border directly, which is 990 km long from Belarus and Russia side.

Foreign trade turnover of Vitebsk, Mogilev, Gomel regions with Russian border regions ranges from 3-5% of the total volume of foreign trade with Russian Federation, indicating significant room for improvement. Among Russian cross-border regions the most active is Smolensk region, particularly in trade with Vitebsk region. In close cooperation with Russian Federation Chamber of Commerce and Russian-Belarusian Business Council cross-border trade in food and agricultural products is being developed.

The main specifications of Belarusian border in 2015

Border	Border length, km	Border area, thousand km <sup>2</sup>	Population, thousand persons	Average district ratio of retail turnover per capita, thousand roubles	Average district ratio of export of goods	Number of small- and microcompanies
1	2	3	4	5	6	7
<b>Belarusian-Polish</b>	329	11,1	206,4	22796,75	53322,2	2127
<b>Belarusian-Ukrainian</b>	975	20,2	415,6	20934,3	18580,3	2600
<b>Belarusian-Latvian</b>	143	6,1	68,9	27303,0	10059,7	255
<b>Belarusian-Lithuanian</b>	462	15,2	258,7	26908,1	27674,9	1976
<b>Belarusian-Russian</b>	990	31,7	561,9	22209,7	10493,4	3742

Source: Belstat [1].

Cross-border cooperation in production industry is actively maintained. Indeed, there are 70 enterprises with Belarusian capital, logistics center in Smolensk region.

Common cross-border labour market is emerging gradually (information concerning migration of working-age population given in Table 2)<sup>3</sup>. Despite the growth of labor mobility, there is a shortage of skilled manpower in the cross-border territory of one country which combines with a high unemployment in the neighbor state region. There are several reasons, including the low leadership of local authorities, discrepancy in the tax systems of the two countries and etc.

A major place is held by collaboration in the sphere of protection and sustainable use of trans-border water object of River Dnepr and Western Dvina. On a constant basis monitoring and exchange of information about a condition of a surface water on cross-border sites of water objects is carried out.

### Belarusian-Ukrainian border territory

Simultaneous orientation of Ukraine to the EU, preserving customs control on the Belarusian-Ukrainian border, and also the continuing military conflict are among the factors which impeding the Belarusian-Ukrainian border commercial affairs. The overall picture escalating with adverse landscape conditions of Polesie and contamination radionuclides of the territory of the Gomel region and boundary regions of Ukraine.

<sup>3</sup> List of migrants-workers, who left the country, did not reflect full information about labour migration: most citizens go abroad and obtain job by their own using right to freedom of movements in accordance with EAEU legislation.

The same trend is due to the focal character of the involvement of border regions on cross-border relations.

Cross-border trade and migration of working-age population are the most developed forms of cross-border relation. Foreign trade of Brest region with Ukraine in 2015 decreased more than by 3 times in comparison with 2012, but continues to constitute about 30.8% of foreign trade of region. Export of the border Gomel region to Ukraine for the last five years remained stable, while import from Ukraine fell twice. The flow of migrants from Ukraine to the Gomel and Brest regions of Belarus increased: more than twice in 2015 in comparison with 2014.

The uniqueness of a natural complex of the Brest region determines the priority of development of cross-border relations in the ecological sphere and joint development of natural resources on site of the Belarusian-Ukrainian border, which can be defined as largest integration potential.

The northwest direction forms the Belarusian-Polish, Belarusian-Lithuanian, Belarusian-Latvian border territory. The main feature of this part of the Belarusian border zone connected with strengthening of dividing function of border due to expansion of the European Union. Now in this zone Belarus most actively provides interaction with the neighboring countries mainly in such directions as illegal migration control, human traffic, drug traffic, organized crime. Cooperation in the economic sphere is objectively limited for many reasons: belonging to different regional blocs; preservation of a visa regime of crossing of border; lack of economic balance in border zones (various approaches to pricing and currency policy, countries peculiarities of financial and tax systems, existence of asymmetries in systems of local management and self-government).

**Migration of working-age population cross-border regions of Republic of Belarus  
and Russian Federation (persons)**

Regions	To Russia		From Russia	
	2014	2015	2014	2015
Vitebsk	714	857	975	674
Mogilev	407	607	588	468
Gomel	572	602	884	690

Source: Belstat [1].

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#### **Belarusian-Polish border territory**

The Belarusian border regions are characterized by low level of social and economic development in comparison with other regions of Belarus; however, they are more economically developed in relation to the Polish border. The territory is densely populated; about 67% of the total population is urban, which tends to increase. The largest Belarusian cities – the regional centers Grodno and Brest – are simply close to border. One more typical feature of regional economy is low level of infrastructure development, including market infrastructure. The transport infrastructure creates favorable prerequisites for development in the border zone of Poland and Belarus.

Cross-border trade develops actively. About a quarter of commodity export of the Brest and Grodno regions

accrue to Poland<sup>4</sup>. In 2015 export of the Brest region to Poland increased by 1.8 times in comparison with 2010 and constituted 53,9 million US dollars. The structure of export has a raw-material orientation: such goods items as crushed stone, cement, pebble prevail. Commodity import from Poland almost by 4 times exceeds export. In the last two years the steady tendency of its decrease caused by implementation of an import substitution program in Belarus is observed. Investment activity is observed: the amount of direct foreign investments from Poland to the Brest region was 17.7 million dollars in 2015.

#### **Belarusian-Lithuanian and Belarusian-Latvian borders**

Analysis of foreign trade figures of cross-border territories of Vitebsk and Grodno regions with Latvia and Lithuania in the period 2010-2015 has showed the following. Export of goods from Vitebsk region to Latvia and Lithuania is stable. In 2015, this index amounted to 67.5% and 58 million US dollars, respectively. Foreign direct investment stock form Latvia increased by more than four times during this period.

Cross-border cooperation of Grodno region was positive during period 2010-2015: foreign direct investment stock shows growth – from Lithuania by 1.7 times, from Latvia by 11 times. Export of goods to Lithuania went up by 1.8 times.

This positive trend of cross-border relations is the result of boosting EU's share of foreign trade of Belarus and certain adjustment of Lithuanian and Latvian economics to the conditions of European integration.

Cross-border regions at the Belarusian-Lithuanian and Belarusian-Latvian borders are characterized by efficient agriculture and high tourism and recreation

<sup>4</sup> Currently, there is no statistics on cross-border regions of Belarus and member countries EU: Lithuania, Latvia and Poland. Statistical Committee of Belarus monitors only economic relations of regions of Belarus with neighbor countries.



capacity of ecosystems. This characteristics define the priority of development of the cross-border relations in such spheres, as well as in the area of border infrastructure development to perform a liaison function between the countries (construction of border crossings, customs control).

"Lake District" euroregion, which participants are cross-border regions of Lithuania, Latvia and Belarus, is focused on the development of tourism, agriculture, with the participation of small and medium-sized businesses. On the Belarusian-Polish border set up and operate three euroregions: "Bug", "Neman", Bialowieza Forest [2]. Development of tourism, environment, culture and education on a project basis are the main directions of their activities. Despite of institutionalism, there are no special mechanisms and operating modes of euroregions.

### **The opportunity to participate in joint projects for EU programs:**

Possibility of participation not only euro-regions in joint projects of the programs of the EU «Cross-border cooperation Belarus-Poland-Ukraine» and «Cross-border cooperation: Belarus-Lithuania-Latvia», but also in general regions of Belarus lowered a role of the euro-regions in development of cross-border ties.

For instance, the priorities of implementation of joint projects of Belarus with the EU for the period 2017-2020 are:

According to the program of a cross-border cooperation Lithuania-Latvia-Belarus - promotion of social integration and reduction of poverty; enhancing the access to social and other services for vulnerable groups; stimulating employment through entrepreneurship and innovations; increasing capacity of local and regional authorities to tackle common challenges; strengthening society; promotion and preserving cultural and historical heritage and traditional skills.

According to the program of a cross-border cooperation Belarus-Poland-Ukraine - \_promotion of local culture and preservation of historical; improvement of accessibility to the regions, development of sustainable

and climate-proof transport and communication networks and systems; promotion of border management and border security, mobility and migration management.

Project activities in the field of development of cross-border cooperation are possible in other directions. The overview of the financial instruments of the EU available for regions of Belarus showed the possibility of participation of regions of Belarus, including border programs of the EU with use of the following of thematic, two-sided, regional tools [3]:

- Civil society organization and local authorities program;
- Cross-border cooperation;
- Territorial cooperation under the Eastern Partnership;
- Territorial cooperation under the European Regional Development Fund;
- Community-led urban strategies;
- Pact of mayors – East;
- Demonstration projects of sustainable development of the cities;
- European neighborhood program for agriculture and rural development.

### **III. Comparative analysis of mechanism for cross-border cooperation with regions of the member countries EU, EAEU and Ukraine**

As criteria for the comparative analysis were identified key components of cross-border cooperation mechanism. This is the directions and spheres of cross-border relations, managerial levels, which are involved in the regulation of cross-border contact, as well as the most frequently used forms and methods of management development of cross-border relations.

As information and analytic base was used legislative and regulatory framework for development cross-border relations, analysis of news flow (content analysis) and internet analysis (web analytics), as well as several economic and statistics indicators.

The results of expert assessment by three criteria are presented in **Tables 3-5**.

**Areas and spheres of cross-border cooperation between Republic of Belarus  
and regions of member countries EU, EAEU and Ukraine**

<b>№</b>	<b>Areas and spheres of cooperation</b>	<b>EU</b>	<b>EAEU</b>	<b>Ukraine</b>
1	Cross-border trade	+	++	+
2	Ecology and environment control	++	++	++
3	Education and culture	++	++	+
4	Tourism	++	++	+
5	Urban development	+	-	-
6	Rural development	+	+	+
7	Innovative cooperation	+	+	
8	Infrastructure creation: -cross-border infrastructure and border checkpoints ; - market infrastructure; - local infrastructure (local road network, water delivery system, etc.)	++ ++ ++	+ + +	+ + +
9	Social sphere	+	+	-
10	Migration and mobility of population	+	++	++
11	Human development and relationships	++	+	-
12	Production sphere			
13	Promotion of entrepreneurship	++	+	+
14	Investment interaction	++	+	+
15	Energy efficiency and harnessing of renewable energy resources (RER)	++	+	-
16	Organization of regional development institutions	++	-	-
17	International cooperation between local authorities and civil institutions (NGO, NPO, etc.)	++	+	+
18	Safety and emergency control	+	+	-

**Note:** «-» - no practice;

«+» - have experience;

«++» - strong cooperation.

Generalization of given results of analysis enable to conclude the following.

1. There is no substantial difference in spheres and areas of cross-border cooperation of Republic of Belarus with regions of member countries EU, EAEU and Ukraine. There is divergence in priorities and intensify of cooperation in single areas.

For instance, EU policy is focused on the organization of institutions of cross-border cooperation and infrastructural assets, as well as cooperation of cross-border regions in the sphere of innovation, human development, public sector inclusion. The prevalent direction of cross-border cooperation with EAEU countries are migration neighbor territories, direct trade and production relations between business entities.

2. In integration mechanism of cross-border regions of member states of EAEU prevail the national managerial and business entities levels. At the same time cross-border mechanism of cooperation EU member states is three-level. Moreover, financial and organizational institutes acting on supranational level. Cross-border regions of Belarus can receive financing from special funds of EU.

More active participants of EU cross-border relations are the regional and local levels. However, in cross-border relations management of Belarus with states of EU, as well as EAEU, local authorities have low engagement by reason of differences in scope of jurisdiction.

Table 4

**Participation of different management levels in cross-border cooperation development  
between Republic of Belarus and regions of the member countries EU, EAEU and Ukraine**

№ пп	Management level	Regions of the member country EU	Regions of the member country EAEU	Ukraine
1	Supranational level of regional association	++	–	*
2	National level	+	++	+
3	Regional and local level	++	+	+

**Note:**

\* - no supranational level ( Ukraine is not a member of EU and EAEU);

«+» - low influence;

«++» - strong influence;

«–» - no special management structure.

3. The most vary forms and methods of the mechanism of cross-border cooperation on the border with the EU, EAEU and Ukraine.

Table 5

**Forms of cross-border cooperation and management tools used by Republic of Belarus  
with regions of the member countries EU, EAEU and Ukraine**

№	Forms of cross-border cooperation and management tools	Regions of the member country EU	Regions of the member country EAEU	Cross-border regions of Ukraine
1	Emerging of euroregions and other target areas	+	+	+
2	Project management (project realization) under international programs	+	–	+
3	Generation of institutional environment for cross-border integration of region	+	–	+
4	Realization of investment projects	+	+	+
5	Forecasting and strategic planning	–	–	–
6	Regulation of prices and tariffs within cross-border territory	–	+	–
7	Financing of programs and projects in the sphere of cross-border cooperation	+	–	+
8	Organization of distribution system and other objects of market infrastructure	+	++	+
9	Exhibition and auction organization	+	++	+
10	Tariff and visa regulation within cross-border territories	+	-	-
11	Regulation of migration flows and increasing labour mobility	++	+	+
12	Collective organization, providing social (public) services to the population	+	–	+
13	Industrial cooperation	+	++	+
14	Direct contacts of business entities	+	++	+
15	Establishing of joint production and foreign enterprises	++	++	+
16	Organization of cross-border clusters	+	+	+

**Note:** «–» - no practice;

«+» - have experience;

«++» - strong cooperation.

Eurasian variant of cross-border relations is a traditional foreign economic ties of business entities. The mechanism of management and development related to organization of joint ventures, production co-operation, products promotion on regional markets through distribution channels establishment, organization of selling exhibitions and etc. Moreover, conditions of common economic space allow to use the instrument of strategic planning and forecasting. Hence, cross-border cooperation between Belarus and Russia, first of all, is a part of foreign economy strategy of Belarus and one of directions of integrational policy of EAEU.

European policy cross-border cooperation consider such relations as tool to reduce regional differences and cohesion of regions cross-border countries. This is the tool of realization both regional integration and supranational regional policy. The main method is project activities in areas which closely connected with regional development (ecology, social services, education and etc.).

Recently we can observe some trends in cross-border relations between Belarus and Ukraine. Firstly, the market relations between business entities and population are the main opportunity for development which comes from price difference for goods and services. Secondly, cooperation within the euroregions "Bug" and "Dnepr", which focused on educational, cultural contacts and solving environmental problems. Third, the migration flows of population of Ukraine cross-border regions to Belarus caused by military operations.

Carried out the comparative analysis of cross-border cooperation of Belarus enables to draw following typology cross-border relations [4; 5]:

1. Institutionalized relation within euroregions;
2. Cross-border relations between business entities develop spontaneous driven by market forces;
3. Cross-border relations as form of international controlled by traditional methods of international policy;
4. Cross-border relations as part of regional cooperation focused on solving regional problems cross-border territory with the participation of local authorities, public sector of cities and towns;
5. Cross-border relations which get main opportunity for development within common economic space of integrational cooperation.

In practice, relation types are closely connected. However, given typology is important from point of view of understanding their development and organization of improvement measures of mechanism cross-border relations.

## IV. Conclusions and practical recommendations

### 1. General recommendations

- It is necessary to enhance the role of local authorities in Belarus in the development of cross-border relations within the limits of legislation enacted at the national level. Their goal should be the elimination of fragmentarity industrial approaches to cross-border cooperation, guarantee of inclusion of growth factor related to local conditions and resources.
- To take effective measures directed at economic diversification of cross-border regions for the purpose of expanding the participants of these relations and decrease of periphery of cross-border areas.
- To strengthen orientation of the investment policy in cross-border regions to achieve synergies from investment projects implementation (innovation, ecology, job creation, local development, etc.)
- To engage integrative and export potential of free economic zones, industrial parks and other territories with a special regime, located in the cross-border regions of Belarus in order to intensify cross-border cooperation.
- To carry out graded policy of cross-border cooperation concerning administrative and territorial units (ATU) of various ranks (small and medium size towns; major cities; rural communities), as well as various economic entities (large business, small and medium size enterprises, objects of communal property).
- To shape a common database with cross-border countries and create information and communication platform for cross-border relations.

### 2. Recommended measures for the further development of cross-border cooperation with Russian regions as major partner of Belarus as part of EAEU.

Suggestions related to more comprehensive implementation conditions of common economic space EAEU are the following:

- To define an approved and interconnected strategies of regional development and plans of socioeconomics development cross-border regions;
- To develop scheme of integrated territorial organization cross-border territory of Belarus and Russia, thus presupposing coordinated spatial ordering and city planning on cross-border territory;
- To enhance cooperation at the level of local authorities and guarantee of inclusion of the public in order bigger orientation on cross-border

cooperation to problem solving of local development;

- To put in place the development programs of institutional integrated environment on cross-border territories;
- To create a legal framework and special administrative bodies and financial institutes at the level of supranational bodies of EAEU in order to support the development cross-border relations between regions of member countries of regional integration;
- To implement a project management approach in order to extend cross-border relations on the border of Belarus and Russia;
- To strengthen regional specialization of cross-border territories as part of common economic space in order to promote competitive opportunities.

### **3. *Priorities for improving policy of cross-border cooperation of Belarus with EU member countries.***

Development of measures to deepen cross-border cooperation between Belarus and the European Union should take into account the implementation of the border several functions: separation of two regional associations – EU and EAEU; national economies of cross-border countries, as well as regions.

The following actions are recommended:

- To reduce existing institutional and socio-economic disparities between cross-border regions of neighbor countries (active on going to market transformation of Belarussian economy towards convergence models of socio-economic development with European countries and organization of economic entities, suitable market environment and the economy of cross-border areas of EU member states).
- To remove existing unbalance in local authorities on the both sides of border. This may involve the following mechanisms:
  1. To delegate on a time basis of specific functions on the local level to carry out cross-border projects;
  2. To create an institute responsible for national authorities on the cross-border territory;
  3. To emerge the urban associations, rural communities for collective indication of local development in cross-border cooperation policy.
  4. To organize the cross-border clusters in the following spheres: tourism; recycling; collective use of natural and local resources, etc.
  5. To grant legal status to local initiatives, to develop clear criteria to allot grants by tender from local budget for the implementation of local initiatives.
  6. To expand sources of funding through co-financing from local budget projects on cross-border cooperation on the part of Belarus.

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## CHINA: FROM A PRODUCER TO A CONSUMER. PROSPECTS FOR SMALL AND MEDIUM FOREIGN BUSINESSES IN CHINA AND INDIA.

### **Abstract**

*The main objective of the article is to provide an overview on China's recent reorientation for domestic consumption and to study China's and India's future consumption growth. The research also studies consumer behavior in China and India and examines prospects for small and medium businesses in the two countries.*

**Key words:** *domestic consumption, consumption growth, e-commerce, Fintech.*

China is becoming a country with the highest purchasing power. It is expected that there will be about 320 million middle-class families in China by 2020. With the growth of domestic consumption there is an increase in demand for mass-produced goods for the domestic market. Many Chinese manufacturers, who previously worked for the export industry, have switched to providing for the needs of the local market. Chinese consumers want more than they can afford; they want wealth, luxury, and beauty. At the same time, overproduction has increased demand for food, real estate, transportation, education, and healthcare. All of the above have caused inflation of goods, shortcomings in quality control, and price volatility. Prices often do not depend on the quality of the product, but rather on the image, prestige, and sale location.

India and China experience intense competition, so they look for special business approaches that will help them to survive the rivalry. However, such conditions of the constant battle also induce these countries to discover new ways of doing business. Fintech and services markets in China have risen to unbelievable heights. Many companies, such as Tencent, Alibaba, and Taobao, which did not exist 15-20 years ago, have a significant share of the market today. Commercial and private construction is growing fast. Right after the Shanghai World Financial

Center had been completed and announced the third tallest building in the world, a new megatall skyscraper, the Shanghai Tower, was constructed next to it and became the second tallest after the Burj Khalifa.

### **China's International Investments And Trade Relations With The World**

Over the past 40 years China was an unprecedented example of a large-scale and rapidly growing economy. According to World Bank, China had overtaken Germany in 2007 and became world third-largest economy. In 2010 China overtook Japan, and it is projected to overtake the USA by 2029. Income and production growth and the increase of middle-class families will cause the rise in the level of education and further GDP and salaries growth, yet together with the recently revoked "one child policy" in China, it will also cause smaller family sizes and the aging of the Chinese nation.

The Chinese development model is considered to be special, but it was originally developed in post-war Japan, which was then adopted by South Korea, Taiwan, Singapore and Hong Kong. Later it was adopted by China and spread to Southeast Asia.

The government has retained control of the financial system, transport infrastructure, and large industrial enterprises, but it supported the creation of joint foreign-Chinese enterprises. Most of the foreign investments were contributed by Chinese diaspora, as well as Hong Kong, Taiwanese, and Singaporean businessmen, who moved production to mainland China where the resources were unlimited and cheap. However, since the early 2000s, the number of foreign investors investing in the Chinese economy had been decreasing, which, to a large extent, was the result of the concerted efforts of the Chinese government.

While China is already the second-largest economy in terms of its overall GDP, it still ranks very low in terms of per capita GDP. In 2015, GDP per capita (PPP) in China was \$13,400, which was significantly less than that of Japan and Germany, with \$35,804 and \$47,268, respectively [1]. In China, the GDP per capita (PPP) is 2 times higher than the nominal GDP, which is common for developing countries. The same situation is in India, where the GDP per capita (PPP) is \$5,730, which is almost 5 times more than the nominal GDP. As previously-used resources are unable to provide China the rate of development that was experienced in the past, public consumption becomes the last reserve of its development. Since the beginning of its reforms, the financial policy of China was oriented on stimulating its domestic demand. However, for the first two decades of the 40-year growth, it had been neglected. Now the government supports and encourages the increase in the monetization of the economy, which will have a positive impact on production and the level of savings. It is the domestic demand and the moderate savings rate that will become the main support of economic growth in the future and help to decline China's dependence on global demand for Chinese exports.

At the same time, China is developing a large-scale program for investment worldwide. China is the second large investor after the US in developing countries in Africa. In October 2016, China became the main investor of the new industrial city in Egypt. According to China's Ministry of Commerce, the amount invested into this project is about \$20 billion, where the total investment amount is estimated to be \$45 billion.

According to the prime minister Li Keqiang, China plans to give an aid of at least \$2 billion to prevent and control malaria and conduct research on traditional medicine in Angola, Cape Verde, Guinea Bissau, Mozambique, and Timor-Leste. In addition to this, they plan to invest in developing agriculture and facilitating trade and investment in these countries.

In general, according to official data of the Ministry of Trade, the sum of China's investment outflow in 2015 was \$118 billion, which increased by 10% from the previous year and broke the record for the last 13 years.

In pursuit of cheap labor and availability of transport infrastructure for export, Chinese investments have progressively flowed to South-East Asia. As such, in 2014, according to Vice Minister of Commerce Gao Yan, China-Vietnam bilateral trade reached \$83.6 billion, an increase of 28% from the previous year. Vietnam became the second largest trade partner of China in ASEAN, while China has been the largest trade partner of Vietnam for 11 consecutive years. Accumulated investments of Chinese enterprises in Vietnam reached \$8 billion in 2014 [2].

China and India aim to develop trade cooperation in economic and investment fields, but at the same time there is a competition between the two countries. China is one of India's main trading partners, but India also has its largest trade deficit with China, with a sum of \$41 billion. China ranks first in the list of countries from which India imports, but it is in fourth place in the list of countries to which India exports. In 2015, India imported goods worth \$61.6 billion from Mainland China, with a partner share of 15.77%. However, India's exports to Mainland China was worth \$9.6 billion, with a partner share of 3.62%. India's export to Hong Kong was worth \$12.1 billion, with a partner share of 4.59% [3]. China mainly supplies steel industry products, electrical engineering, telecommunications equipment, turbines, and computers to India. Indian exports to China is represented mainly by Indian mineral ores, yarn and fabrics, metals, and precious stones.

### **China's Reorientation For Domestic Consumption And Rapid Development Of E-Commerce**

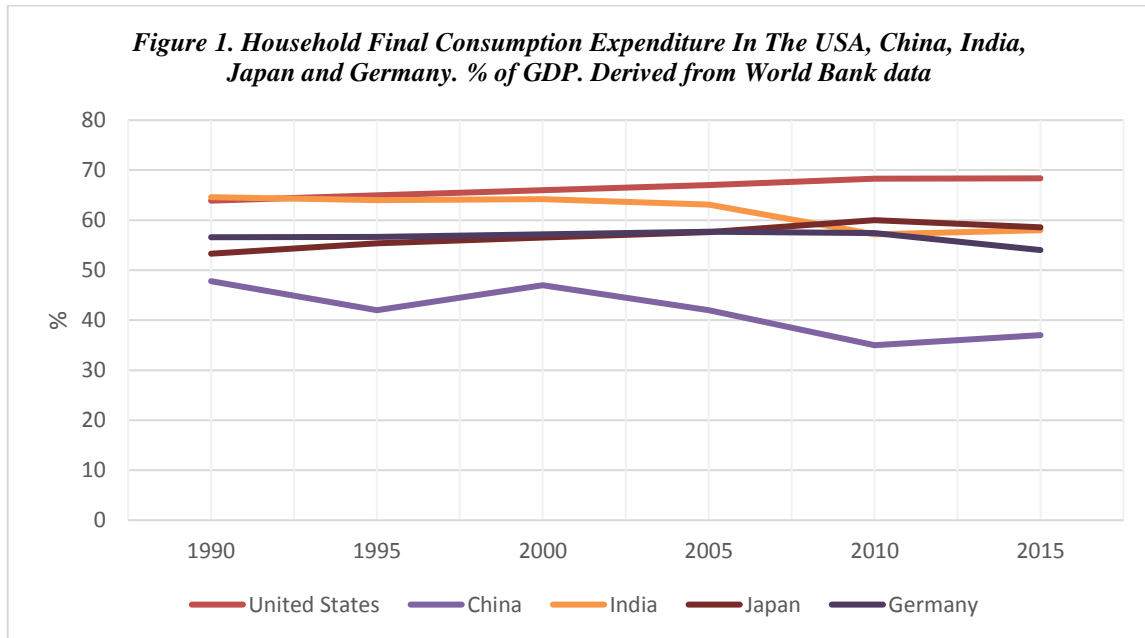
Recently, India has become one of China's competitors in production and domestic consumption. Though India still needs some time to catch up with and exceed China's growth rate, in the upcoming decades, India has very good prospects. The rapid growth of the two countries was due to their development models, which are very similar by their economic reforms focused on rapid economic growth, orientation on export, and a greater influence of government on the economy. However, the two models have a few differences that affect the local business opportunities and their prospects.

Unlike China, India has a significant trade deficit. However, India is a market leader in technology, having considerably more well-known companies that have gone

public. The conditions for private and small businesses in India are also much better than those in China.

In China, the government has had a much bigger influence on the country's economy than in India and, until recently,

its economy was more focused on exports while India's economy had been relying more on domestic consumption as a source of growth. The result of these politics was a constant decline of consumer spending as a share of GDP in China [Figure 1].



Source: Author calculations.

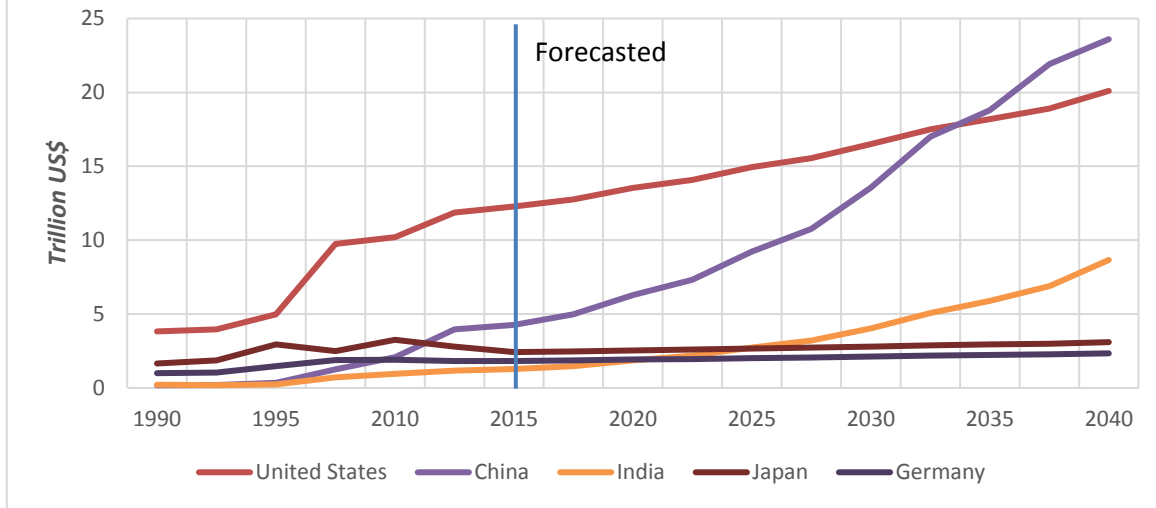
One reason for the consumption decline in 2000-2010 was a rapid increase in property prices caused by economic growth. For a long time, the Chinese lived in houses provided by the government. However, with the beginning of economic reforms, they had to buy their homes themselves. The early 2000s were accompanied by strong growth in the real estate sector and real estate investment had become very popular among the wealthy Chinese, which artificially increased the prices even further. To be able to pay the down payment and mortgage, the middle class had to save a large percentage of their earnings. However, due to the now-revoked one child policy, much of the present and the future generations will not have to buy a house because they will be provided with one by their parents or grandparents.

Therefore, in recent years, the Chinese government has decided to rebalance the economy towards domestic

consumption. Although the reorientation of the growth of domestic consumption causes concerns that it will slow down overall economic growth, with a moderate savings rate and a steady income increase, Chinese domestic consumption is projected to grow by 8% [Figure 2]. For comparison, the figure presents India with a benchmark scenario growth rate of 8%, USA with that of 2%, and Germany and Japan with a growth rate of 1%. In 2010, China's domestic consumption level passed Germany and became the third-largest economy in the world by consumption and, in 2013, surpassed Japan to become the second-largest in the world. According to forecasts, China will overtake the USA in 2035. India is projected to overtake Germany and Japan in 2020 and 2025, respectively. In other words, in 2025, China and India will be the second- and the third-largest economies by global consumption. Chinese and Indian customers will spend 3 and 2 times more than today.



**Figure 2. Household Final Consumption Expenditure In the USA, China, India, Japan and Germany. Trillion US\$. Derived from World Bank data**



Source: Author calculations.

The two main reasons for future consumption growth are an increase in income and, consequently, an increase in living standards in the two countries accompanied by a decrease in savings. Over the past 10 years, the GNI per capita in China has increased by almost 3 times, from \$5,000 in 2005 to \$14,000 in 2015. In India, it has grown by over 2 times from \$2,800 in 2005 to \$6,000 in 2015 [4]. It is expected that in 2020, the GNI in China will be about \$18,000, and in India \$8000. At the same time, there will be an increase in the number of households and a decrease the number of people living below the international poverty line, which is \$1.9 a day in China. The level of savings in China is amazingly high and accounts for 49% of the GDP, while in India it is 33%. For comparison, the level of savings in the United States is 18% of the GDP, while in Japan and Germany this metric is 24% and 27%, respectively. A decline in the savings level will increase domestic consumption. A decisive factor is that recently, the governments of China and India have specifically focused on the development of domestic consumption as it is one of the components that stimulate economy growth, even though it leads to a reduction in savings.

Chinese consumers can be divided into urban and rural groups. Urban residents are much richer and buy 6 times more than rural residents. In 2015, 55% of China's population (around 750 million people) accounted for urban residents and made more than 200 million

households. According to National Bureau of Statistics of China, the average income of urban residents, who make up a large part of the middle class, is \$11,700 a year. Workers in rural areas make roughly 6 times less, around \$2,000 a year. The largest portion of their income is spent on food, healthcare, and clothing. Smaller parts of expenditure constitute transport cost, utilities, entertainment, eating out, sports, and travel. In November 2016, total retail sales of consumer goods reached 3 trillion yuan (\$434 billion) with an annual increase of 11% in nominal growth rate. From January to November, total retail sales of consumer goods went up by 10% and reached 30 trillion yuan (\$4.4 trillion). The national online retail sales of goods and services for the same 11-month period were 4.6 trillion yuan (\$666 billion) with an increase of 26% [5].

### Conclusions

Such a continuous and impressive growth of retail, especially e-commerce consumption, is one of the recent breakthrough changes in China. Online purchases make 15% of private consumption and are projected to reach \$650 billion by 2020, which will potentially lift China's general consumption by an additional 4-6%. In Tier 4 cities, which include the majority of Chinese cities and count for a major part of urban citizens, the average online shoppers spend 27% of their disposable income through different digital channels [6]. More than 6 million

manufacturers and retailers have online stores on Taobao and Tmall platforms, which are the largest trading platforms in China. There are also less-popular, but still famous, websites such as Jingdong, Alibaba, and some smaller online marketplaces. A new marketplace on the base of WeChat messenger is gaining more popularity and is predicted to overtake TaoBao. The demand for online stores in Tier 4 cities is particularly high because there are few offline retail offerings.

In addition to increase in overall consumption, e-tail drives the growth for various services. Since manufacturing is a comparatively easy process in China and the added value of the products is low, it has become much more of a difficult process to competitively sell the products against numerous other online sellers. There is a growing demand for online advertising and marketing, express delivery services, and IT services, which include the rapidly-developing Chinese Fintech and various payment systems. The internet finance sector has also been booming in China recently, driven by a highly-developed e-commerce sector. More than 30% of China's population use internet payment systems because of its convenience and the popularity of the internet and smart phones. Due to the rapid growth of online-to-offline payment systems, some Chinese companies have become leaders in innovative Fintech. For example, Alibaba, with its payment system Alipay, controls about 65% of Chinese online payments and about 80% of the general mobile payments.

The increase in domestic Chinese consumption does not imply an increase in imports of consumer goods into China nor the growth of foreign trade companies in the Chinese market. China has made great efforts to ensure its economic independence, persistently pursuing a policy of import substitution in many sectors of its economy. For

instance, in 2013 China's level of food self-sufficiency reached 97%, which allowed for the significant decrease of grain imports. Therefore, China's share in global imports of goods is quite low, standing at about 2%.

In countries like China or India, considering their import-substitution policies, only businesses with goods that cannot be reproduced locally have a chance to survive in the long run. This may be, for example, certain cosmetics or foods, such as coffee, chocolate, cheese, or inexpensive high quality wine. Although recently, the Yunnan province in China has cultivated and exported local coffee at low prices and there is a tendency to learn and reproduce many of the world-famous products very quickly in China. To operate successfully in huge and rapidly changing markets such as China and India, companies need a strategy that considers consumer preferences, quickly responds to market shifts, and adjusts to new technologies. A very important condition is a presence in mobile and social media. In order to have a good range of products, it is crucial to consider the categories for which the demand will remain in the future.

Start-ups should also consider almost-unrealistic ambitions in business, high speed development, and originality, which are inherent for these markets. At the same time, their customers are very demanding. Other than China and India, there is no other world market so oversupplied with cheap goods. Moreover, after becoming accustomed to low prices, customers pay attention to quality. High quality and cheap price are two contradictory requirements that, nevertheless, a lot of local companies still adhere to. Many of the technology companies like Huawei, Xiaomi, and others have successfully entered international market due to this concept. These large-scale sales will remain a big influence on the global business.

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## STABILITY OF CROSS-BORDER FUNCTIONAL REGION IN THE CONTEXT OF COUNTER INTEGRATIONS. PART I. THEORETICAL AND HISTORICAL ASPECTS

### **Abstract**

*On the basis of consideration of the prevailing approaches to development tools of European Territorial Cooperation, a new functional model for the EU Extreme External Border Zone was proposed. It is based on the assumption of stability for Common Neighborhood space of counter integrations - European and Eurasian, as the main attribute of a balanced development of the European continent. The necessity of emergence of a new macro-region is discussed considering cross-border cooperation tools used in 2000-2013 on the Russian-Ukrainian Borderland.*

**Key words:** Region, Territory, European Territorial Cooperation, Macro-regional Strategy, Cross-Border Cooperation, Stability, Counter Integrations.

### **Introduction**

According the report of the United Nations, which appeared in a 1987, Sustainable development was defined as "development which meets the needs of the present without compromising the ability of future generations to meet their own needs".

Article 3 of the Treaty on the European Union proclaims that the Union shall work for the sustainable development of Europe based on balanced economic growth and price stability, a highly competitive social market economy, aiming at full employment and social progress, and a high level of protection and improvement of the quality of the environment. Sustainable development is a key objective of the European Union.

Cohesion Policy aims to promote harmonious development of the Union and its regions by reducing regional disparities (Article 174 of the Treaty).

The table below shows basic EU documents relating to the territorial agenda. They define objectives, trends and key challenges in the implementation of which the EU's regional policy with other sectoral policies focuses in the programming period of 2014-2020. A special role is assigned to the European territorial cooperation, funding up to 2020 will be 10.1 billion Euros.

The main principles and objectives of sustainable development – social equity, economic prosperity, environment protection and international responsibilities were recognised by the European Council in Gothenburg in 2001 and then these goals were complemented by the international responsibilities in June 2005. This allowed in the new European programming period of 2007-2013 go to the creation of integrated territorial development strategies, which can be defined as «the process of shaping economic, social and environmental change through spatially sensitive policies and programmes».

Key EU documents for Regional Sustainable development

COM(2001)264 final <b>Communication from the Commission A Sustainable Europe for a Better World: A European Union Strategy for Sustainable Development</b>	Commission's proposal to the Gothenburg European Council
COM(2005) 658 final <b>On the review of the Sustainable Development</b>	A platform for action. Effective responses require international co-operation and solidarity.
COM(2005) 37 final <b>The 2005 Review of the EU Sustainable Development Strategy: Initial Stocktaking and Future Orientations</b>	Clear political leadership is necessary to promote <b>a dynamic European model</b> for today and in the future
COM(2009) 400 final <b>Mainstreaming sustainable development into EU policies: 2009 Review of the European Union Strategy for Sustainable Development</b>	The EU SDS has also been instrumental in developing sustainable development strategies at national and regional levels.
<b>Green Paper on Territorial Cohesion</b> 06.10.2008	Three fronts: concentration, connection, cooperation
<b>The Europe 2020 Strategy</b> 03.03.2010	Three key drivers for growth: smart growth, sustainable growth, inclusive growth
<b>Fifth Report on Economic, Social and Territorial Cohesion</b> 09.11.2010	An evidence-based and result-oriented approach
<b>The Territorial Agenda 2020</b> 19.05.2011	Promote polycentric and balanced territorial development; Integrated development in cities, rural and specific regions; Territorial integration in cross-border and transnational functional regions; Ensuring global competitiveness of the regions based on strong local economies; Improving territorial connectivity for individuals, communities and enterprises; Managing and connecting ecological, landscape and cultural values of regions
<b>Sixth Report on Economic, Social and Territorial Cohesion</b> 23.07.2014	Investment for jobs and growth: Promoting development and good governance in EU regions and cities

Source: Author.

The main principles and objectives of sustainable development – social equity, economic prosperity, environment protection and international responsibilities were recognised by the European Council in Gothenburg in 2001 and then these goals were complemented by the international responsibilities in June 2005. This allowed in the new European programming period of 2007-2013 go to the creation of integrated territorial development strategies, which can be defined as «the process of shaping economic, social and environmental change through spatially sensitive policies and programmes».

### 1. Theoretical aspects of a cross-border region

A border space is a socio-geographical area, within which there is the most intense interaction of economic, cultural, legal and political systems in neighboring countries and their interest's collision.

The fundamental category in the EU Cohesion Policy/Regional policy is the concept of "region". In academic discourse study the concepts of "region" and "regionalism" are discussed in numerous works from the beginning of the 90s (See, e.g., [2], Schmitt-Egner, 2002).

The European Commission defines a “region” as a tract of land with more or less definitely marked boundaries, which often serves as an administrative unit below the level of the nation state. Regions have an identity which is made up of specific features such as their landscape, climate, language, ethnic origin or shared history [20].

In turn, Border regions have become a laboratory of European integration and cohesion policies because of the increased mobility of people, intensification of movement of goods and services across national borders.

Since the late 90's - early 2000's appeared a wide discourse and applied research on cross-border regionalism and cross-border regions (Euroregions), as basic processes / instruments of European integration in the internal and external borders of the EU [16, 8, 17, 26].

The cross-border space may be considered:

- as the result of interactions and retroactions, past and present;
- as the product of all kinds of encounters - from material and financial planning to the networking of actors, from social relations to the definition of political strategies;
- as a complex reality due to the presence of border which both separates and links different territorial systems. This production takes part in the dynamic of territorial reconfiguration and engenders new rationales of development and spatial practice.

Cross-border integration as a dynamic and multi-dimensional process of bringing territories closer together and strengthening of social bonds by lowering the barriers associated with border and by the development of cooperation between territorial systems.

Cross-border integration is also impermanent: it is made up of diverse elements which develop independently of each other, following different rhythms and time-scales [5].

## **2. The European experience of cross-border cooperation of 1989-2016**

European territorial co-operation is understood to be an increasingly intensive/extensive and deliberate interaction among public and nonpublic actors located at various governance levels in different countries that take advantage, in a mutually beneficial way, of their respective specialisations (or complementarity) and of the territorial proximity effects, existing at various geographical scales. This interaction has progressively led

to a stronger integration of the cross-border/transnational/interregional co-operation areas concerned and thus contributes, in the long run, to achieving a harmonious, balanced and sustainable development of the entire European territory [7, p.15].

The appearance of the first cross-border region EUREGIO on the German-Dutch border in 1958 and then creation of the Association of European border regions in 1971 has launched formation of the whole system of territorial cooperation. Since 1989, when the European Commission launched a pilot project (Phase PILOTE), regional initiatives have got systemic support as the first instrument of INTERREG launched in 1990 for the border regions of the EU.

In the countries of Central Europe since 1994 has been launched the PHARE CBC instrument and in Eastern European countries started to act a feebler instrument TACIS CBC. A detailed analysis of the results of these community initiatives INTERREG I-V were given in a series of related AEBR reviews [18<sup>1</sup>,2], as well as in the newest review, prepared by the MOT at the request of the European Commission [12].

For its part, the Council of Europe regularly publishes critical reviews on implementation of programmes and projects of cross-border cooperation, supported by the Congress of local and regional authorities and its standing committees, as well as pan-European organizations such as AER and CEMR [19].

## **3. The European Neighbourhood Policy**

The Union's external action under the Instruments should contribute to clear results (covering outputs, outcomes and impacts) in countries benefiting from the Union's external financial assistance. Whenever possible and appropriate, the results of the Union's external action and the efficiency of a particular Instrument should be monitored and assessed on the basis of pre-defined, clear, transparent and, where appropriate, country-specific and measurable indicators, adapted to the specificities and objectives of the Instrument concerned (Regulation (EU) No 236/2014)<sup>2</sup>.

Within the framework of the principles and objectives of the Union's external action and of the European

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<sup>1</sup> Practical Guide to Cross-border Cooperation, 1st edition 1995; 2nd edition 1997; 3rd edition 2000.

<sup>2</sup> Regulation (EU) No 236/2014 of the European Parliament and of the Council of 11 March 2014 laying down common rules and procedures for the implementation of the Union's instruments for financing external action

Consensus and agreed modifications thereto: cooperation under this Regulation shall contribute to fostering sustainable economic, social and environmental development.

The 'Global Public Goods and Challenges' programme aims at strengthening cooperation, exchange of knowledge and experience and partner countries' capacities with a view to contribute to poverty eradication, social cohesion and sustainable development. This programme shall be drawn from the following areas of cooperation, ensuring a maximum synergy amongst them in light of their strong interconnection:

- a. increasing the integration and mainstreaming of climate change and environmental objectives in Union development cooperation through support for methodological and research work on, in and by developing countries, including monitoring, reporting and verification mechanisms, ecosystem mapping, assessment and valuation, enhancing environmental expertise and promoting innovative actions and policy coherence;
- b. strengthening environmental governance and supporting international policy development to improve the coherence and efficiency of global governance of sustainable development, by assisting regional and international environmental monitoring and assessment, and by promoting effective compliance and enforcement measures in developing countries for multilateral environmental agreements (Regulation (EU) No 233/2014)<sup>3</sup>.

#### **4. What happened to the Russian-Ukrainian border in the period of 2000-2013**

Ukrainian-Russian relations mean for Eastern Europe the same thing that the Franco-German ones for Western Europe (John Morrison). At the same time, the Ukrainian-Russian border is becoming a more important key link in the system of the European borders, because it reflects two different geopolitical models of the European Union - an affiliate, which Russia focuses on, and full European integration - strategic direction for Ukraine.

Ukraine realizes this long-term aspiration through signing and ratification of the Association Agreement with the EU (September 2014) and implementation of sectoral and regional policies in the practice of social and economic development.

However, a new regional architecture of the European continent with the participation of European CIS countries can be successfully built only on condition of simultaneity of structural modernization of all segments of Belarusian-Russian-Ukrainian border, convergence of border space in the European processes of economic, social and territorial cohesion [3].

Regulation (EU) No 230/2014 of the European Parliament and of the Council of 11 March 2014 establishing an instrument contributing to stability and peace (Article 1 Subject-matter and objectives 1). This Regulation establishes an instrument (the 'Instrument contributing to Stability and Peace') which provides, for the period from 2014 to 2020, direct support for the Union's external policies by increasing the efficiency and coherence of the *Union's actions in the areas of crisis response, conflict prevention, peace-building and crisis preparedness*, and in addressing global and trans-regional threats.

*The specific objectives of this Regulation shall be:*

- a. in a situation of crisis or emerging crisis, to contribute swiftly to stability by providing an effective response designed to help preserve, establish or re-establish the conditions essential to the proper implementation of the Union's external policies and actions in accordance with Article 21;
- b. to contribute to the prevention of conflicts and to ensuring capacity and preparedness to address pre- and post-crisis situations and build peace;
- c. to address specific global and trans-regional threats to peace, international security and stability.

<sup>3</sup> Regulation (EU) No 233/2014 of the European Parliament and of the Council of 11 March 2014 establishing a financing instrument for development cooperation for the period 2014-2020

Table 2

## Comparative analysis of the historical stages of the development of cross-border cooperation

	Interreg 1990-1993	Interreg II 1994-1999	Interreg III 2000-2006	Interreg IV 2007-2013	Interreg V 2014-2020
<b>Legal status</b>	Community initiative		Intercorporated into the Structural funds regulations		Own regulations
<b>Participating Member States (EU internal borders)</b>	11	11, then 15	15, then 25	27, then 28	28
<b>Budget (commitments in current prices)</b>	1.1 billion ecus	3.8 billion ecus	EURO 5.8 bn	EURO 8.7 bn	EURO 10.1 bn
<b>Belorussian-Russian-Ukrainian Borderland</b>					
<b>Legal status</b>	Community initiative	Interstate agreement	Interstate cross-border programme	Implementation of Euroregional approach	Hybrids Conflict
<b>Participating Member Regions /Euroregions</b>	10/0	19/0	18/2	18/4	-/3
<b>Budget</b>	-	-	TACIS and local	Regional	-

Source: Agnès Monfret, 2015 with additions of the author

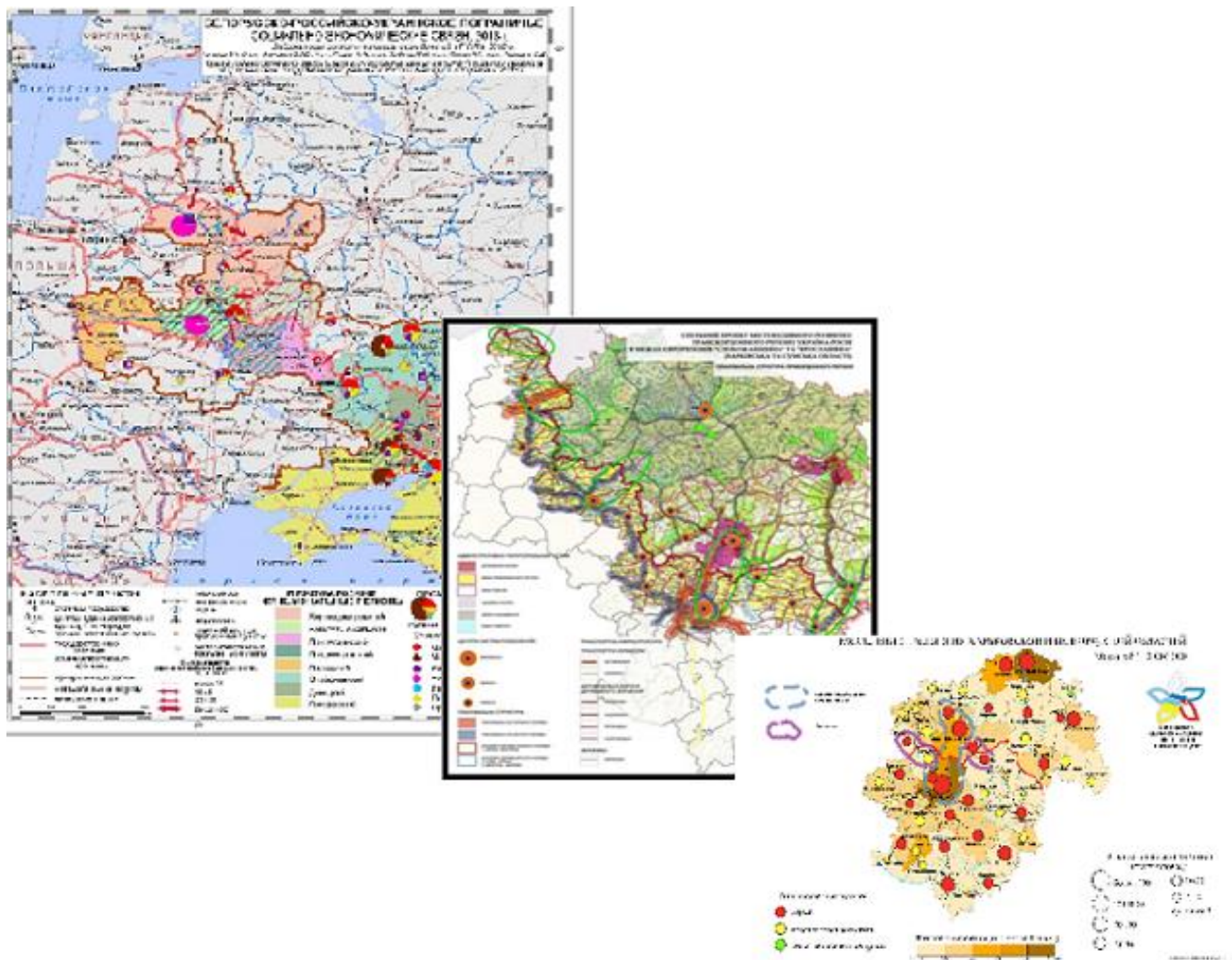
The Council of Heads of Border Regions of Republic Belarus, Russian Federation and Ukraine was set in 1994 as a tool to adapt to the emerged barriers of new state borders. The Council Executive Committee initiates and constantly implements on the systematic level an integrated approach to forming a consolidated cross-border space through preparing and implementing big inter-regional programs and sets up a continuous grid of compact euroregions along the Russian-Ukrainian Border. The Executive Committee of the Council of Heads of Border Regions provides for developing cross-border cooperation between the enterprises oriented on the sustainable export with the help of a two-level system:

- Basic level is determined by the partnership between Chambers of Industry and Commerce within the framework of the Business Council of Chambers of Industry and Commerce of Belarusian Russian-Ukrainian cross-border areas, set under the auspices of the Council of Heads of Border oblasts on April 15, 2008;
- Cooperation structures, set at the oblast administrations, ensure the level of cooperation between the adjacent regions (euroregions).

Kharkiv oblast Council and Belgorod oblast Duma joint inter-deputy group, set at the beginning of 2008, has become a stabilizing factor in Euroregion Slobozhanschina cross-border cooperation relations. Its functions have been fixed by the Belgorod oblast Duma decree of 27 December 2007 and Kharkov oblast Council session decree of 28 February 2008. Those decrees are directed to monitor implementation of the joint projects and programs.

In September 2013 in Kharkiv, a working meeting on the joint development project of urban planning of the Ukrainian-Russian cross-border region was held. The CBC projects in the period 2007-2013 became streamlined to match with the policy frames defined by the EU [10].

As of today, there are four official euroregions – “Dnepr”, “Yaroslavna”, “Slobozhanschina” and “Donbas” in the Belarus-Russian-Ukrainian Borderland. There are the full members of the AEBR, excluding “Dnepr”. But now their activity is frozen because of the conflict between Ukraine and Russian Federation.



**Figure 1. Multi-level spatial planning development of Belarus-Russian-Ukrainian border areas**

Source: [3, 10]

New regional architecture of the European continent with participation of CIS European countries (Euro-East) could only be successfully constructed on the condition of simultaneous structural upgrading of all Belarus-Russian-Ukrainian cross-border issues, convergence of the Neighbourhood areas into the all-European processes of economic, social and territorial cohesion.

The most detailed surveys on cross-border cooperation between Russia and Ukraine are given in the following publications [11, 24, 3, and 10].

Weak institutionally euroregions to which emphasis was placed while implementation of the European instruments

of cross-border cooperation into the EU's external area were absolutely useless in smoothing the armed conflict in the east of Ukraine and overcoming the escalation of inter-state Russian-Ukrainian relations.

Integration initiatives, which the EU had in the early 2000s in its outer region was thus completely blurred. The advantage was replaced by parity and for the next phase – stabilization in the area of counter integrations – one requires a new approach that will be built on the account of the interests of both sides.



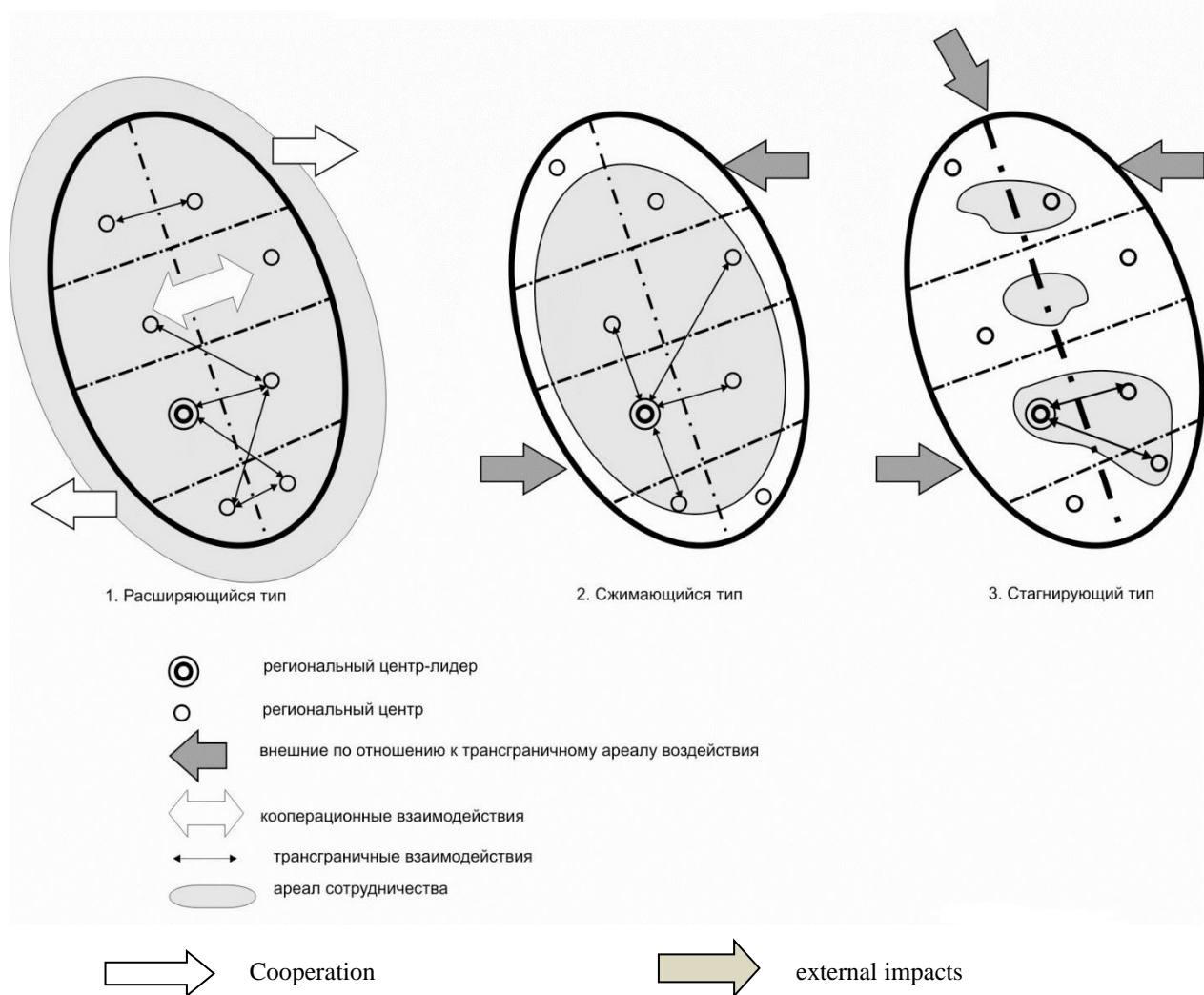
## 5. Modeling the stability of a cross-border region.

As the object of study of territorial cooperation, we propose to allocate cross-border area of territorial cooperation which covers the territory included in the format of interaction through the contractual arrangement. The cross-border area of territorial cooperation is characterized by spatial structure and temporal dynamics.

Structural elements of cross-border area of territorial cooperation are *centers, nodes, cooperation axis, programming and project districts/areas*, the density and symmetry of which are the most important characteristics.

Formal analysis of spatial and temporal dynamics of cross-border area of territorial cooperation can be done using mathematical techniques – General systems theory and Stability theory as to the entire range (meso-level), and the local area range (micro level). The latter is designed to study the effectiveness of Euroregions.

Depending on the foreign factors and relevant external influences on the regime of the border, we have allocated 3 types of cross-border territorial cooperation area: a) expanding and b) contracting and c) stagnating.



**Figure 2.** 3 types of cross-border territorial cooperation area: expanding, 2) contracting and 3) stagnating

Source: Author, 2011

The cross-border area of territorial cooperation is considered as a dynamic system which behavior is described by a system of differential equations

$$\begin{cases} \dot{x}_1 = F_1(x_1, x_2, \mu) \\ \dot{x}_2 = F_2(x_1, x_2, \mu) \end{cases} \quad (1)$$

$(x_1, x_2)$  – variables,  $\mu = (\mu_1, \dots, \mu_m)$  – parameters.

Taking into account the spatial structure of cross-border area of territorial cooperation, the system takes the following form:

$$\begin{cases} \dot{x}_1 = F_1(x_1, x_2, \mu) \\ \dot{x}_2 = F_2(x_1, x_2, \mu) \\ \dot{p} = kP - \alpha P^2 \end{cases} \quad (2)$$

$\dot{p}$  – rate of increment territory change of P, covered by territorial cooperation, P – cross-border area, including into a territorial cooperation process; k and  $\alpha$  – proportionality coefficients.

Variables considered density of territorial benefits and areas, covered by the cross-border projects. The parameters determining the dynamic stability of cross-border area of territorial cooperation system are the finances allocated for projects, accessibility, cross-border solidarity, balance of different types of projects and impact of the capitals.

Presented in general dynamic model of cross-border area of territorial cooperation behavior vary for specific applications to study the stability of Euro-regions, the European grouping of territorial cooperation (EGTC) and the macro-regions due to their structural and institutional differences. Models of stability for all three types of cross-border area of territorial cooperation, determining their specific features and spatial-temporal dynamics, will be presented in the second part of this publication.

The total dynamic model of functional cross-border region in each of three main types is also characterized by a certain type of stability. Switching from a dynamic model in describing the conduct of cross-border systems allows making preventive evaluation of the effectiveness of its operation in a particular programming period. It is an important component of strategic planning, taking into account the volume of future funding as well as more accurate forecast estimates on the basis of accepted indicators of sustainable development.

## 6. Macro-strategy as a new instrument of the European cohesion policy

Macro-regional cooperation means that NUTS 2 regions cooperating within close proximity to each other within boundaries of some larger geographical macro-region. Under this type of cooperation are INTERREG B “transnational co-operation programmes”, which cover larger areas of co-operation such as the Baltic Sea, Alpine, Mediterranean region and Danube basin (ESPON TERCO, 2011).

Macro-regional strategies (MRS) have become a crucial element in the design of European Territorial Cooperation (ETC) for post-2013 Cohesion Policy. Currently, the European Union (EU) is implementing two MRS, the EU Strategy for the Baltic Sea Region (EUSBSR and the EU Strategy for the Danube Region (EUSDR). The EU Strategy for the Adriatic-Ionian Sea was adopted in October 2014. In addition there are proposals and debates on the creation of strategies for other macro-regions, in particular for the Alpine Region, the Carpathian Region, the North Sea, the Black Sea, the Western and Eastern parts of the Mediterranean Sea and the coastal region of the Atlantic Arc<sup>1</sup>.

Macro-regional strategies represent a new opportunity for comprehensive development of a larger region, addressing common challenges and potential. To succeed, the macro-regional strategies need a better balance between the leadership provided by the countries and regions involved and the role of the Commission.

Most National Contact Points have set up a national coordination platform, bringing together national/ regional stakeholders to facilitate implementation. Good examples are Austria and Poland, bringing together central/federal and regional actors, sector ministries, managing authorities of programmes, local associations and e.g. scientific institutes.

A macro-region has consequently been understood as “an area including a territory from a number of different Member States or regions associated with one or more common features and challenges”.

The use of macro-regional strategic approach to the Belarusian-Russian-Ukrainian borderland in the context of counter-integrations provides the basis for long-term geoeconomics’ interests of the contact interface at different spatial scales - interregional, interstate and interbloc.

<sup>1</sup> New role of macro-regions in European Territorial cooperation / Resp. Admin. Marek Kołodziejowski. - Policy Department B: Structural and Cohesion Policies. EP. – Brussels. – 2015. – 107 p.

Four types of transnational territorial cooperations (TTCs) according to distinctive criteria

Type of TTC	Units (NUTS or equivalent)	Proximity			Coverage
		Close (neighbouring)	Distant in Europe	Distant out of Europe	
Twinning City	Cities or communes (always with twinning agreement)	Yes*	Yes	-	Europe
Cross-border (e.g. Interreg A)	NUTS 3	Yes	-	-	Internal and external European borders
Interregional (e.g. Interreg C)	NUTS 2	-	Yes	-	Europe
Macro-regional (e.g. Interreg B)	NUTS 2	Yes, i.e. within macro-region			Europe

\*only if they have twinning agreements

Source: ESPON TERCO, 2011.

From our point of view it is necessary to start a discussion about the formation of such a macro-regional strategy within two conjugate river basins - the Dnieper and the Don. In this case, it follows the basic principle of macro-regional strategies - geographical approach. As initial objects of **D-D Macro-Regional Strategy** it is necessary to focus efforts on 2-3 sub-basins, namely, the Seversky Donets, Psel and Vorksla.

Transition from the intergovernmental dialogue (Ukraine-Russia) to the inter-bloc (EU-EAEU) through the coordination of complementary parameters of macro-regional strategies at the level of the European Commission – the Eurasian Commission provides a new generation of tools to meet the challenges of sustainable development of the European continent.

## Conclusions

Over the last 25 years on the European continent a wide system of management tools of spatial development was created - INTERREG, CEMAT, ESPON, URBACT and Macro-regional Strategy Approach.

A wide range of tools and financial mechanisms allowed in the current programming period 2014-2020 to pass to a good Integrated Territorial Development Strategy at different spatial levels - from local to European. The Russian-Ukrainian border since the conflict in Donbas 2014-2016 has acquired the role of a key link in the system of the European borders, so its state reflects long-term trends of integration/disintegration of the European continent.

Formation of D-D macro-strategy allows taking into account and reconciling the interests of the two counter-

integration for sustainable development of the European continent. This macro-strategy in the long term will ensure a positive impact on the Black Sea macro-strategy by reducing the anthropogenic negative impact on the waters of the Azov and Black Seas.

The use of macro regional approach to the EU's external area, first of all, to the Extreme External Border Zone, means inclusion in long term, stabilization and mutually beneficial cooperation among the various participants (actors) in the space of common neighborhood:

- European Union – Eurasian Economic Union (*Continental level*)
- ENI - EANI (*Macro-Regional level*)
- Border regions of western and eastern parts of Ukraine (*National level*).

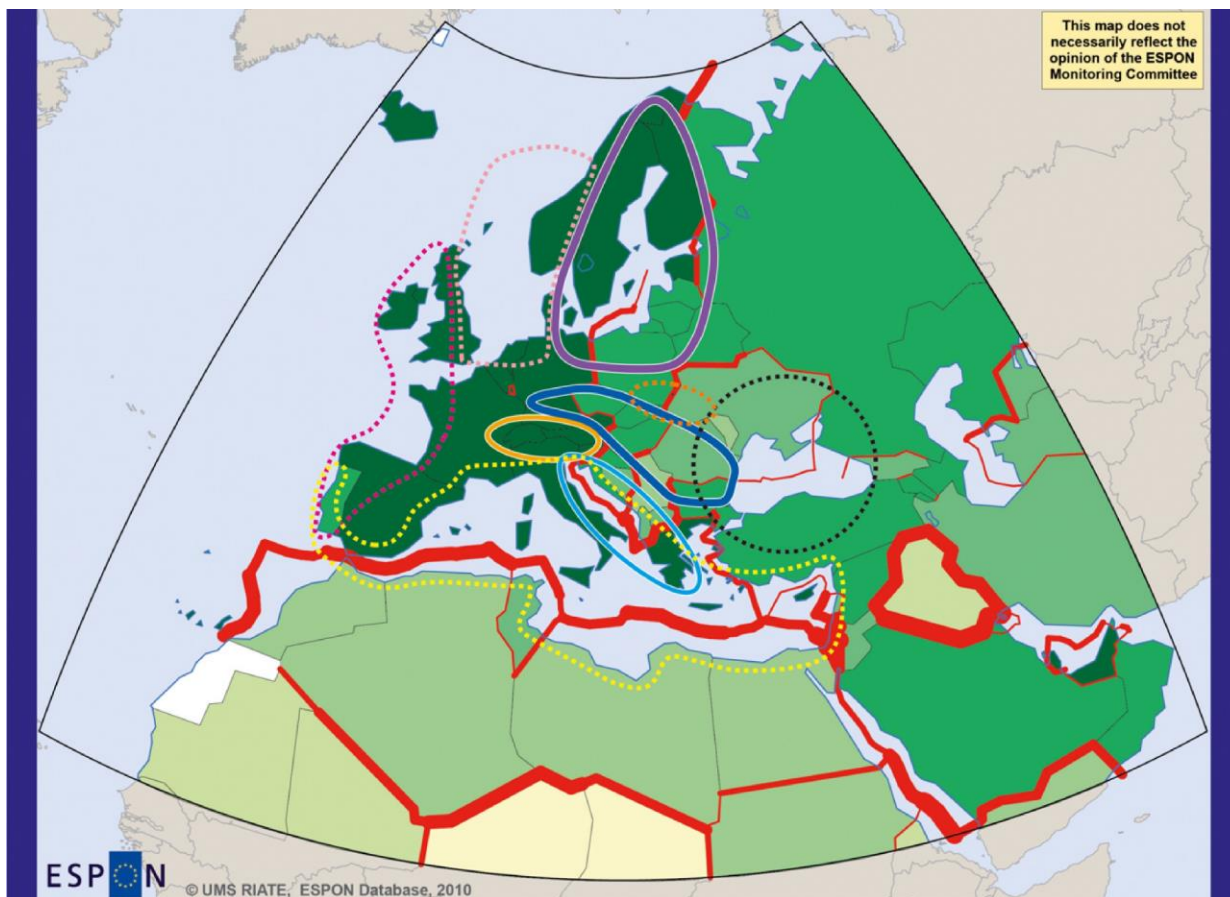
Such a strategic approach makes Ukraine a subject, not the object of the European policy and lays the foundation for stable contact interface of counter integrations in the future.

**Vision 2020+** D-D model (functional – territorial approach)

**Post 2030** D<sup>3</sup> model<sup>1</sup> (integrated functional solutions)

The complete line of instruments of the European Territorial Cooperation in the framework of macro-regional strategic approach will ensure spatial consolidation after 2025 (transport corridors, cross-border growth axis, cross-border innovation systems) across the European continent and prevent the appearance of hot spots in its eastern part.

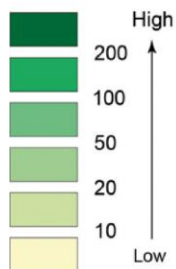
<sup>1</sup> Don, Dnieper, Dniester



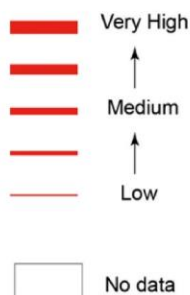
EUROPEAN UNION  
Part-financed by the European Regional Development Fund  
INVESTING IN YOUR FUTURE

Source: Historical Statistics of the World Economy, 1-2008 AD  
(Copyright Angus Maddison)  
© UMS 2414 RIATE for administrative boundaries  
Edited by ÖIR

**GDP Per Capita 2008**  
(1990 International Geary-Khamis dollars)  
index 100 = World



**Discontinuities (Relatives)**



**Macro-regional strategy areas**

Existing

- EU Strategy for the Danube Region
- EU Strategy for the Baltic Sea Region

In preparation

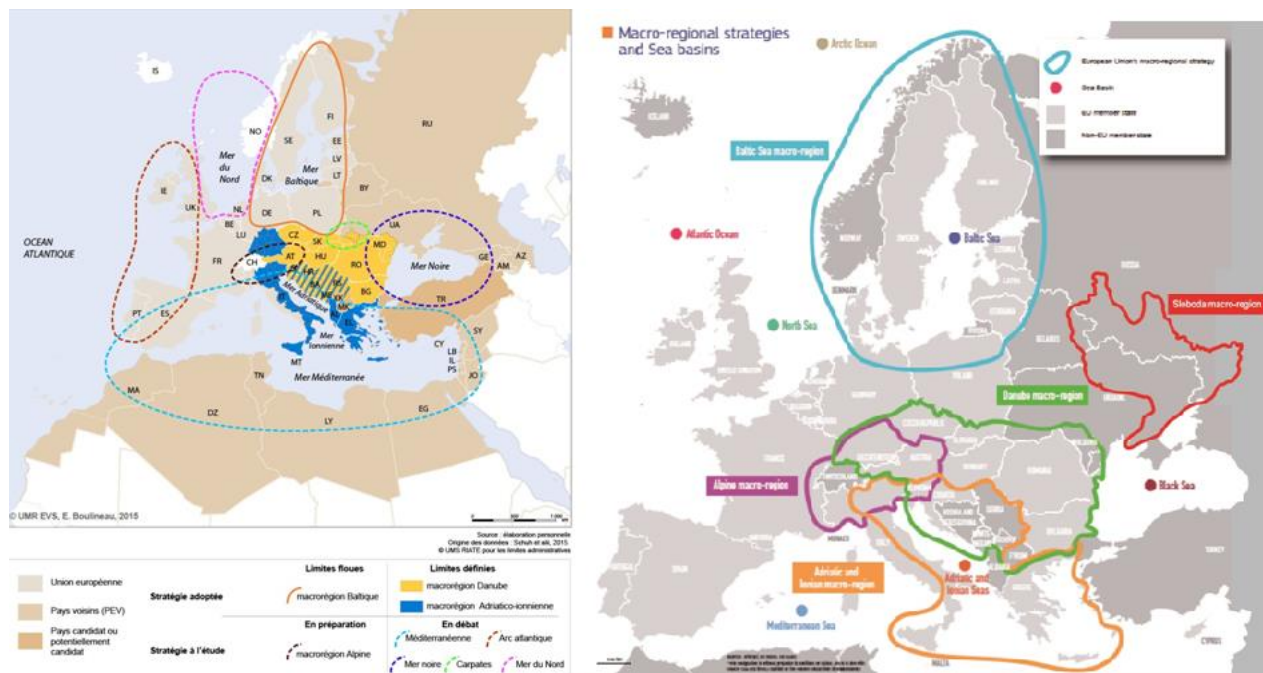
- EU Strategy for the Adriatic Ionian Region
- EU Strategy for the Alpine Region

Under consideration

- ⋯ Carpathian Region
- ⋯ North Sea (European North Sea Strategy)
- ⋯ Black Sea (Black Sea Synergy)
- ⋯ Atlantic Arc (Atlantic Strategy)
- ⋯ Western and Eastern parts of the Mediterranean Sea

**Figure 4.** Macro-regional strategy areas

Source: ÖIR 2014



**Figure 5.** Russian-Ukrainian Borderland: a new Macro- Strategically vision  
 Source: [1, 12, author, 2016]

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**WORLD PRACTICE OF BOUNDARIES CLARIFICATION  
AND DESIGNATION: EXPERIENCE FOR UKRAINE**

**Abstract**

*Since Ukraine declared its independence, one of the most difficult problems that arose, and remains urgent today, is delimitation and demarcation of the State border and security of country territorial integrity. The border question therefore has always been a central issue in Ukrainian peace and security strategies. As a result, Ukrainian leaders have adopted a number of decisions to tackle the border issue as a security concern. The principle of the respect of borders and subsequent political and legal actions is a key tool to reduce the conflict-inducing characteristics of Ukrainian's borders. The aim of this paper is to study modern experience in demarcation and delimitation of borders and the possibility of its use in Ukraine.*

**Key words:** state border, delimitation, demarcation, boundary signs, territories.

**Topicality.** Land and sea borders of many states have been set up historically. Under international law they are inviolable. The provision on recognition of borders between states and countries that have been established after the Second World War and was adopted in Helsinki in 1975 during the Conference on Security and Cooperation in Europe.

Nowadays length of the state border of Ukraine holds one of the first places among other European countries. Its length is about 7000 kilometres. Ukraine borders with seven countries: Poland, Slovakia, Hungary, Romania, Moldova, Russia and Belarus.

The current work on delimitation and demarcation of the State border of Ukraine is characterized by the use of different data on border objects spatial localization and information on spatial data with regard to a particular place and space, including topographic maps and plans, nautical charts, aero- and satellite images, orthophotos, protocols descriptions of passing the border line, reports and directories coordinate border signs, tables with information about the islands and their belongings, lists of geographical names found in the protocol describing the

contract documents. Work on delimitation, demarcation and verification of the state border line is an important factor in optimizing the geographic, geopolitical situation of the country.

There are number of questions to be clarified such as the boundary conditions in conditions of landscapes change and other natural disasters. Thus, one of the key problems of the border between Ukraine and Romania was its modification through changing the natural landscape. The lower bank of the river Tisza is Ukrainian due to geographical position, he gradually goes deep into our territory, releasing water from the Romanian coast. Since 1961, the Ukrainian side has lost 270 hectares of land as a result of this change.

Since Ukraine has proclaimed its course to EU integration this course should be supported by actions towards providing proper conditions of integration. The countries that have territorial contradictions can not become full members of the EU. That is why the matter of demarcation works completion throughout Ukraine border has become urgent.

**The aim of the work** is to study modern experience in demarcation and delimitation of borders and the possibility of its usage in Ukraine.

One of the most important and most challenging characteristics of state borders may be found in their functions. The state border has two main functions: separation and connection (contact function).

*Separation function.* It appears to control the conditions of flows of people, goods, capital and information between countries and to limit the terms of their movement. In the first case, this function is blocking and filtering flows. To limit or suspend the movement of people, for example, prohibitions or formalities which are difficult to overcome are imposed, high government fees for visas are set and obstacles to the pendulum migration across the border are created. Measures managing the transport of goods across borders, is the differentiation of customs duties on a variety of products from different countries.

*Connection (contact) function.* This function is related to the processes of internationalization of economic life and diverse relations between states. Increased contact function of borders – yet is just a trend which appears mainly in Europe and North America. The share of these regions in the total length of boundaries is low (8% of their total length within the world). In other regions the influence of first function is more visible.

Boundaries of administrative units (states, provinces, cantons, land, etc.) and economic areas are distinguished inside the national territory.

The current stage of work on delimitation and demarcation of the state border of Ukraine is characterized by the usage of different data on border objects with spatial localization and information on spatial data relating to a particular place and space including topographic maps and plans, nautical charts, aerial and satellite images, orthophotos, protocols descriptions of passing the border line, reports and directories coordinate border signs, tables with information about the islands and their membership, lists of geographical names found in the protocol, describing the contract documents. Work on delimitation, demarcation and verification of the State border line is an important factor in optimizing the geographic, geopolitical situation of the country.

Throughout all periods of history there were different governmental entities on the territory of modern Ukraine. Borders are constantly changing, but documents and old maps remain in the archives which reveals the borders of the state. Picture 1 shows a map of the Ukrainian National Republic, which is kept in the archive of Louis XIV at the Ministry of Foreign Affairs of France. Ukraine borders declared by the delegation of Ukrainian National Republic during the Paris Peace Conference in the 1919-1920 years are presented on the map.

Current length of the state border of Ukraine holds one of the first places among the countries of Europe, its length is about 7000 kilometres. Ukraine borders with seven countries: Poland, Slovakia, Hungary, Romania, Moldova, Russia and Belarus (Picture 2).

Ukraine has on land borders with all the above-mentioned countries:

- Poland 542.39 km, including river border in 187.3 km.
- Slovak Republic 97.852 km, including river border in 2.3 km.
- Hungary 136.7 km, including river border in 85.1 km.
- Romania 613.8 km, including river border 292.2 km and sea border in 33 km.
- Republic of Moldova 1222 km, including river border 267 km, 452 km of Transnistria.
- Russian Federation 2,295.04 km, including 1974.04 overland and 321 km. of sea.
- Belarus 1084.2 kilometres, including river border in 325.9 km.

The whole territory of the country is solid, which means that there no small Ukrainian enclaves in other countries, from all sides bounded be foreign territory. Within the sea Ukraine borders with Romania and Russia. Ukrainian-Romanian border in the west continues from the border on the land into the Black Sea in the distance of 33 kilometres from the coast, then (until it does not return to the north, encompassing the Zmiinyi Island in the south), it serves as a border of Ukrainian territorial waters and economic zone of Romania. Turning north, our maritime border is the boundary between the state area (better to say waters) and the exclusive economic zone of Ukraine, it goes around the contours of the Ukrainian coast until the Kerch Strait keeping the distance at 22224 meters aside from the shore. In the eastern part of the Black Sea to the south of the Kerch Strait meets the border of the Russian economic zone in the Black Sea.





**Picture 1. The map of state borders of Ukrainian National Republic**

Ukrainian-Russian border starts from the point where economic zones and territorial waters of Ukraine and Russia are located, afterwards it follows to the north (to the southern borders of the Strait), where it serves as the border between the territorial waters of Russia and Ukraine (22.5 km). Further it continues with the Ukrainian-Russian border in the Kerch Strait (49 km) and the Azov Sea (249,5 km) - here it separates the internal waters of both countries till the border point on the coast. The total length of the maritime boundary of Ukraine is 1355 km., of which the Black Sea - 1056.5 km., the Azov Sea - 249,5 km., the Kerch Strait - 49 kilometres. However, it deviates considerably to the west towards the southeast of the Romanian territorial waters, due to the presence of Zmiinyi island near the border.

The matter of delimitation and demarcation of the state border of Ukraine has always been of high priority in relations with neighbouring countries within all the years of Ukraine independence. Nevertheless, it has not been

settled up to this day. And taking into account the current status of Ukrainian-Russian interstate relations, the entire illusory of resolving it in the near future can be pointed. The history of this issue was not formed in the last few decades, but throughout the whole last century. The process of Ukraine state borders forming in the twentieth century was affected by a number of important factors that determined their modern line. Like for many newly established national states, factor of ethnic territory played a special role. For Ukraine, it was also probably the most important. However, the geopolitical factor was added to this factor in the twentieth century and it was much more influential than ethnic territories in international politics of foreign countries. In addition, the formation of the boundary line was affected by the administrative-territorial division of the countries, which encompassed Ukrainian lands at the beginning of the twenties century.

Of course, a significant role was also played by economic, geographic and ideological levers.



Picture 2. Topographic and geodetic, mapping and surveying works on demarcation and delimitation of Ukrainian state border

Since Ukraine declared its independence one of the most difficult problems that arose and left up to the present time, is state border development. According to the law of Ukraine "On State Border of Ukraine" in the legal interpretation "Ukraine state border is a line and a vertical surface passing along this line, which define the territory of Ukraine - land, water, minerals, air space." State borders "is a reflection of the territorial integrity, political and economic independence, sovereignty and unity of Ukraine".

Legal registration of state borders is one of the priorities of Ukraine's foreign policy, the implementation of which should ensure the sovereignty and the legal personality of Ukraine in the international arena, to guarantee its inviolability and territorial integrity. Legally state border is one of the main conditions of stability in the political, economic, military and defence relations between the neighbouring countries.

In post-Soviet countries, new interstate borders have not been legitimized properly - the incomplete process of

delimitation and demarcation causes uncertainty in the border areas and border relationships. If with Poland, Slovakia and Hungary we managed to reach agreements on the recognition and legal registration of the borders in short time, resolving this issue with Romania, Moldova, Belarus and Russia was delayed.

In the Ukrainian-Polish intergovernmental agreement "On neighbourhood, friendship and cooperation" from May 18, 1992 it is noted that the parties "have no mutual territorial claims, and will not nominate them in the future." Next year, on January 12, 1993, the agreement "On legal regime of the Ukrainian-Polish border, cooperation and mutual assistance in border issues" was signed in Kiev. The agreement "On neighbourliness, partnership and cooperation," was signed between Hungary and Ukraine in 1992, which emphasized the territorial integrity and inviolability of borders. In May 1992 it was supplemented by agreements "On a simplified procedure for crossing the border by the citizens living in border areas", "On the crossing points across the state border", "On the transfer and receiving of people across the common state border. "

An agreement between Ukraine and the Republic of Hungary "On the regime of the Ukrainian-Hungarian border, cooperation and mutual assistance on border issues." was signed on May 19, 1995 in Kiev. Verification of borders between Ukraine and Hungary was done during 1996-2003 years.

In the second article of the Agreement "On Neighbourliness, Friendship and Cooperation Between Ukraine and the Slovak Republic" dated 24 June 1993 it is emphasized that states recognize the inviolability of existing borders between them. On this basis, a joint commission was immediately formed, and due to the results of its work agreements between Ukraine and the Slovak Republic "On the common state border" and "On the regime of Ukrainian-Slovak state border, cooperation and mutual assistance in border issues " were signed in Bratislava on 14<sup>th</sup> of October 1993. After their ratification on July 15, 1993 legal framework of functioning of Ukrainian-Slovak border was complemented with the agreement "On the transfer and receipt of people across the common state border." Verification of borders between Slovakia and Ukraine started again in 2003 (after 1989-1994.)

The issue of the border with Romania was settled with the signing of the agreement between Romania and Ukraine "On the regime of the Romanian-Ukrainian state border, cooperation and mutual assistance in border issues" on 17 June 2003. Both sides recognized the demarcation of land boundary area that was carried out between the USSR and Romania some time ago. The status of Zmiiny Island in the Black Sea was left not fully resolved, which affected on the determination of the limits of the continental shelf and exclusive economic zone. In 2004 Romania sues to the International Court of Justice in The Hague statement on the delimitation of the continental shelf and special economic zones of Ukraine and Romania in the Black Sea, insisting that Snake is not an island but a rock, and therefore it can not be taken into consideration during the delimitation line. The Court announced its decision on February 3, 2009. The final decision was not subject to appeal, the Court has put the two countries in the status quo. Zmiiny was recognized as an island in all the documents, but not a rock, as it was required by Romania. However, preservation of the status of Zmiiny Island does not provide Ukraine with the right to increase the exclusive economic zone in the Black Sea.

Thus, Romania formally confirmed the principle of "inviolability" of existing borders with Ukraine, but the border remained without legal confirmation (later the situation was repeated during the signing of the relevant agreement between Romania and Moldova) [1].

In addition to issue with Zmiiny Island, another problem of the border between Ukraine and Romania was its modification by change of the natural landscape. This was the area of Rakhiv and Tyachiv district (Transcarpathian region) of Ukrainian-Romanian border. According to the Agreement on the regime of the Soviet-Romanian border, cooperation and mutual assistance in border issues from 1961 boundary line here lies in the middle of the Tisza river. However, this channel as the channel of any other river changes with time. The main reason for the change of riverbeds are floods which take place here several times a year and erode the coast. It was formed geographically that the lower Ukrainian shore, gradually goes deeper into our territory, releasing the Romanian coast from water from. Since 1961, the Ukrainian side has lost 270 hectares of land in this way [2].

Since the change of the river was caused by primarily natural factors, to prevent this process completely is impossible, but to weaken it significantly and to make it manageable – is quite feasible task, which may be implemented by establishing reliable embankments. The loss of the territory by Ukraine may be stopped by signing with Romania documents on demarcation, under which the state border would become permanent, relevant arrangements of Ukraine with Hungary, Slovakia and Poland may be used as example.

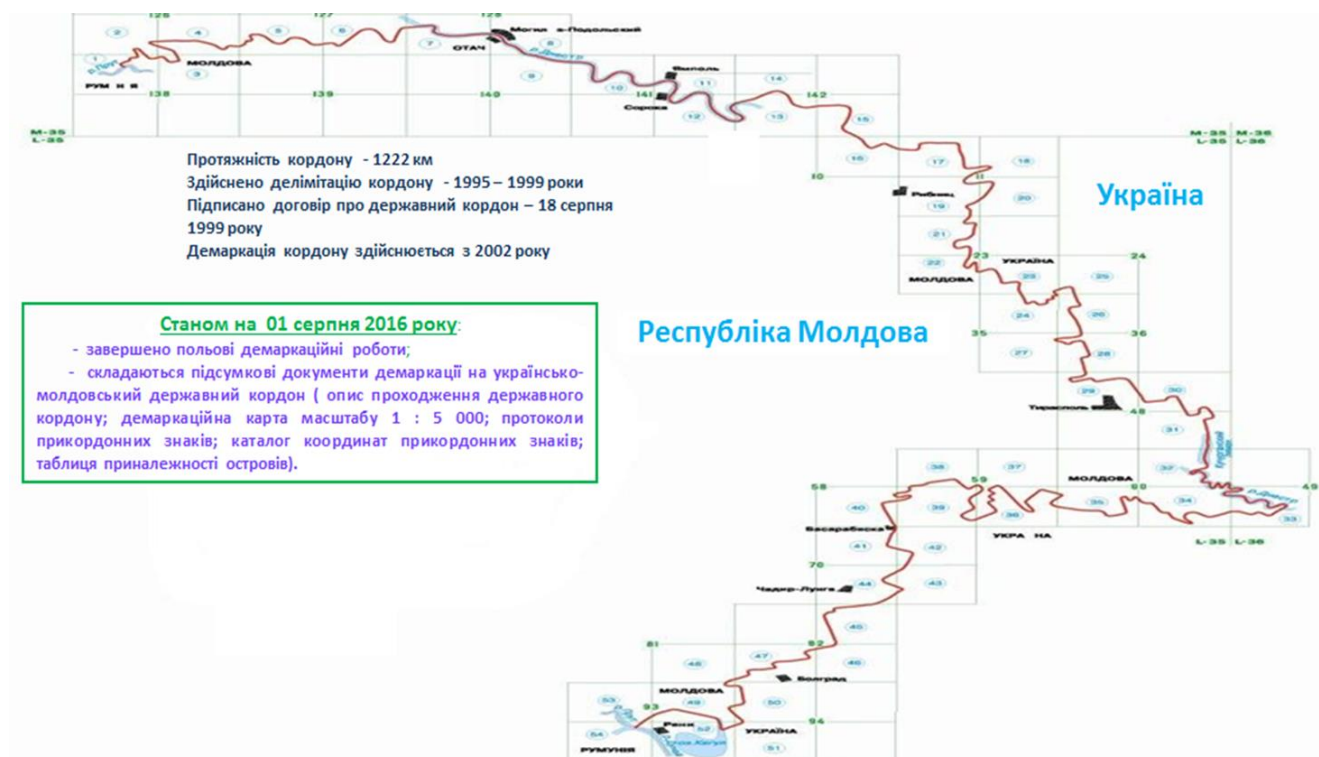
In November 1994, Ukraine and Moldova signed an agreement "On cooperation in border issues." A draft of fifth border passage on the map was approved later and one of the main problems was outlining of starting point of the state border in the south, near the mouth of the river Prut. Kyiv was insisting that the Moldovan-Ukrainian border is defined by the agreement from 1940, which says that it starts on the river Prut, leaving the village. Giurgiuleshti in the Moldavian SSR. However, Moldova was supporting the position that the border must be lying on the river Dunai. This would give them the opportunity to get access to the Black Sea and to build an oil terminal there. One of the solutions to the problem could become the exchange. Moldova passed the part of the road Odessa - Ismael to Ukraine, and for that the country received territorial concessions in Bessarabia. That it was taken as a basis for future compromise. Delimitation of border with Moldova was made during 1995-1999 years. Agreement between Ukraine and Moldova on the state border was signed on August 18, 1999. From 2002, works on demarcation are continuing. Picture 3 shows the demarcation of the state border between Ukraine and Moldova. And Picture 4 shows a fragment of demarcation map scale of 1: 5000 of the state border between Ukraine and Moldova. Picture 5 shows the protocols of the border

signs, and Picture 6 reveals catalogue of coordinates of border signs.

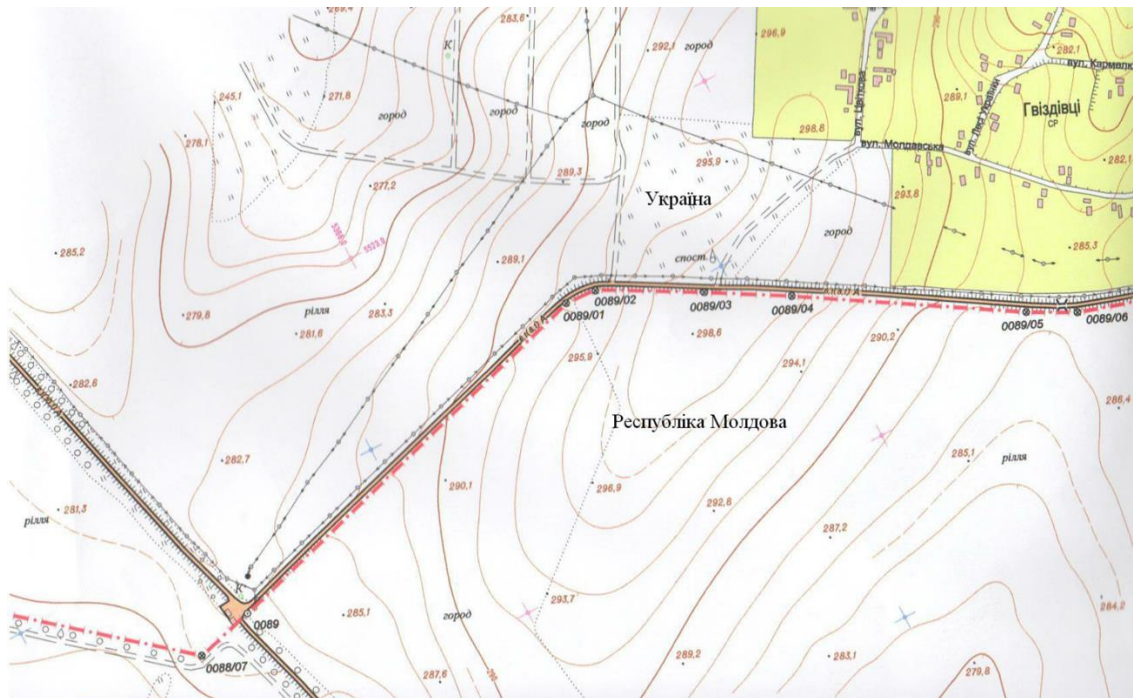
The European Union is ready to contribute to taking the final decision on practical initiation of process of demarcation of the central (Transnistrian) area of the Ukrainian-Moldovan state border by parties. Such willingness of the European Union was expressed by the Head of European Commission in assistance in the matters of the border between Moldova and Ukraine (EUBAM), Ferenc Banafi, who highly appreciated the level of cooperation between the EU mission with the Ukrainian side, which is an important factor in strengthening security in the region [3, p. 56].

Otherwise, there was a process of delimitation of the Ukrainian-Belarusian border. Already in December 1992,

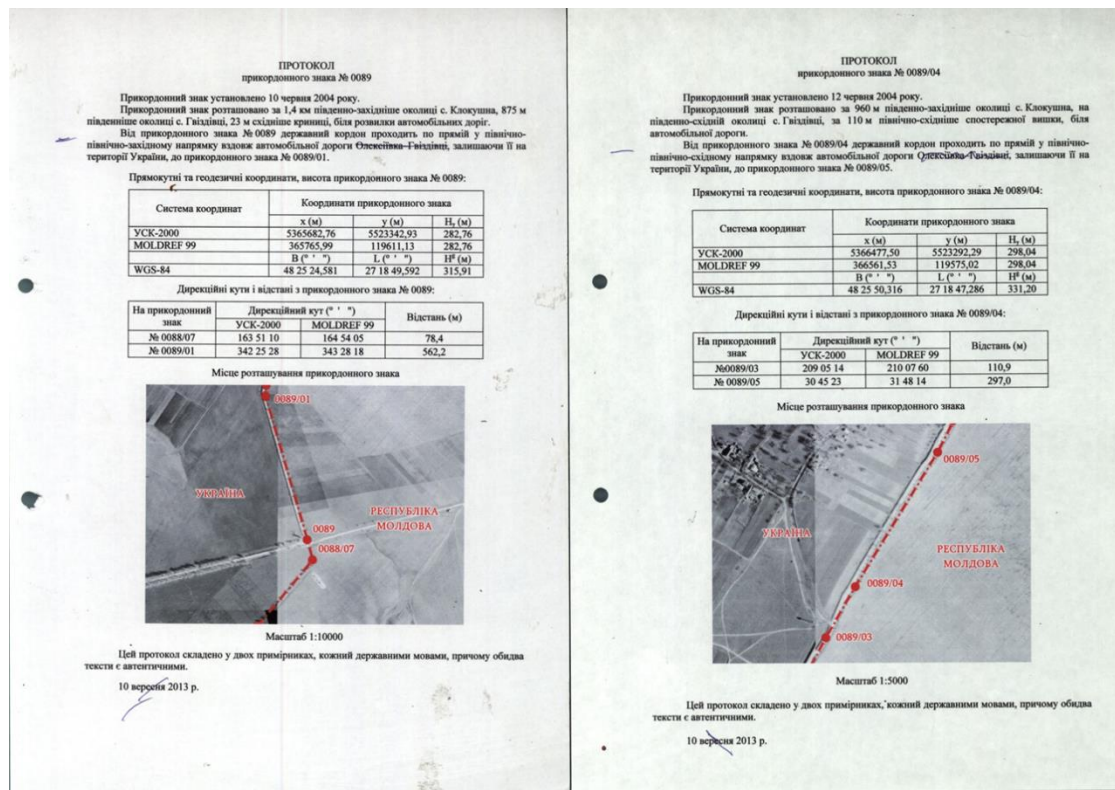
the Prime Minister of Ukraine Leonid Kuchma signed an agreement with the Republic of Belarus "On cooperation on border and customs issues as well as visa-free border crossings." Completion of delimitation process took place in May 12, 1997 with the signing of the agreement "On the border." On June 18, 2013 Ukraine and Belarus have exchanged instruments of ratification of the agreement on state border between Ukraine and Belarus from 12 May 1997 and the initiation of work on the demarcation of the Ukrainian-Belarusian border. Picture 7 provides the demarcation of the state border between Ukraine and Belarus. Picture 8 shows a fragment of delimitation map in scale of 1:10 000 with the project boundary signs at the state border between Ukraine and Belarus. Picture 9 describes the border between Ukraine and Belarus.



Picture 3. Demarcation of State border between Ukraine and the Republic of Moldova



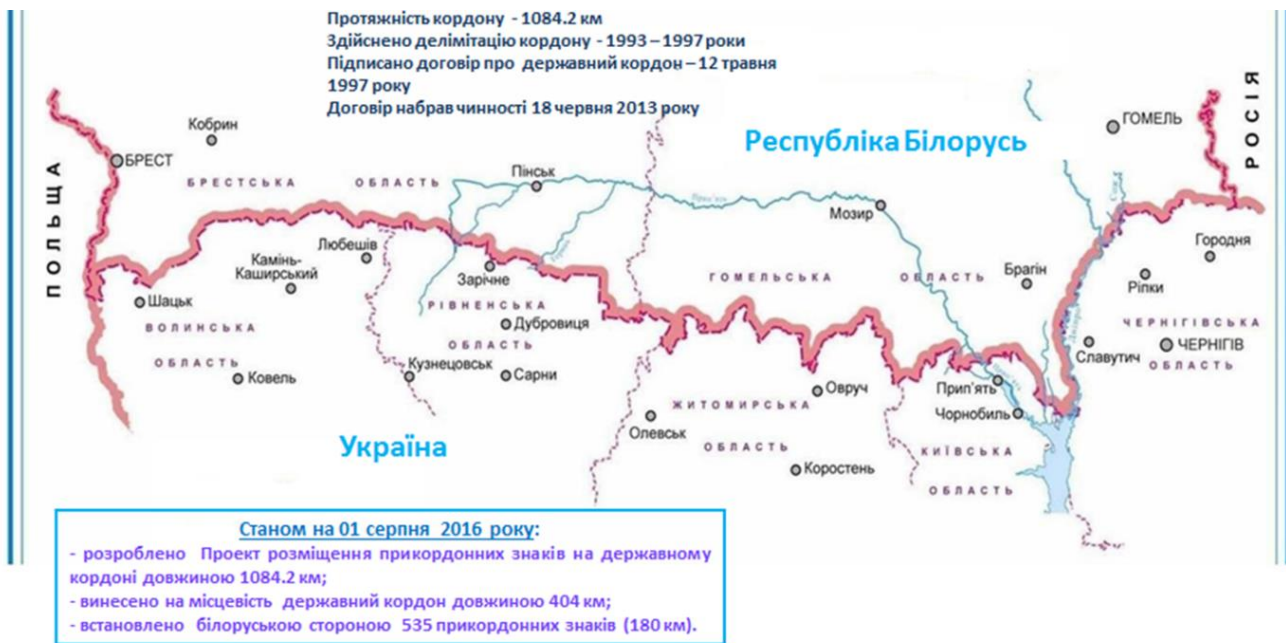
Picture 4. Fragment of demarcation map of the state border between Ukraine and Moldova, scale 1: 5000



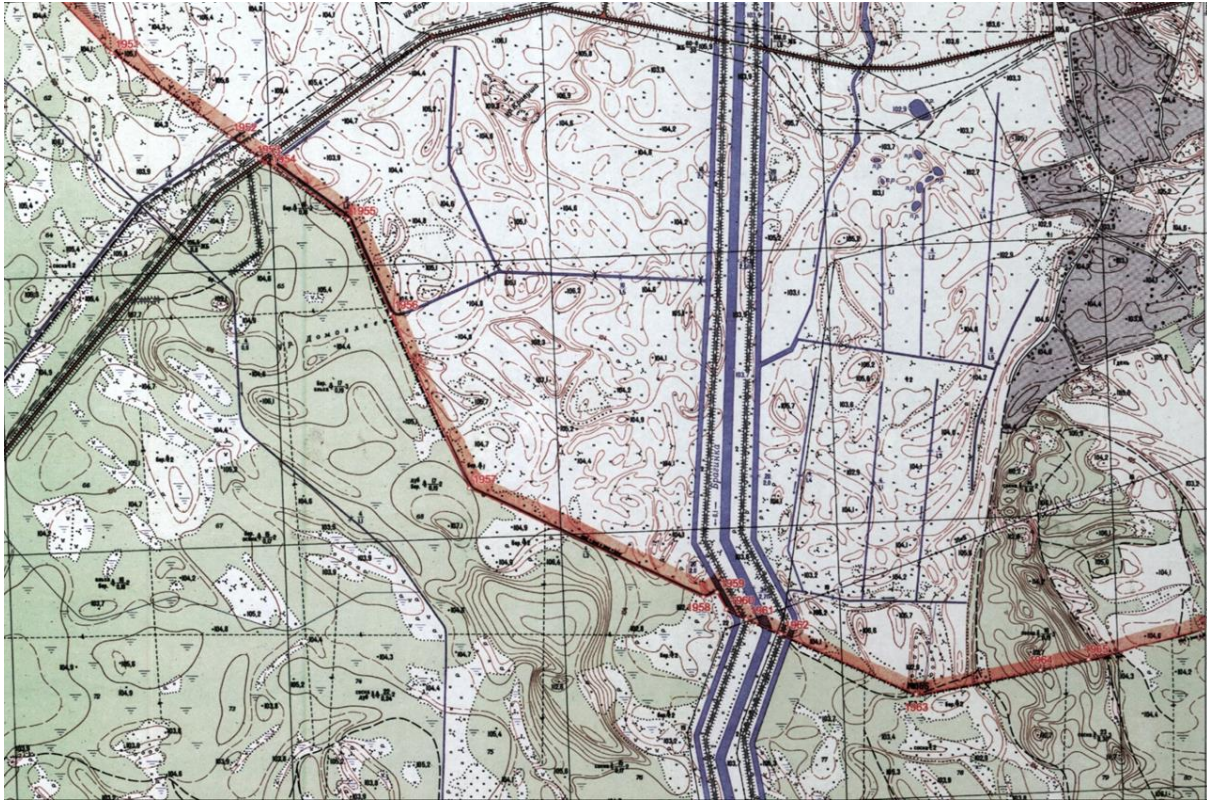
Picture 5. Protocols of border signs

№ п.п.	Номер прикордонного знака	Тип прикордонного знака	Координати і висоти прикордонних знаків								
			УСК-2000			MOLDFEF 99			WGS-84		
			x (м)	y (м)	H <sup>r</sup> (м)	x (м)	y (м)	H <sup>r</sup> (м)	B (° ' ")	L (° ' ")	Hg (м)
531	0081/04	пр	5 360 847,31	5 516 910,38	220,96	361 048,81	113 091,19	220,96	48 22 48,772	27 13 36,018	254,18
532	0081/05	пр	5 360 463,40	5 517 234,57	216,02	360 659,03	113 408,32	216,02	48 22 36,312	27 13 51,716	249,24
533	0081/06	пр	5 360 356,52	5 517 312,74	239,04	360 550,74	113 484,52	239,04	48 22 32,844	27 13 55,499	272,25
534	0081/07	пр	5 360 265,83	5 517 398,35	250,03	360 458,50	113 568,47	250,03	48 22 29,900	27 13 59,646	283,24
535	0082	осн	5 360 045,79	5 517 578,67	252,34	360 235,20	113 744,74	252,34	48 22 22,758	27 14 08,376	285,55
536	0082/01	пр	5 360 154,07	5 517 763,15	246,20	360 340,09	113 931,17	246,20	48 22 26,245	27 14 17,356	279,40
537	0083	осн	5 360 238,16	5 517 911,06	236,44	360 421,47	114 080,60	236,44	48 22 28,952	27 14 24,557	269,66
538	0083/01	пр	5 360 289,42	5 518 160,73	237,98	360 468,16	114 331,17	237,98	48 22 30,586	27 14 36,697	271,18
539	0083/02	пр	5 360 308,26	5 518 385,17	246,21	360 482,90	114 555,92	246,21	48 22 31,173	27 14 47,606	279,42
540	0084	осн	5 360 323,36	5 518 627,05	251,20	360 493,58	114 798,04	251,20	48 22 31,636	27 14 59,362	284,40
541	0084/01	пр	5 360 412,46	5 518 805,99	253,08	360 579,40	114 978,58	253,08	48 22 34,502	27 15 08,072	286,28
542	0084/02	пр	5 360 475,86	5 518 936,41	251,14	360 640,41	115 110,14	251,14	48 22 36,541	27 15 14,420	284,34
543	0084/03	пр	5 360 751,14	5 519 483,78	262,06	360 905,65	115 662,46	262,06	48 22 45,393	27 15 41,065	295,25
544	0085	осн	5 360 872,50	5 519 658,31	263,25	361 023,80	115 839,18	263,25	48 22 49,303	27 15 49,566	296,44
545	0085/01	пр	5 360 745,90	5 519 868,56	262,48	360 893,38	116 047,08	262,48	48 22 44,180	27 15 59,764	295,67
546	0085/02	пр	5 360 536,43	5 520 222,32	254,54	360 677,48	116 396,96	254,54	48 22 38,359	27 16 16,919	287,72
547	0085/03	пр	5 360 278,96	5 520 652,46	243,66	360 412,19	116 822,34	243,66	48 22 29,974	27 16 37,778	276,84
548	0085/04	пр	5 360 102,12	5 520 947,94	235,84	360 229,98	117 114,54	235,84	48 22 24,214	27 16 52,104	269,02
549	0085/05	пр	5 359 975,61	5 521 161,62	231,00	360 099,59	117 325,88	231,00	48 22 20,093	27 17 02,464	264,17
550	0086	осн	5 359 899,67	5 521 324,66	220,32	360 020,68	117 487,50	220,32	48 22 17,614	27 17 10,372	253,48
551	0086/01	пр	5 359 918,40	5 521 362,48	224,92	360 038,72	117 525,66	224,92	48 22 18,216	27 17 12,214	258,08
552	0086/02	пр	5 359 964,01	5 521 373,49	229,60	360 084,12	117 537,50	229,60	48 22 19,692	27 17 12,757	262,76
553	0086/03	пр	5 360 077,32	5 521 395,94	232,56	360 197,00	117 562,02	232,56	48 22 23,358	27 17 13,868	265,72
554	0086/04	пр	5 360 286,97	5 521 433,45	244,73	360 405,93	117 603,35	244,73	48 22 30,138	27 17 15,728	277,90

Picture 6. Catalogue of coordinates of border signs



Picture 7. The demarcation of the state border between Ukraine and Belarus



**Picture 8. Fragment of delimitation map with the project boundary signs at the state border between Ukraine and Belarus, scale 1:10 000**



**Picture 9. The border between Ukraine and Belarus**

The most difficult issue was the definition of Ukrainian-Russian state border. Ukrainian-Russian border holds important position among others with regard to the special features of its formation, extension and nature of the decision taken towards settlement of territorial demarcation. The current designation of Ukrainian-Russian state border in the area is provided on Picture 10.

Although the line of Ukrainian-Russian border has been confirmed several times by a number of bilateral agreements starting with the agreement between the USSR and RSFSR from November 19, 1990 and these

commitments were subsequently confirmed in the agreement on further development of bilateral relations from June 23, 1992, the work on the preparation of wide-ranging cooperation agreement between Ukraine and Russia was hampered by the unwillingness of the Russian side to recognize existing borders and declare that the two countries have any territorial claims to each other. Only after five years of negotiations the situation has changed. The Agreement on friendship, cooperation and partnership between Ukraine and the Russian Federation was signed in May 31, 1997 during the visit of the Russian President to Kyiv.



**Picture 10. Designation of Ukraine-Russia state border on the area**

According to the dynamics of the negotiation process the major differences occurred in recognition of the administrative border between Ukraine and the Russian Federation by the USSR and RSFSR. During the negotiations, Ukraine insisted on the recognition of inter-republic (administrative) border between the former USSR and RSFSR as the border between Ukraine and Russia in the Kerch Strait by the Russian side. The positions of parties on the delimitation of the Kerch Strait did not match. Ukrainian side proposed to hold delimitation and demarcation of the Kerch Strait on the

basis of inter-republic border of the former USSR. The Russian side considered not the division, but the legal regulation of the status of the Kerch Strait waters. In different periods of time the Russian side offered four different approaches: to set the borders within the coast line and to share the water area; to set the border at a distance from 0.3 to 0.5 nautical miles from the coast Ukrainian and Russian, and to share the water space; to set the borders with the fairway of Kerch- Yenikalsky channel; avoid setting borders and to share water space.



Significant differences in the positions of Ukraine and Russia on the delimitation of the Kerch Strait stipulated the situation where solving the entire block of issues concerning delimitation of maritime spaces between the two countries was actually blocked. Russian diplomats were including in a single package the matter of delimitation of the Black and Azov seas with the adoption of their position on the delimitation of the Kerch Strait. Ukrainian diplomats were prepared to accept the package, but not through giving up Ukrainian territory. As a result, negotiations were stalled.

Starting from the middle of 1990s there were diametrically opposite approaches of the settlement of a number of issues related to the common border in Ukrainian-Russian relations. Ukraine is a proponent of settling disputes under existing international law and the political/legal standards, and the Russian Federation is trying to impose surrogate forms of "agreement" that would ensure its strategic interests in the region.

Russia considers the borders within the CIS as "internal" and their demarcation as optional, unwanted and even one that impedes partnership relations. Ukraine insists on borders demarcation with Russia, based on the principle of equal status for all its borders. The core of the conflict lies in the history of the problems territorial delimitation settlement between Russia and Ukraine throughout the twentieth century.

The events of 2003 related to the conflict over the island of Tuzla, highlighted another problem of the Ukrainian-Russian border demarcation. Although its origin dates back to the period when Crimea was considered as a part of Russia, with the accession of Crimea to Ukraine and the next almost 50 years' borders calm period " the new confusion was faced in the territorial settlement, but not between the Soviet republics, and between independent states.

The dialogue with Russia on the matter of Tuzla island belonging to Ukraine lasted nearly for two years. Only in July 2005 the Russian side declared its Ukraine's Tuzla island ownership.

The total length of the state border between Ukraine and Russia is 2,295.04 km as of today, including a land border - 1974.04 km and sea area - 321 km. The agreement on the Ukrainian-Russian state border from 28 January 2003 defined border line on land. With ratification of this document on 20 April, 2004 and the Agreement on cooperation in the usage of the Azov Sea and Kerch Strait on December 24, 2003 legal registration of line border on land was completed and also the necessary political and

legal basis for the revitalization of the negotiation process on delineation of waters were created. The agreement on the demarcation of Ukrainian-Russian state border was signed on May 17, 2010, and it came in force on July 29, 2010 that created legal basis for initiating the process of designation of the Ukrainian-Russian State border on land.

In April 2010 the Russian side agreed to resume negotiations on the demarcation of the land border. In the third meeting of URMK an agreement between Ukraine and Russia on demarcation of the Ukrainian-Russian state border was signed in Kyiv by the presidents of both countries on May 17, 2010 in which the parties approved creation of a joint Ukrainian-Russian Demarcation Commission (Art. 2). The commission finally agreed on a plan of the demarcation of the state border on the first part of Chernihiv-Bryansk area on 25-27 October, 2011 in Chernihiv, specifying points where to establish border 631 signs within the distance of 222 km. The joint Ukrainian-Russian demarcation commission determined in September, 2012 the coordinates of the first pillar between Ukraine and Russia on the territory of the village Senkivsk, Chernihiv region. Thus, on November 7, 2012 the first border post was established at the Ukrainian-Russian border. However, the demarcation work was carried out very slowly. The absence of the border has obviously a negative effect on the legality of its operation. At the beginning of 2014 the Ukrainian-Belarusian-Russian negotiations on the draft of the agreement between the Cabinet of Ministers of Ukraine and the Government of the Republic of Belarus and the Russian Federation on the junction point of the state borders of Ukraine, Belarus and Russia were held in Moscow.

The tenth meeting of the joint working group of the Joint Ukrainian-Moldovan demarcation commission was held in Chisinau (Republic of Moldova) on 15-18 April 2013 to prepare the final documents on demarcation of the Ukrainian-Moldovan State border.

Efforts of the commission also were focused on finalizing the proposals on the demarcation of the state border near the buffer hydroelectric Dniester hydropower complex and Giurgiulesht. During the meeting of the Joint Commission it was agreed to demarcate the frontier buffer area in the middle of hydropower facilities, which crosses the river Dniester. Since 2012 94 km of the state border have been located in the district and 295 places have been identified for installation of border signs. Remains is taken line of the state border on the section length of about 45 km. 240 border signs have been installed by Ukrainian side out of 1019 planned.

In contrast to borders with other former Soviet Union republics, the problem of demarcation of the land part of the Ukrainian-Russian border, the differences in positions on the issue of delimitation of the Azov Sea and the Kerch Strait remain "frozen" matters in bilateral relations for years. Russia felt advantageous from this situation of uncertainty due to geopolitical considerations for a long time, which often led to the escalation of political passions and "confusion" in international relations. However, taken into account the recent events in 2014 related to the treacherous aggression of the Russian Federation towards Ukraine and annexation of Crimea contrary to all international legal norms, consideration of these issues is irrelevant [4].

It is fundamentally important to point that EU enlargement led to fundamental, qualitative changes in the geopolitical situation on the continent, which, in fact, was reflected in expanding eastward interests and territory of EU with distinguishing clear contours of Central and Eastern Europe - and consequently - the changing nature of new eastern border of the EU, the formation of a new border between Ukraine and the EU.

The formation of new international border during 2003-2004 between EU, Central European states and Ukraine, de facto between international organization the EU and Ukraine as a subject of international relations puts on the agenda the following issues: the changing nature of the eastern borders of Central and Eastern Europe, the presence of a number of issues of new eastern borders of the EU, especially in the context of protection and the regime of intersection [5, p. 151-152].

During analysis of changes in the geopolitical situation in the region including CE, the key role is played by the new border, especially in the context of its delimitation and demarcation.

In fact, any boundary is "artificial", so it reflects the value of specific power at a particular period of time, and throughout history the boundaries were established both within the so-called natural boundaries, historical boundaries, sometimes ethnic boundaries, but mostly because of wars - as delineating borders of power, sphere of influence of the winners. There are no eternal borders, each boundary is set, transferred, specified by certain event in the history. And perhaps a new modern border between the EU and Ukraine will not become permanent. Moreover, in accordance to the internal logic of development, the new border has to evolve over the century. Since this will depend not only on the internal development of the enlarged EU during the XXI century,

but also on its newest neighbours nearby the new border, and thus on internal development of Ukraine [6, p. 47].

The preparatory process of transforming of the EU border has been already launched in 2002, which was reflected in settlement of practical issues of border management in building and organizing the "new" eastern borders of the EU according to the European standards on borders, including Ukraine. Due to changes in the essence of the EU borders, simultaneously the change of nature of the eastern borders of the EU took place as well as the countries of Central Europe (as full EU member since 2004), that are currently happening and the changing nature of border management between Ukraine and its neighbours - Poland, Hungary and Slovakia.

Considering the main standard-setting documents of the European Union, it should be noted that in light of the investigated issues of greatest interest, in our view, are the following: Helsinki Final Act dated from 1975, The Declaration of EU Council from June 1993, known as the Copenhagen criteria, which set conditions for the including to the EU, the agreement on European Union from 07.02.1992 with the changes introduced by the Amsterdam agreement from 02.10.1997 and Nice agreement from 26.02.2001, the agreement on Accession from 2003, Athens agreement dated from 01.02.2003. The most important part of the Athens agreement is the Act concerning the conditions of accession and changes to contracts, on which EU is based.

These documents determine the policy of the European Union in relation to addition of new members, entry conditions and requirements that apply to candidate countries.

In accordance with art. 49 of the EU, candidate country should have "European" spirit, so culture, political and legal traditions of countries - new members should be European. The candidate countries before their accession to the EU should adjust their political and economic system to the standards of the EU to survive in the domestic market and become full members. As for the geographical position in Europe, then this condition - desirable, but obviously not required, we can take as example such countries such as Malta (closer to Africa than to Europe) and Cyprus (located in Asia) and a candidate country Turkey (Asia).

In accordance with art. 6 of the EU agreement the candidate must respect democratic principles of the constitutional order (freedom, democracy, human and civil rights, the rule of law).

According to the "Copenhagen criteria" candidate country must meet the following requirements:

1. Respect and protection of minorities.
2. Stability, democracy and the rule of law, human rights, properly functioning market economy and ability to compete on the EU internal market.
3. The ability to learn the duties and goals which implies EU membership. This means that candidate countries have to incorporate into national law EU legal norms, "the general legal framework of the EU."

Equally important condition for EU membership is settlement of all territorial disputes with its neighbours by a candidate country, so that the borders should be clearly demarcated and all mutual territorial claims should be removed. This criteria can be met not by all candidate countries for entering the EU and the countries that are willing to enter the Union on temporary basis (candidates for candidacy in the EU). Turkey may be used as an example, the adoption of which was postponed for a long time because of the unresolved issue of Northern Cyprus. Therefore, any debates on changing passage of borders established after II World War is a violation of the principles of international law and as a result - a very

important factor that negatively affects the integration processes in the international community, which is part of Ukraine and the European Union.

A striking example of solving regional problems relating to natural changes, is an example of changing the border between Belgium and the Netherlands.

The authorities of Belgium and the Netherlands have agreed to exchange small peninsulas which were lying in the territory of both countries due to changes of the river 55 years ago. [7] Now these peninsulas are settled by drug dealers because Belgian police could not get on their territory without permission of their neighbours (Picture 11).

In 1961, the river Maas (or Meuse) that flows in France, Belgium and the Netherlands was made straight. As a result, the border between the Netherlands and Belgium, which ran along the river has changed - a peninsula appeared in in the Netherlands, that previously was referring to Belgium, and Belgium got two "Dutch" peninsulas.



Picture 11. Designation of the border change between Belgium and the Netherlands

During the visit of Belgium King Philip to the Netherlands on 28 of November the parties signed an agreement on new boundaries. Belgium agreed to give two peninsulas to the Netherlands and the Netherlands gave one to Belgium. Consequently, the Netherlands increased slightly - about 10 hectares were added. The new border will come in force only in January 2018, before that the parliaments of both countries must approve the transfer of territories.

The last time the Netherlands and Belgium shared territory was 1830 year - there was a revolution in Belgium, as a result of which it was separated from the neighbouring country. As the majority of publications that have written about the transfer of peninsulas, this time everything went much more peacefully. "Rarely the section of territories is done without firing a shot," - said the head of the province of Limburg in the Netherlands.

### Conclusions

1. The land and sea borders of many states have developed historically. Under international law they are inviolable. In 1975 during Helsinki Conference on Security and Cooperation in Europe clause on the recognition of borders between states and countries that have developed after the Second World War was approved.
2. If the borders are lying in the middle of the river, the landscape may change, so there is a need for borders clarification. Since the change of the river is caused by primarily natural factors, it is completely impossible to prevent this process, but it is possible to significantly

weaken this process by establishing reliable embankments. Thus, according to the agreement on the regime of the Soviet-Romanian border, cooperation and mutual assistance in border issues 1961, boundary line runs along the middle of the channel of the Tisza. However, this channel, like any other river has changed over time. Since 1961, the Ukrainian side has lost 270 hectares of its territory in this way.

3. International treaties and agreements signed a few centuries ago, old maps etc. are used actively in addressing controversial issues to clarify the boundaries nowadays.

4. Ukraine has a number of unresolved problems with determination and ensuring the protection of its frontiers. The relationship established between Romania and Ukraine due to the need to settle the problems of the state border line on the river Dunai from the locality Paridno to the Black Sea and a question of delimitation of the continental shelf has already been solved, as well as defining maritime economic zones of both countries in the Black Sea. There are several disputes with Russia as well. This includes determining the boundary line on the Azov sea etc.

5. Lack of territorial disputes with the neighbours is one of the key conditions for entering the European Union. Therefore, Ukraine should complete delimitation and demarcation of its border as soon as possible. It is recommended to attract international experts and international organizations to the demarcation commissions and to accelerate the signing of agreements between countries to conduct a complete border demarcation.

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## LA REPARTITION DES COMPETENCES RELATIVES A LA DELIMITATION DES FRONTIERES

### **Résumé<sup>1</sup>**

*Cet article fait le point sur la répartition actuelle des compétences en France en matière de délimitation et de démarcation des frontières. Après avoir recensé les principaux textes applicables, Constitution, traités et textes de droit interne – notamment ceux qui définissent les compétences des principaux ministères et administration concernées -, il distingue les différentes étapes de la démarcation des frontières: définition, établissement des signes démarcatifs, puis surveillance, vérifications et entretien ou rétablissement. Il trace les perspectives d'évolution des signes démarcatifs et de changement de statut juridique, soulignant que la mise en œuvre de la directive européenne INSPIRE, à partir de 2018, pourrait rendre à termes caducs les signes physiques de démarcation au profit de lignes repérées électroniquement. Il suggère enfin des pistes de clarification de la distribution des compétences entre administrations françaises.*

**Mots clés:** frontières, limites, délimitation, marquage, démarcation, abornement.

### **Abstract<sup>2</sup>**

*This article settles the present situation about the distribution of competences in France in the area of borders determination and demarcation. It takes at first a census of the existing texts in force – Constitution, treaties, and internal rules – in particular those determining the competences of the main ministries and administrations involved. Then it proceeds with the different steps of borders demarcation: determination, establishing bounds and markers, then survey, checking and maintaining or restoring it. It draws some perspective evolution of the borders markers and its potential change of juridical status, underscoring the fact that starting from 2018, the implementation of the INSPIRE directive might in the future nullify physical marks for the benefit of lines determined by electronic means. It suggests at last ways of clarifying the competences among French administrations dealing with it.*

**Key words:** border, limits, boundaries, marking, demarcation, borders markers.

<sup>1</sup> Cet article a initialement été publié dans la revue «Innovations Régionales» (2015, #1). L'auteur a proposé de l'adapter (avec quelques modifications), avec l'accord de l'éditeur, en vue de sa publication dans le numéro thématique «frontières» de la revue «Innovations Régionales».

<sup>2</sup> This paper was already published in the Regional Innovations Journal (2015, #1). It was proposed by the author (with some modifications and additional information) for its publication in this thematic issue on border management of the Regional Innovations Journal.

La délimitation des frontières, leur démarcation, leur entretien, et la surveillance de ces limites induisent de nombreuses conséquences d'ordre diplomatique, juridique, politique, sécuritaire, économique, patrimonial, environnemental, social ou culturel. Elles relèvent de compétences multiples dont la répartition relève souvent autant de la coutume ou de l'habitude que du droit écrit. En faisant le point des principales dispositions existantes, cet article a pour objectif d'amorcer les réflexions sur les ambiguïtés liées à la situation actuelle en France, et de pointer les voies possibles d'une clarification de la norme.

## I/ Les principaux textes existants

Les textes sont de deux ordres : traités ou conventions internationaux d'une part, lois et réglementations internes d'autre part.

### A/ La Constitution

Norme suprême en France, elle indique en particulier la nécessité d'une loi pour ratifier ou approuver les traités qui modifient le territoire (art 53), la soumission de la loi aux traités internationaux (art 55), et la compétence du Président de la République pour négocier, ratifier ou approuver les traités et accords internationaux (art 52).

Elle confie également au «représentant de l'Etat dans les collectivités territoriales» (i.e. le préfet) la charge des intérêts nationaux et du respect des lois, ainsi que la représentation de chacun des membres du gouvernement (art 72). Cette disposition lui confère donc en particulier la responsabilité du respect des traités ou accords concernant la frontière, et l'institue comme représentant local du ministre des affaires étrangères pour les questions relatives aux frontières.

### B/ les traités et accords

Ils sont de deux ordres : multilatéraux, à portée générale, ou bilatéraux, ne concernant que deux pays souverains. Les traités multilatéraux tendent à s'imposer, en cas de contradiction, aux traités bilatéraux. Ainsi la commission internationale des Pyrénées, dans sa 40<sup>ème</sup> session du 2 décembre 2014, a-t-elle eu l'occasion de rappeler que les dispositions particulières des traités bilatéraux conclus entre la France et l'Espagne ne pouvaient déroger aux dispositions contraignantes des directives européennes.

Les traités bilatéraux recouvrent, quant à eux, trois catégories d'accords internationaux:

- **Les accords ou traités généraux comportant attribution de territoires** (exemple : traité des Pyrénées 1659, traité d'Utrecht 1713, traités de Paris des 30 mai 1814 et 20 novembre 1815, traité de Versailles 28 juin 1919). Ils fixent, parmi d'autres dispositions, les principes de la distribution de territoires entre deux Etats. Ils ne rentrent pas dans les détails et nécessitent en général d'être précisés.
- **Les traités ou accords de délimitation** (exemple : traité de Courtrai du 28 mars 1820 avec les Pays-Bas (= aujourd'hui, Belgique et Luxembourg), traités de Bayonne de 1852, 1856, 1868, avec l'Espagne, traité de Paris du 14 août 1925 avec l'Allemagne). Ils précisent, en tant que de besoin, la distribution exacte des territoires et la ligne des frontières. Ils peuvent aussi comporter des indications ou des prescriptions sur le marquage de ces frontières ou sur leur entretien, et peuvent aussi servir à régler certaines questions frontalières courantes (pâturage, pêche, construction, usage des eaux, vie transfrontalière d'une manière générale).
- **Les conventions ou accords de démarcation ou d'abornement.** Textes autonomes ou additionnels aux précédents, ils servent le plus souvent à déterminer, sur le terrain, l'emplacement exact des repères ou le mode précis de détermination des frontières.

Cette distribution en trois niveaux ou catégories de traités bilatéraux n'est ni systématique ni parfaite. Des conventions supplémentaires viennent parfois préciser ou modifier un point ou un autre de ces traités. Elle est néanmoins assez générale, et pas uniquement entre la France et ses partenaires.

Point particulier, ces textes contiennent assez souvent des dispositions à effet interne, y compris sur l'organisation administrative française (répartition des missions entre autorités administratives et même entre administrations d'Etat, commissions ou associations transfrontalières ou syndicats mixtes de gestion bi-nationaux, propriété, droit de la construction, droit d'usage ou de passage, etc.).

### C/ les textes de droit interne

Excepté les lois et décrets ratifiant ou publiant les actes internationaux, et qui déterminent leur entrée en vigueur dans le droit français, il n'y a pas de texte général déterminant précisément la distribution des compétences entre autorités administratives dans le domaine de la gestion et de la surveillance des frontières. Il faut donc rechercher ailleurs, dans la combinaison des textes propres

à chaque administration, la distribution des rôles sur la surveillance et l'entretien des frontières.

La Constitution prévoit que les « ministres responsables » contresignent les actes du Président de la République (art 19), et les « ministres chargés de leur exécution » ceux du Premier ministre (art 22). A contrario, et quand bien même les dits actes distribuent des missions aux préfets, sous-préfets, administrations communales et autres administrations territoriales, *le ministre de l'intérieur ne contresignant ni les décrets de promulgation des traités ni aucun des actes relatifs à ces traités, n'est ni responsable, ni chargé de l'exécution desdits traités, qui incombe au ministre des affaires étrangères* – contresignataire quant à lui -. Cette lecture confirme le principe ci-dessus évoqué selon lequel, *en matière de délimitation et de surveillance de la démarcation des frontières, les préfets agissent comme délégués du ministre des affaires étrangères. C'est à lui qu'ils doivent donc directement des comptes en la matière, et non au ministre de l'intérieur qui n'intervient le cas échéant que pour les questions pratiques nécessitées par la coordination et la cohérence de l'action des préfets sur le territoire. Dans la pratique par exemple, la commission internationale des Pyrénées (CIP), invite ainsi directement le ou les préfets ou sous-préfets concernés à participer à celles de ses séances où leur présence est jugée utile. Il peut aussi lui arriver de confier au ministère de l'intérieur la présidence de la commission mixte d'abornement (CMA) qui est, sur la frontière espagnole et sur celle-ci seulement, une sous-commission de la CIP.*

### **Le ministère des affaires étrangères**

- Décret n° 2014-400 du 16 avril 2014 relatif aux attributions du ministre des affaires étrangères et du développement international
- Décret n° 2012-1511 du 28 décembre 2012 portant organisation de l'administration centrale du ministère des affaires étrangères
- Décret n°87-389 du 15 juin 1987 relatif à l'organisation des services d'administration centrale (rôle des secrétaires généraux)
- Décret impérial du 25 décembre 1810 sur les attributions du ministre des relations extérieures

Le décret du 16 avril 2014 ne mentionne que les compétences nouvelles du ministère en matière d'action économique extérieure et de tourisme. Les autres attributions ne sont pas expressément énumérées. Seuls les textes relatifs à l'organisation de l'administration centrale du ministère (notamment le décret du 28 décembre 2012) permettent donc de préciser les contours de ces attributions.

Il en ressort que les questions de délimitation, démarcation et surveillance des frontières, sans être expressément mentionnées, peuvent relever en premier lieu du secrétaire général, au titre de sa mission de coordination générale (décret du 15 juin 1987), des directions géographiques concernées par chacune des frontières communes avec la France, mais également de la direction des affaires juridiques (participation à la négociation des traités), de la direction des archives (conservation des traités, élaboration de cartes), ainsi que de la délégation pour l'action extérieure des collectivités territoriales (cohérence entre l'action extérieure de l'Etat et celle des pouvoirs publics locaux, conseil aux collectivités sur leur action extérieure, coopération transfrontalière, conseil aux préfets sur le contrôle de légalité).

A la direction de l'Union européenne, un ambassadeur est spécialement chargé des «Commissions intergouvernementales, [de] la coopération et [d]es questions frontalières», mais sa compétence ne s'étend pas, compte-tenu de son rattachement, aux territoires d'Outre-mer.

Par ailleurs, si le décret impérial de 1810 interdit par principe les relations directes entre administrations françaises et autorités diplomatiques extérieures, certains traités de limites autorisent les relations directes entre autorités locales frontalières limitrophes (préfets, gouverneurs, maires agissant à la fois en tant qu'autorités de l'État et représentant les intérêts locaux de leurs concitoyens, ingénieurs de l'État ou des collectivités locales, géomètres ou représentants du cadastre, délégués à l'abornement, etc.), pour l'exécution des conventions de délimitation.<sup>1</sup>

### **Le ministère de l'intérieur**

- Décret n° 2014-408 du 16 avril 2014 relatif aux attributions du ministre de l'intérieur
- Décret n° 2013-728 du 12 août 2013 portant organisation de l'administration centrale du ministère de l'intérieur et du ministère des outre-mer
- Décret n°87-389 du 15 juin 1987 relatif à l'organisation des services d'administration centrale (rôle des secrétaires généraux)

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<sup>1</sup> Voir, par exemple, article 11 du *Règlement conclu entre la Belgique et les Pays-Bas pour l'entretien et la conservation des bornes de démarcation plantées sur la frontière des deux pays, en exécution de la convention des limites du 8 août 1843*, qui autorise les contacts entre gouverneurs des provinces limitrophes. , ou articles 1, 2 et 3 de l'acte additionnel du 28 mai 1866 avec l'Espagne, ou article 9 de l'accord du 10 mars 1965 avec la Suisse.

«Le ministre de l'intérieur prépare et met en œuvre la politique du Gouvernement en matière de sécurité intérieure, de libertés publiques, [...] d'administration territoriale de l'État, [...]. En liaison avec le ministre de la décentralisation, [...] il prépare et met en œuvre la politique du Gouvernement à l'égard des collectivités territoriales» (décret du 16 avril 2014).

Le ministère de l'intérieur peut être impliqué dans la démarcation et la surveillance des limites du territoire national au titre de l'administration du territoire, de la relation avec les collectivités territoriales, de la sécurité intérieure ou des libertés publiques. Peuvent être impliqués à ce titre, le secrétariat général, soit au titre de son rôle de coordination générale, soit au titre de directions spécialisées dans l'administration du territoire (DMAT – direction de la modernisation et de l'administration territoriale), la DGOM (direction générale des outre-mer), la DGCL (la direction générale des collectivités locales), la gendarmerie ou la police (unités générales ou spécialisées comme la police aux frontières).

Mise à part la mission spécifique de la police aux frontières, «chargée de veiller au respect des textes relatifs à la circulation transfrontière et d'assurer, en liaison avec la direction générale des douanes et droits indirects, le contrôle des personnes franchissant les frontières nationales» (art 20 du décret du 12 août 2013), aucune autre direction ou service n'a de compétence directe sur la délimitation et la surveillance de la démarcation des frontières. Néanmoins la mention spécifique des frontières dans ce texte implique nécessairement cette direction, ainsi que l'administration des douanes, dans la connaissance, la surveillance et la démarcation des frontières.

#### **Le ministère de l'écologie, du développement durable et de l'énergie (MEDDE) et son EPA l'IGN**

- Décret n° 2014-401 du 16 avril 2014 relatif aux attributions du ministre de l'écologie, du développement durable et de l'énergie
- Décret n°2008-680 du 9 juillet 2008 portant organisation de l'administration centrale du ministère de l'écologie, de l'énergie, du développement durable et de l'aménagement du territoire

C'est le ministère de la gestion du territoire. Aux frontières, ce ministère peut notamment être impliqué par la protection de la nature, des paysages et des sites, la protection du littoral et de la montagne, la police et la gestion de la pêche en eau douce, la protection, la police et la gestion des eaux, la police des installations classées

et de l'exploitation des carrières, et la politique de réduction et de traitement des déchets, la politique d'aménagement de l'espace rural et de la forêt, l'occupation des sols, les transports ferroviaires, guidés et routiers et leur infrastructure.

C'est notamment au titre de sa compétence spéciale en matière d'infrastructures et d'équipement qu'il a été, par le passé, mis à contribution et impliqué dans la mise en place, la surveillance et l'entretien des signes de démarcation des frontières.<sup>2</sup>

Ce ministère est responsable de la mise en œuvre de la directive INSPIRE, (directive 2007/2/CE du Parlement européen et du Conseil du 14 mars 2007 établissant une infrastructure d'information géographique dans la Communauté européenne)

En outre, ce ministère assure la tutelle de l'IGN, intervenant principal de la délimitation et de la démarcation, chargé fonctionnellement du repérage cartographique des frontières. *Il décide à ce titre de la liste des bases de données géographiques et des fonds cartographiques à constituer et mettre à jour par l'IGN.* (décret du 27 octobre 2011).

#### **L'IGN (Institut national de l'information géographique et forestière)**

- Directive 2007/2/CE du Parlement européen et du Conseil du 14 mars 2007 établissant une infrastructure d'information géographique dans la Communauté européenne (INSPIRE)
- Décret n° 2011-1371 du 27 octobre 2011 relatif à l'Institut national de l'information géographique et forestière (IGN)

Héritier des ingénieurs et géographes royaux, puis des services d'État-major chargés de missions à caractère géographique, l'IGN est l'opérateur historique de la délimitation des frontières. Le plus souvent, c'est en pratique un ingénieur ou géographe royal, ou des services géographiques de l'Etat-Major, ou de l'IGN depuis 1940, qui a reçu la charge de la négociation et de la mise en œuvre initiale des traités et conventions de délimitation ou de démarcation des frontières de la France.<sup>3</sup>

<sup>2</sup>Par exemple, article 46 du Traité de délimitation du 14 août 1925 avec l'Allemagne.

<sup>3</sup>Ainsi le commissaire nommé par la France pour la négociation et la conclusion de l'accord de délimitation avec la Prusse, en 1829, est-il un colonel du corps royal des ingénieurs-géographes ; le délégué du commissaire est un chef de bataillon du génie chargé de faire établir des poteaux (de délimitation) par les soins de ou des ingénieurs attachés à la commission. Pour le traité de Courtrai (*Traité de limites entre S. M. le roi de France et S. M. le roi des Pays-Bas ; signé à Courtray, le 28 mars 1820*), c'est aussi un officier du corps royal des ingénieurs géographes



«L'institut a pour vocation de *décrire*, d'un point de vue géométrique et physique, *la surface du territoire national et l'occupation de son sol*, [...] ainsi que de faire toutes les représentations appropriées [...].

L'institut est chargé des missions suivantes:

1° Concevoir et *constituer une infrastructure géodésique cohérente avec les systèmes internationaux* [...];

2° Réaliser et renouveler périodiquement la *couverture en imagerie aérienne ou satellitaire de l'ensemble du territoire national*;

3° *Constituer et mettre à jour sur l'ensemble du territoire les bases de données géographiques et les fonds cartographiques dont la liste est fixée par arrêté du ministre chargé du développement durable*, notamment le référentiel à grande échelle (RGE). Le référentiel à grande échelle, système intégré d'information géographique couvrant l'ensemble du territoire national, est composé de *bases de données numérisées et interopérables* décrivant les thèmes, dénominations géographiques, unités administratives, adresses, parcelles cadastrales issues du plan cadastral, réseaux de transport, hydrographie, altitude, occupation des terres, ortho-imagerie et bâtiments *mentionnés aux annexes I, II et III de la directive du 14 mars 2007 susvisée*. Les modalités de constitution et de mise à jour du référentiel à grande échelle sont fixées par arrêté du ministre chargé du développement durable [...].

10° Mettre en place et administrer le portail INSPIRE de l'Etat pour ce qui concerne les services de consultation prévus à l'article L. 127-4 du code de l'environnement et les services de transformation prévus au même article lorsque ces services sont dédiés aux changements de référentiel de coordonnées [...].

13° *Concourir aux travaux* menés en France et dans un cadre international en matière *d'organisation et de normalisation de l'infrastructure d'information géographique* [...].

#### Article 4

Pour l'accomplissement de ses missions, l'institut peut:  
1° Contribuer à l'élaboration et à la mise en œuvre d'accords de coopération internationale, notamment dans le cadre de partenariats européens [...].

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qui négocie (le même Etienne-Nicolas Rousseau, qui n'est alors que lieutenant-colonel). En 1955, c'est un ingénieur général de l'IGN qui conduit la délégation française pour l'installation de la commission de délimitation de la frontière franco-brésilienne.

Il peut apporter son concours, par convention, à des administrations, collectivités et services publics, aux collectivités d'outre-mer pour l'exercice de leurs compétences propres, à des organismes internationaux et à des États étrangers ou, si les services ou travaux présentent un caractère d'intérêt général, à des organismes ou des personnes privés [...].

**Le ministère des finances** (douanes, cadastre, domaine).

- Décret n° 2014-403 du 16 avril 2014 relatif aux attributions du ministre des finances et des comptes publics

« Le ministre des finances et des comptes publics est compétent pour: [...]

- les impôts, le cadastre et la publicité foncière;
- les douanes et droits indirects; [...]

La direction des douanes a notamment vocation à exercer la surveillance de la «frontière terrestre du territoire douanier» et exerce le contrôle aux frontières des personnes et des marchandises (e.g. Art 67 quater du code des douanes – contrôle des personnes dans la zone des 20 km de la frontière terrestre; art 44 rayon des douanes ; art 43 zone de surveillance spéciale le long des frontières dite «rayon des douanes»; art 51 «barrières, bureaux, postes ou clôtures destinés à la garde et à la surveillance des frontières»; article 208 registre spécial du bétail).

L'Administration du cadastre, structure organique de la DGFIP (direction générale des finances publiques - GF3), remplit quant à elle quatre types de missions:

- Foncière: identification des propriétaires et description physique des biens,
- Fiscale: évaluation de tous les biens, détermination des bases d'imposition,
- Technique: confection, maintenance du plan et gestion de l'informatisation du plan,
- Documentaire: diffusion de données littérales et cartographiques.<sup>4</sup>

Cette Administration emploie, pour les besoins de ses missions foncières, un peu moins de 1300 géomètres répartis sur le territoire national et notamment à proximité des frontières. Certains traités internationaux prévoient expressément son implication dans la fonction de démarcation des frontières.<sup>5</sup>

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<sup>4</sup>Étude DS Services non datée (2010?) réalisée pour le secrétariat général dans le cadre du rapprochement SIP - CDIF

<sup>5</sup> Voir par exemple, pour la Belgique, la *convention des limites du 8 août 1843*, article 7: présence des ingénieurs-vérificateurs du cadastre ou de leurs délégués requise lorsque des bornes doivent être replacées.

## **Le ministère de la défense**

S'il est historiquement impliqué au titre des services géographiques ou du génie (voir plus exemples plus haut), ou au titre de sa contribution à la surveillance et à l'entretien des frontières, il ne lui reste plus guère en ce domaine que des compétences résiduelles, avec cependant quelques notables exceptions : ainsi les traités franco-espagnols prévoient-ils la compétence propre du chef de la station navale de Hendaye pour la co-présidence de la CTMB (commission technique mixte de la Bidassoa prévue par la convention sur la pêche de 1959). Il est cependant le seul à pouvoir assurer une présence et une surveillance concrète des signes démarcatifs et de la frontière sur certaines zones difficiles d'accès (Guyane et forêt amazonienne en particulier).

## **Les représentants de l'Etat sur le territoire**

Préfets, sous-préfets, maires pour certaines fonctions déléguées, sont les représentants territoriaux de l'État sur le territoire français. Aucun texte interne n'attribue aux préfets la conservation de la démarcation des frontières, sauf à se reporter au texte général de la Constitution qui leur confie la charge des intérêts nationaux. (Constitution article 72). Leur action en matière de surveillance des frontières et de leurs signes démarcatifs relève donc exclusivement, à ce jour, de la mise en œuvre des traités internationaux pour le compte du ministère des affaires étrangères.

Selon le cas, les préfets, les sous-préfets (dans le cas de l'Allemagne), les maires des communes limitrophes (Espagne, Pays-Bas et Luxembourg notamment), leurs délégués et les administrations qu'ils désignent, ont vocation à surveiller ou faire surveiller périodiquement l'état et l'emplacement des signes démarcatifs implantés sur le terrain, et à les faire entretenir, relever ou réparer le cas échéant. Des inspections communes sont le plus souvent prévues à échéances, voire dates régulières (tous les ans le au mois d'août pour les communes limitrophes de l'Espagne, tous les ans le premier mai pour le Luxembourg, tous les 5 ans depuis 1926 avant le mois d'octobre pour l'Allemagne, etc.).

Les mêmes autorités ont également la charge de la surveillance et de l'entretien des éléments physiques formant frontière (chemins mitoyens par exemple).

Un tableau détaille en annexe 1 les dispositions propres à chaque frontière en l'état actuel du droit positif.

## **Les collectivités locales (régions – départements – communes)**

En dehors des fonctions dévolues aux maires, ci-dessus rappelées, aucun texte interne spécifique n'évoque le rôle des collectivités territoriales en la matière <sup>6</sup>. Ces collectivités demeurent cependant compétentes a minima pour les infrastructures limitrophes de leur ressort (routes, chemins, bâtiments) ou pour la gestion des ressources communes transfrontalières (eaux potables et usagées, pêche notamment).

## **II/ La nécessité d'une mise en ordre**

Certains États ont clairement établi les responsabilités administratives en matière de démarcation et de surveillance des frontières. La loi luxembourgeoise, par exemple, assigne clairement cette mission à l'ACT, l'administration du cadastre et de de la topographie : L'article 2.c) de la loi organique du 25 juillet 2002 réserve à cette administration tous les travaux ayant trait aux limites d'Etat du Grand-Duché de Luxembourg, des cantons, des communes et des sections. Dans d'autres Etats, comme en France, l'habitude et la coutume le disputent à la loi et au règlement.

La combinaison des textes existants permet cependant d'établir comme suit les principales missions et responsabilités:

### **1/ Détermination et démarcation initiale des limites d'Etat :**

Cette responsabilité incombe au ministre des affaires étrangères, qui négocie les traités et contresigne seul les décrets de promulgation. Elle inclut la détermination des limites sur le terrain, sur les cartes ou représentations figurées, la mise en place le cas échéant de repères ou signes démarcatifs et leur description. Ces signes démarcatifs peuvent prendre toute forme adaptée et agréée par les deux États concernés: bornes en granite ou dans un autre matériau durable, poteaux en chêne, croix gravées et peintes sur des rochers, etc.

Les travaux qui y sont liés, dits «d'abornement», ont pour objet de permettre de repérer le tracé de la frontière avec certitude. On dit, et on écrit dans les traités, - expression plusieurs fois employée - que «L'abornement doit être établi et maintenu de manière que le tracé soit bien déterminé et puisse être repéré facilement sur toute son

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<sup>6</sup> Sauf à considérer que l'expression «autorité administrative supérieure», parfois employée, puisse désigner une collectivité territoriale aujourd'hui ou demain. En l'état actuel du droit, il n'existe pas de hiérarchie entre collectivités territoriales.

étendue», ou encore, que les parties s'engagent à «maintenir la frontière dans un état tel qu'elle puisse être suivie d'une extrémité à l'autre» (traité de délimitation de 1825 avec l'Allemagne). Ils comprennent la fabrication, le marquage, la pose des signes démarcatifs, mais aussi le dégagement des zones frontières permettant leur parcours (défrichage d'une bande de 2 à 5 mètres de part et d'autre par exemple).

Pour ces opérations initiales, le ministère des affaires étrangères peut s'appuyer notamment sur les spécialistes que sont les ingénieurs de l'IGN, soit comme négociateurs, soit comme techniciens chargés de traduire les décisions et les ententes politiques sur le terrain. Cette responsabilité initiale pourrait trouver à s'appliquer prochainement avec l'Andorre, avec qui un traité de délimitation, prévoyant la mise en place d'un bornage, est en cours de ratification.

S'il le souhaite, le ministère des affaires étrangères peut s'appuyer sur tel ou tel fonctionnaire du ministère de l'intérieur pour participer au processus des négociations: la commission mixte dite d'abornement ou CMA est ainsi chargée de rendre compte de ses travaux à la commission internationale des Pyrénées, et rien ne s'oppose à ce qu'elle propose à celle-ci, au terme de ses débats techniques, telle solution consensuelle pour le règlement d'une difficulté particulière. Cette commission est traditionnellement co-présidée, du côté français, par un haut-fonctionnaire du ministère de l'intérieur. Les CMA – commissions mixtes d'abornement – créées, avec ou sans traité de limites, pour le suivi et la surveillance des autres frontières, n'ont pas formellement reçu cette mission de la part du ministre des affaires étrangères (Italie, Suisse, Brésil sont les commissions existantes, et il pourrait en être créé une autre avec la Belgique qui en a exprimé le souhait). Cependant l'accord du 25 mai 1983 signé avec l'Italie prévoit que lorsque les décisions de la CMA ne peuvent faire l'objet d'un consensus, elle en rend compte au ministère des affaires étrangères. Cette commission est présidée, du côté italien, par un diplomate professionnel délégué par son propre ministère des affaires étrangères.

De cette responsabilité initiale de détermination des lignes, relève la mise en œuvre de la directive INSPIRE sur les frontières: s'il appartient bien au MEDDE et à l'IGN de mettre en œuvre cette directive, lorsqu'il s'agit de fixer la ligne frontière, cette mission s'effectue sous le contrôle du ministère des affaires étrangères, garant du respect des traités et conventions internationales.

## **2/ Surveillance, entretien, restauration des limites d'Etat et de leurs signes démarcatifs**

Si la responsabilité de ces missions relève également du ministre des affaires étrangères, seul ministre appelé à contresigner les décrets de promulgation des traités, sa mise en œuvre est le plus souvent dans la main des préfets et des administrations dont celui-ci coordonne l'action, de leurs délégués (le plus souvent dénommés «délégués à l'abornement»), des communes, voire des propriétaires concernés.

Sur certaines frontières – Suisse, Italie, Espagne notamment, les fonctions des délégués à l'abornement (ou «agents responsables») pour la frontière franco-italienne) sont déterminées avec précision. Un tableau présenté en annexe résume les principales dispositions applicables lorsqu'elles sont précisées.

Les délégués actuellement désignés par les préfets relèvent de diverses administrations (douanes, cadastre, équipement, police aux frontières, enseignement supérieur et recherche notamment), caractérisant selon le cas la logique fonctionnelle ou géographique<sup>7</sup> privilégiée. On pourrait concevoir de même d'étendre le champ des administrations impliquées à ce titre à l'ONF (zones frontalières fortement boisées), la gendarmerie (zones de haute montagne où celle-ci dispose d'unités spécialisées et mobiles), ou l'armée de terre (zones de forêt amazonienne où seules se rendent les unités spécialisées de l'armée de terre).

Les budgets dévolus aux travaux impliqués par la reconstruction ou la restauration des signes démarcatifs sont centralisés au ministère de l'intérieur, qui exerce ainsi une coordination de l'action des préfets pour l'exécution de cette fonction. Cette coordination est actuellement effectuée par la cellule de coopération internationale du cabinet du secrétaire général. L'IGN apporte un appui scientifique et technique à cette cellule.

## **III/ La nécessité d'une mise en ordre – les pistes à explorer**

L'organisation des administrations françaises n'a pas donné de bons résultats dans un passé récent: Les secteurs dévolus à la France sont en général en déshérence depuis plusieurs années (pour autant que les rapports de visite continuent à être rédigés et transmis), les travaux d'entretien des bornes frontières, voire de simple reconnaissance, sont effectués dans les seuls secteurs

<sup>7</sup> Fonction notamment de l'implantation des organes administratifs mobilisables.

relevant des pays frontaliers, aucun programme n'est établi, les budgets consacrés sont en forte diminution. Certains secteurs n'ont pas ou n'ont plus même de délégué à l'abornement.

Par ailleurs, la mise en œuvre de la directive INSPIRE impose aux États membres de l'Union européenne, lorsque cela est possible, de fournir des données communes aux frontières pour 2018.

Bien que ni le MEDDE ni l'IGN n'aient inscrit la question des frontières au titre de leurs priorités, l'impasse ne pourra être faite totalement sur ce dossier auquel sont intéressés les autres pays-membres. Il en résulte qu'à la fin de 2018, une part importante, voire la majeure partie des lignes frontières sera identifiée de manière commune et conjointe, à l'aide de données cartographiques et de coordonnées GPS de précision métrique. Le repérage traditionnel et multiséculaire des frontières à l'aide de bornes n'aura plus, sur ces secteurs, qu'un intérêt symbolique, historique ou culturel, et ne constituera plus une véritable contrainte pratique.

Le moment est donc venu de revoir le dispositif administratif et juridique qui régit la question de la démarcation des frontières.

5 hypothèses de travail peuvent être retenues : une refonte ou une adaptation des traités, une loi interne, un décret, un arrêté du Premier ministre, et/ou une simple circulaire. Elles ne sont pas exclusives l'une de l'autre, et le travail peut être initié parallèlement, cumulativement, successivement ou alternativement sur chacune d'entre elles.

### **Hypothèse 1: mise à jour des traités**

Cette hypothèse est la plus complexe à mettre en œuvre, compte-tenu du formalisme à respecter et de la multiplicité des acteurs à impliquer. Il ne faut pas l'écarter d'emblée cependant. Les voisins de la France, non plus qu'elle-même, n'ont d'intérêt particulier à continuer à surveiller, restaurer ou réimplanter des bornes ou d'autres signes démarcatifs qui n'auraient plus de raison d'être que culturelle ou folklorique. Ce sont des coûts et des procédures administratives que tout gouvernement ou Administration verrait favorablement diminuer ou disparaître.

Par ailleurs, il n'est nul besoin de reprendre le détail des traités ou conventions de limites conclus avec chacun de nos voisins. Une formule unique suffirait, précisant que partout où les deux États auront arrêté des limites communes de précision métrique et déterminables par GPS ou tout autre système commun de positionnement satellitaire, les dispositions antérieures relatives à la démarcation et à l'entretien des frontières sont caduques.

### **Hypothèse 2: loi interne**

Une loi pourrait contribuer à traiter certains aspects incertains ou imparfaits de ce sujet, et notamment:

#### **1. Dévolution patrimoniale des signes démarcatifs:**

actuellement, ces signes relèvent du patrimoine de l'Etat (cas des bornes ou poteaux situés sur le territoire français exclusivement) ou des deux Etats voisins (cas des bornes ou poteaux situés sur la ligne frontière même qu'ils déterminent). Le transfert de ces signes au patrimoine des communes sur le territoire desquels elles se trouvent permettrait d'en assurer un suivi de proximité, tout en accompagnant ou en anticipant un futur changement du statut juridique international de ces signes. Dans l'hypothèse d'une modification des traités dans le sens évoqué en effet, l'intérêt juridique et fonctionnel de ces signes s'effacerait - au fur et à mesure de la détermination commune des lignes par d'autres moyens techniques - au profit d'un intérêt patrimonial, culturel et historique.

#### **2. D'autres sujets éventuels,**

comme le rôle des préfets, des collectivités territoriales et des propriétaires en matière de surveillance et d'entretien des lignes frontières et de leurs signes démarcatifs (actuellement ces compétences sont dispersées entre plusieurs traités qui établissent des règles différentes et inapplicables ou inappliquées).

Certains textes de niveau législatif pourraient aussi être modifiés à cette occasion, si la discussion interministérielle venait à mettre en évidence cette nécessité (code général des impôts, code des douanes, code de la sécurité intérieure, code de la défense, code de la construction et de l'habitation, code civil éventuellement etc.). Il peut s'agir par exemple de l'imposition de servitudes publiques communes sur les terrains se trouvant à proximité de la ligne frontière, ou de l'introduction dans la loi des prescriptions non aedificandi au droit des lignes frontières, ou de pouvoirs de contrôle de certaines administrations sur la zone frontière (par exemple, pouvoirs de constatation d'infractions spécifiques par des militaires de l'armée de terre dans certaines zones difficiles d'accès aux autres administrations).

#### **Hypothèse 3: décret**

Du décret relève la répartition des missions entre administrations. Le recensement des textes effectué plus haut montre que la compétence administrative sur la surveillance et l'entretien des signes démarcatifs de la ligne frontière n'est pas clairement établie. Un décret pourrait y pourvoir, en complément ou en substitution de textes de meilleur niveau. Son principal intérêt serait d'identifier une administration chef de file sur ce dossier, qui pourrait être l'IGN ou le cadastre.

#### **Hypothèse 4: arrêté du Premier ministre**

Le constat actuel, d'une faible implication administrative et d'un dossier en déshérence sur certaines zones, pourrait plaider en faveur de la désignation d'un coordonnateur temporaire sur chaque zone frontrière. Un préfet de région, ou un préfet de département, pourrait être désigné sur chaque frontière (Espagne, Italie, Suisse, Allemagne, Luxembourg, Belgique) par arrêté du Premier ministre pour coordonner le suivi et la mise à jour du dossier à l'horizon 2018 (date de mise en œuvre théorique de l'annexe II de la directive INSPIRE qui concerne les frontières).

#### **Hypothèse 5 : circulaire**

Parallèlement ou indépendamment des textes de niveau supérieur évoqués plus haut, une circulaire ministérielle (intérieur) ou interministérielle (Premier ministre ou ministère des affaires étrangères) pourrait rappeler l'état actuel du droit (essentiellement le contenu des deux premières parties et les annexes de la présente note) et donner des indications plus directives pour la désignation et le contrôle de l'activité des délégués à l'abornement (notamment, unification de l'administration d'appartenance des délégués à l'abornement, ou au contraire spécification de l'administration la plus adaptée selon les zones comme suggéré plus haut).

### **Références**

#### **Textes (références partielles - voir tableau en annexe pour plus de détails)**

1. **Constitution française** (1958, modifiée)  
Traité de paix (e.g.: traité des Pyrénées 1659, traité d'Utrecht 1713, traités de Paris des 30 mai 1814 et 20 novembre 1815, traité de Versailles 28 juin 1919)
2. **Traité de délimitation**: (e.g. : traité de Courtrai du 28 mars 1820 avec les Pays-Bas (= aujourd'hui, Belgique et Luxembourg), traités de Bayonne de 1852, 1856, 1868, avec l'Espagne, traité de Paris du 14 août 1925 avec l'Allemagne, *Traité de limites entre S. M. le roi de France et S. M. le roi des Pays-Bas; signé à Courtray, le 28 mars 1820*, traité de limites et abornement entre Lorraine et Bourgogne 1703)
3. **Conventions d'abornement**: (ex: France - Italie 1983, France- Suisse 1965, France -Espagne 1973, accord de délimitation avec la Prusse 1829, etc.)

#### **Directive européenne:**

4. Directive 2007/2/CE du Parlement européen et du Conseil du 14 mars 2007 établissant une infrastructure d'information géographique dans la Communauté européenne (INSPIRE)

#### **Textes de définition des compétences administratives:**

5. Décret n° 2014-400 du 16 avril 2014 relatif aux attributions du ministre des affaires étrangères et du développement international
6. Décret n° 2012-1511 du 28 décembre 2012 portant organisation de l'administration centrale du ministère des affaires étrangères
7. Décret n°87-389 du 15 juin 1987 relatif à l'organisation des services d'administration centrale (rôle des secrétaires généraux)
8. Décret impérial du 25 décembre 1810 sur les attributions du ministre des relations extérieures
9. Décret n° 2014-408 du 16 avril 2014 relatif aux attributions du ministre de l'intérieur
10. Décret n° 2013-728 du 12 août 2013 portant organisation de l'administration centrale du ministère de l'intérieur et du ministère des outre-mer
11. Décret n°87-389 du 15 juin 1987 relatif à l'organisation des services d'administration centrale (rôle des secrétaires généraux)
12. Décret n° 2014-401 du 16 avril 2014 relatif aux attributions du ministre de l'écologie, du développement durable et de l'énergie
13. Décret n°2008-680 du 9 juillet 2008 portant organisation de l'administration centrale du ministère de l'écologie, de l'énergie, du développement durable et de l'aménagement du territoire
14. Décret n° 2011-1371 du 27 octobre 2011 relatif à l'Institut national de l'information géographique et forestière (IGN)
15. Décret n° 2014-403 du 16 avril 2014 relatif aux attributions du ministre des finances et des comptes publics

#### **Articles et autres sources (quelques exemples inter alia):**

1. Journal des opérations de la Commission d'abornement de la frontière Quàng-Tây, pendant la campagne 1893-1894
2. Les frontières de la France (Gérard Lang , 2007, in « projet label – le code officiel géographique»)
3. Article « abornement » - Encyclopédie universelle –
4. The maintenance of boundary pillars and boundary lines in France (Michel Bacchus, IGN, Rome, 2004).
5. France – Brésil : un pont géopolitique, par Hervé THERY, le 20 juin 2011.

**Principaux extraits des textes passés ou en vigueur et relevant, selon le cas:**

- 1/ la qualité et l'origine administrative des autorités ayant négocié ou mis en œuvre les conventions d'abornement et traités de limites (y compris, à titre d'exemple ou de marque de la tradition, pour des traités caducs);
- 2/ l'objet des opérations d'abornement;
- 3/ la désignation des autorités et/ou agents chargés de la surveillance et de l'entretien des signes de démarcation des frontières;
- 4/ la périodicité des visites, réunions et rapports;
- 5/ le rôle des délégués à l'abornement ou agents responsables lorsque celui-ci est précisé;
- 6/ autres dispositions pratiques éventuelles.

Pays	Source	Opérations	Compétence	Périodicité	Autres/textes
Espagne	Décret n° 75-321 du 28 avril 1975 portant publication de l'accord entre la France et l'Espagne relatif à l'abornement et à l'entretien de la frontière du 8 février 1973	«L'abornement doit être établi et maintenu de manière que le tracé soit bien déterminé et puisse être repéré facilement sur toute son étendue».  NDR: texte adopté «Sur proposition de la «commission internationale des Pyrénées»	<b>Délégués permanents à l'abornement</b> (article 6 détaille les fonctions) <b>Préfets</b>  NDR : le texte est quasi identique à celui- de l'accord de 1965 avec la Suisse., ou de celui de 1983 avec l'Italie, à la différence notable près que sur la frontière suisse, l'autorité compétente pour recevoir les rapports n'est pas le préfet mais une administration centrale.	PV des délégués adressés annuellement aux préfets et gouverneurs compétents	Art. 6 L'abornement et l'entretien de la frontière sont confiés à des délégués permanents à l'abornement dont les tâches sont les suivantes: a. Assurer la surveillance et le contrôle des bornes et autres signes de démarcation de la frontière. Il est entendu cependant que chaque Etat a la faculté de faire assurer la surveillance et le contrôle des bornes et autres signes de démarcation par des services ou des organes administratifs autres que les délégués permanents; b. Constater et communiquer aux autorités dont ils relèvent tous faits contraires aux dispositions prévues aux art. 1 , 4 et 5 du présent accord;c. Dresser d'un commun accord un état annuel des travaux à effectuer pour l'entretien ou le remplacement des bornes et autres signes de démarcation; cet état doit comporter notamment un devis des frais relatifs à ces travaux; d. Faire exécuter, après accord des autorités visées à l'art. 10, les travaux incombant à leur Etat ou à effectuer par l'un des deux Etats pour le compte de l'autre. Cependant, lorsqu'il s'agit de travaux ayant un caractère d'urgence, les délégués permanents à l'abornement peuvent prendre directement les mesures qu'ils jugent opportunes; e. Etablir un rapport annuel sur l'exécution des travaux d'entretien ou de remplacement des bornes et autres signes de démarcation; ce rapport doit indiquer les frais relatifs aux travaux exécutés. Les opérations prévues au présent article feront l'objet d'un procès-verbal, établi en deux exemplaires originaux, signé par les délégués compétents des deux Etats; ce procès-verbal sera adressé aux Préfets et aux Gouverneurs compétents ; copie en sera donnée à la commission mixte prévue à l'article 10.
Espagne	Décret n° 75-321 du 28 avril 1975 portant publication de l'accord entre la France et l'Espagne relatif à l'abornement et à l'entretien de la frontière du 8 février 1973		<b>Commission mixte</b> de 4 délégués de chaque pays (article 10 détaille les compétences)	Réunion annuelle alternativement en France et en Espagne	Président des commissions mixtes pas déterminé dans chaque pays. Minint? préfet? MAE?
Espagne	Décret du 27 juillet 1985 Traité de délimitation du 2 décembre 1856		Commission internationale des Pyrénées, « sous-commission de l'abornement et de la		

Pays	Source	Opérations	Compétence	Périodicité	Autres/textes
	Convention additionnelle d'abornement du 29 décembre 1858 modifiée Lettre de 1999		circulation transfrontalière» (1985); idem, «sous-commission de l'abornement et de la délimitation physique des frontières» (1999)		
Espagne	ACTE ADDITIONNEL AUX TRAITÉS DE DÉLIMITATION CONCLUS LES 2 DÉCEMBRE 1856, 14 AVRIL 1862 ET 26 MAI 1866 ENTRE L'Espagne ET LA FRANCE	«Dispositions applicables sur toute la frontière dans l'un et l'autre pays, et relatives à la conservation de l'abornement »	<b>Municipalités</b> nomment des délégués, sur ordre des préfets et gouverneurs (« <b>Autorités supérieures administratives des provinces et départements limitrophes</b> »)	<b>Tous les ans au mois d'août</b>	<i>Article I.</i> Tous les ans, au mois d'août, les Autorités supérieures administratives des provinces et départements limitrophes se mettront d'accord pour ordonner aux Municipalités intéressées de nommer des délégués qui devront, dans chaque commune, et de concert avec ceux du territoire contigu de l'autre pays, faire sans délai une reconnaissance complète de l'abornement de leur frontière et en adresser, de part et d'autre, le rapport officiel auxdites Autorités supérieures pour l'effet que de droit.
Espagne	ACTE ADDITIONNEL AUX TRAITÉS DE DÉLIMITATION CONCLUS LES 2 DÉCEMBRE 1856, 14 AVRIL 1862 ET 26 MAI 1866 ENTRE L'Espagne ET LA FRANCE	Veiller à ce qu'aucun dommage ne soit porté aux repères, constater ceux qui auraient été commis, en rechercher les auteurs et les signaler enfin à l'Autorité compétente tout ce qui se rapporte à cet objet.	<b>Préfets, chefs des divers services de l'Administration publique, préposés municipaux</b>	Permanent	<i>Article II.</i> Sans préjudice des prescriptions de l'article précédent, et dans le but d'assurer la conservation des repères tout le long de la délimitation internationale plus efficacement que jusqu'à ce jour, les Gouverneurs civils et les Préfets s'entendront, chacun dans sa province ou son département, avec les chefs des divers services de l'Administration publique, pour qu'ils ordonnent à leurs agents employés à la frontière de veiller, de bonne intelligence avec les préposés municipaux qui en seront expressément et plus spécialement chargés, à ce qu'aucun dommage ne soit porté auxdits repères, de constater ceux qui auraient été commis, d'en rechercher les ailleurs et de signaler enfin à l'Autorité compétente tout ce qui se rapporte à cet objet.
Espagne	ACTE ADDITIONNEL AUX TRAITÉS DE DÉLIMITATION CONCLUS LES 2 DÉCEMBRE 1856, 14 AVRIL 1862 ET 26 MAI 1866 ENTRE L'Espagne ET LA FRANCE	Rétablissement des repères détruits ou enlevés.	<b>Préfets ingénieurs auteurs des dommages</b>		<i>Article III.</i> Les Gouverneurs civils et les Préfets conviendront ensemble du rétablissement des repères détruits ou enlevés, les frais de l'opération devant être partagés également par les deux Gouvernements, sauf les vacances des Ingénieurs, lesquelles seront acquittées respectivement dans chaque pays, à moins qu'il n'ait été convenu qu'on ne déléguerait qu'un seul Ingénieur dont les vacances devront alors tomber à la charge des deux pays. Si les auteurs du dommage venaient à être découverts, ils en seraient personnellement responsables.
Espagne	Acte de délimitation du 11 juillet 1868 (appliquant traité de Bayonne de 1866)		Commission internationale d'ingénieurs instituée par article 18 traité de Bayonne de 1866 Annexe 4 CANAL DE PUYERDA, article 10 «commission administrative internationale» fera respecter les règlements.		
Espagne	Traité de Bayonne de 1866		«Commission internationale d'ingénieurs» instituée par article 18		
Espagne	Traité des limites de 1783	« Fixer les points les plus convenables pour	Maréchal de camp aux armées du roy, commissaire du roy		Texte caduc, valeur historique

Pays	Source	Opérations	Compétence	Périodicité	Autres/textes
		<i>une démarcation claire et permanente»</i>			
Espagne	Traité des limites de 1783	<i>Bornage de la ligne de démarcation convenue</i>	Délégués des communautés et autres parties intéressées, en présence des notaires royaux des deux nations		Texte caduc, valeur historique.
Suisse	Accord entre le Conseil fédéral et le Gouvernement de la République Française concernant l'abornement et l'entretien de la frontière. Conclu le 10 mars 1965	«L'abornement doit être établi et maintenu de manière que le tracé soit bien déterminé et puisse être repéré facilement sur toute son étendue.»			
Suisse	1999 rapport assemblée nationale	Rectification franco-suisse	Compétence DATAP (mère de la DMAT au ministère de l'intérieur) évoquée		
Suisse	Accord entre le Conseil fédéral et le Gouvernement de la République Française concernant l'abornement et l'entretien de la frontière. Conclu le 10 mars 1965	abornement et entretien de la frontière a. Assurer la surveillance et le contrôle des bornes et autres signes de démarcation de la frontière; b. Constater et communiquer aux autorités dont ils relèvent tous faits contraires aux dispositions prévues aux art. 1, 4 et 5 du présent accord; c. Dresser d'un commun accord un état annuel des travaux à effectuer; d. Faire exécuter, les travaux; e. Etablir un rapport annuel sur l'exécution des travaux.	<b>Délégués permanents à l'abornement possible services ou organes administratifs autres que les délégués permanents</b>	Rapport et états annuels	Art. 6 L'abornement et l'entretien de la frontière sont confiés à des délégués permanents à l'abornement dont les tâches sont les suivantes: a. Assurer la surveillance et le contrôle des bornes et autres signes de démarcation de la frontière. Il est entendu cependant que chaque Etat a la faculté de faire assurer la surveillance et le contrôle des bornes et autres signes de démarcation par des services ou des organes administratifs autres que les délégués permanents; b. Constater et communiquer aux autorités dont ils relèvent tous faits contraires aux dispositions prévues aux art. 1, 4 et 5 du présent accord; c. Dresser d'un commun accord un état annuel des travaux à effectuer pour l'entretien ou le remplacement des bornes et autres signes de démarcation; cet état doit comporter notamment un devis des frais relatifs à ces travaux; d. Faire exécuter, après accord des autorités visées à l'art. 9, les travaux incombant à leur Etat ou à effectuer par l'un des deux Etats pour le compte de l'autre. Cependant, lorsqu'il s'agit de travaux ayant un caractère d'urgence, les délégués permanents à l'abornement peuvent prendre des mesures de leur propre chef; e. Etablir un rapport annuel sur l'exécution des travaux d'entretien ou de remplacement des bornes et autres signes de démarcation; ce rapport doit indiquer les frais relatifs aux travaux exécutés. Les opérations prévues au présent article feront l'objet d'un procès-verbal, établi en deux exemplaires originaux, signé par les délégués compétents des deux Etats; ce procès-verbal sera adressé aux fonctionnaires visés à l'art. 9.
Suisse	Accord entre le Conseil fédéral et le Gouvernement de la République Française concernant l'abornement et l'entretien de la frontière.	Correspondre directement entre eux en vue de l'application du présent accord, en assurer le bon fonctionnement, coordonner l'activité des	<b>Fonctionnaires compétents en matière d'abornement et relevant des administrations centrales</b> (ndr: cette définition exclut curieusement ,	<b>Au moins annuelle</b>	Art. 9 Les fonctionnaires compétents en matière d'abornement et relevant des administrations centrales des deux Etats pourront correspondre directement entre eux en vue de l'application du présent accord afin d'en assurer le bon fonctionnement et de coordonner l'activité des délégués permanents. Ils se réuniront à cet effet au moins une fois par an dans le but de: a. Mettre au point, d'un commun accord et sur la base des



Pays	Source	Opérations	Compétence	Périodicité	Autres/textes
	Conclu le 10 mars 1965	délégués permanents. a) Mettre au point, un plan de répartition des travaux des meilleures conditions économiques; b. Se prononcer sur les rapports établis par les délégués permanents c. Adopter toutes les mesures nécessaires pour que les fiches et plans frontière soient établis sans retard et tenus à jour recevoir les rapports des délégués.	théoriquement, les préfets du dispositif, sauf à les désigner comme délégués).		rapports établis par les délégués permanents, conformément à l'art. 6 c , un plan de répartition des travaux à effectuer par lesdits délégués. Cette répartition devra être opérée de telle sorte que les travaux incombant à chacun des deux Etats entraînent autant que possible des dépenses d'importance égale. Les travaux pourront néanmoins être groupés et exécutés par l'un des deux Etats pour le compte de l'autre lorsque ce regroupement répondra à des meilleures conditions économiques; b. Se prononcer sur les rapports établis par les délégués permanents concernant les travaux exécutés conformément à l'art. 6 et prendre les dispositions pour assurer le cas échéant la compensation des dépenses; c. Adopter toutes les mesures nécessaires pour que les fiches et plans frontière – constituant la documentation relative à la description et à la délimitation du tracé – soient établis sans retard et tenus à jour d'une manière rationnelle. Les deux Gouvernements se feront connaître réciproquement les noms des fonctionnaires visés à l'al. 1 du présent article, ainsi que de celui auquel devront être adressés par les délégués permanents les procès-verbaux visés au dernier alinéa de l'art. 6. Les réunions tenues par les fonctionnaires visés au présent article feront l'objet de procès-verbaux, établis en deux exemplaires originaux, à l'intention des deux Gouvernements.
Suisse/ Neufchatel	PV du plantement de bornes du 8 avril 1767	Plantement de bornes	1° Subdélégué de l'intendant de Franche-comté aux départements des Salins , 2° Commissaire du Roy		
Belgique	Note verbale du 16 avril 2014	Avaliser les changements et évolutions, notamment ceux de 2009 accordés entre cadastres Fr et Be mais sans PV.	Commission permanente de conservation et d'entretien des frontières compétence service fédéral des finances / administration générale de la documentation patrimoniale côté Belge	Réunion une fois par an	Proposition de création faite par la Belgique, réponse de principe favorable fin 2014, IGN et minint indiqués comme interlocuteurs côté français
Belgique/ pays-bas	<i>Règlement conclu entre la Belgique et les Pays-Bas pour l'entretien et la conservation des bornes de démarcation plantées sur la frontière des deux pays, en exécution de la convention des limites du 8 août 1843</i>	Vérification rétablissements ou changements	«Commissaires délégués par leurs gouvernements respectifs, pour <u>régler le mode d'entretien et de conservation des signes distinctifs de démarcation entre les deux États</u> » <b>autorités locales des communes limitrophes</b>  <b>rétablissements ou changements en présence maires et ingénieurs du</b>	<b>Vérification annuelle au printemps par les communes,</b> date fixée par entente entre gouverneurs pour réunion des fonctionnaires	«ART. 1er. — Les <b>autorités locales des communes limitrophes</b> feront vérifier, chaque année, à l'époque du printemps, les bornes placées sur la limite, afin de s'assurer si elles sont en bon état. En cas de détérioration OU de déplacement, il en sera dressé procès-verbal en double expédition.»ART. 6. — Les <b>frais de réparation ou de renouvellement de bornes tomberont, par parts égales, à la charge des deux États</b> , quelle que soit, d'ailleurs, la cause des accidents survenus.ART. 7. — <b>Lorsque des bornes devront être replacées, les gouverneurs des deux États requerront la présence simultanée sur les lieux des bourgmestres des communes intéressées, ainsi que celle des ingénieurs-vérificateurs du cadastre ou de leurs délégués</b> , afin que le placement soit conforme en tous points aux indications des procès verbaux descriptifs de

Pays	Source	Opérations	Compétence	Périodicité	Autres/textes
			cadastre. les gouverneurs s'entendent directement entre eux.		délimitation et des cartes de limite déposés dans les archives des communes. A cet effet, les gouverneurs s'entendront pour fixer l'époque de la réunion des fonctionnaires susmentionnés.» ART. 11. — Les gouverneurs des provinces limitrophes des deux États entreront directement en relations entre eux pour tout ce qui concerne les prescriptions du présent règlement.
<b>Pays-Bas (Belgique) /France</b>	<i>Traité de limites entre S. M. le roi de France et S. M. le roi des Pays-Bas ; signé à Courtray, le 28 mars 1820.</i>	PV de limites; Etat des bornes à planter	<b>Commissaires appartiennent au Corps royal des ingénieurs géographes</b> Commission de délimitation		ARTICLE PREMIER. — Afin de déterminer d'une manière précise et invariable la ligne de limite entre les deux États, il a été dressé des procès-verbaux descriptifs du cours de cette limite, lesquels ont été formés d'après le levé exact de toute la frontière, fait contradictoirement par les ingénieurs et géomètres nommés de part et d'autre, et sous la direction du sieur Étienne-Nicolas Rousseau, lieutenant-colonel au corps royal des ingénieurs-géographes, chevalier de l'ordre royal et militaire de S'-Louis et de l'ordre royal de la Légion d'honneur, pour la France, et du sieur Jean-Egbert Van Gorquin, lieutenant-colonel de l'état-major du quartier-maître général, chevalier de l'ordre militaire de Guillaume, pour les Pays-Bas, et tous deux membres de la commission de délimitation ; lesdits procès-verbaux se trouvent, de plus, accompagnés de croquis visuels, ou plans figuratifs, dressés sur une grande échelle, pour servir à leur explication en cas de besoin, et des états des bornes à planter. Cette limite, qui s'étend depuis la mer du Nord jusqu'à la Moselle, a été divisée en six sections ; les procès-verbaux, ainsi que les feuilles de levés de chaque section, ont été arrêtés et signés par les commissaires,
<b>Pays-Bas (Belgique) /France</b>	<i>Traité de limites entre S. M. le roi de France et S. M. le roi des Pays-Bas ; signé à Courtray, le 28 mars 1820.</i>	<b>ENTRETIEN DES CHEMINS MITOYENS</b>	<b>Gouverneurs des provinces et préfets des départements limitrophes</b>		ART. 68. — Les chemins dits <i>mitoyens</i> sont à l'usage des deux États, sans qu'il soit attenté aux droits de propriété des particuliers à qui ces chemins mitoyens pourraient appartenir. Aucun des deux royaumes ne peut exercer sur ces chemins d'acte de souveraineté, si ce n'est ceux nécessaires pour prévenir ou arrêter les délits ou crimes qui nuiraient à la liberté et sûreté du passage. Les gouverneurs des provinces et préfets des départements limitrophes veilleront au bon entretien de ces chemins.
<b>Pays-Bas (Belgique) /France</b>	<i>Traité de limites entre S. M. le roi de France et S. M. le roi des Pays-Bas ; signé à Courtray, le 28 mars 1820.</i>	Abornement PRISE DE POSSESSION DES TERRAINS ECHANGES OU CEDES.	Exécuté par service d'Etat-major de l'armée ou deux membres des commissions de délimitation . présence des <b>délégués des préfets de département</b> pour la prise de possession des terrains échangés ou cédés.		ART. 71. — Pour l'exécution du présent traité, les sieurs DE CASTRES, colonel au corps royal de l'état-major, chevalier de l'ordre royal et militaire de S'-Louis, de l'ordre royal de la Légion d'honneur et de l'ordre militaire de Maximilien de Bavière, pour la France; et BEHR, colonel de l'état-major général, chevalier de l'ordre militaire de Guillaume, pour les Pays-Bas, (ou deux membres des commissions respectives de délimitation , seront chargés de faire exécuter l'abornement de la frontière conformément à ce qui a été arrêté à l'égard du matériel de l'abornement par le plan annexé au procès-verbal de la 4e section et d'après ce qui a été indiqué, à cet égard, tant dans les procès-verbaux de délimitation des six sections que dans les tableaux qui y sont annexés; ils procéderont, en outre, en présence des délégués des préfets des départements ( pour la

Pays	Source	Opérations	Compétence	Périodicité	Autres/textes
					France) et des gouverneurs des provinces (pour les Pays-Bas), à la prise de possession des parties de terre échangées ou cédées; en même temps ils feront connaître les concessions de passages réciproquement accordés, et tiendront des procès-verbaux de toutes leurs opérations pour lesquelles ils suivront l'instruction arrêtée par les commissaires et jointe au protocole de leur dernière séance; ils adresseront le rapport de leurs opérations à leurs commissaires respectifs, qui leur feront donner l'assistance ou les renseignements dont ils pourront avoir besoin.
<b>Pays-Bas (Belgique)</b> /France	<i>Procès-verbal de la délimitation entre les Pays-Bas et la France, comprenant la partie entre la mer du Nord et la Lys et portant règlement de la navigation de cette rivière. Du 28 mars 1828</i>				
<b>Allemagne</b>	<i>Traité de délimitation du 14 août 1925</i>	Art 35 : « maintenir la frontière dans un état tel qu'elle puisse être suivie d'une extrémité à l'autre »			En cas de divergence entre carte et texte, c'est en principe la carte qui l'emporte.
<b>Allemagne</b>	<i>Traité de délimitation du 14 août 1925</i>	Art 33 : surveillance et entretien des frontières	<b>Préfets et sous-préfets des départements limitrophes</b> , chacun en ce qui concerne sa division administrative	<b>Visite commune tous les 5 ans avant octobre (art 46) à partir de 1926</b>	
<b>Allemagne</b>	<i>Traité de délimitation du 14 août 1925</i>	Visites	Art 46 Participation des administrations des ponts et chaussées, des voies ferrées, des eaux et forêts aux visites, éventuellement des propriétaires concernés.	Visite commune tous les 5 ans avant octobre (art 46) à partir de 1926	
<b>Prusse</b>	<i>Convention du 23 octobre 1829 dite «convention définitive entre la France et la Prusse pour régler les limites des États»</i>	Établissement initial des poteaux de délimitation	Le commissaire français est un certain «Rousseau, colonel au corps royal des ingénieurs-géographes», le délégué du commissaire est un chef de bataillon du génie chargé de faire établir des poteaux (de délimitation) par les soins du ou des ingénieurs attachés à la commission.		
<b>Luxembourg</b>	<i>Traité de limites entre S. M. le roi de France et S. M. le roi des Pays-Bas;</i>	Visitent les bornes; rendent compte au Travaux.	<b>Autorités communales</b> des deux pays <b>préfet de Meurthe-et-</b>	<b>Tous les ans le premier mai</b>	Pas de mention d'un délégué du préfet.

Pays	Source	Opérations	Compétence	Périodicité	Autres/textes
	<i>signé à Courtray, le 28 mars 1820. convention d'entretien et conservation des bornes frontalières du 18 octobre 1853</i>		<b>Moselle</b> (côté France) Entente directe entre AG du Luxembourg et préfet pour adjudications ou urgences.	faits <b>tous les trois ans</b> sauf urgence ;	
<b>Brésil</b>	<i>PV d'installation du 13 septembre 1955</i>	Installation	<b>Commission mixte franco-brésilienne de délimitation des frontières</b> président délégation française : Armand Rumeau, ingénieur général de l'IGN ; membres : le sous-directeur chargé des affaires politiques ; un ingénieur-géographe ; secrétaire le sous-préfet de l'Inini	n.c . Dix réunions depuis 1955, la dernière en 2011 à Belem (Brésil)	
<b>Italie</b>	<i>Décret du 24 octobre 1986 publiant accord du 26 mai 1983 relatif à l'entretien des bornes et de la frontière</i>	<i>«L'abornement de la frontière [...] doit être précisé et maintenu de manière que le tracé soit bien déterminé et puisse être repéré facilement sur toute son étendue».</i>	Commission mixte de quatre membres de part et d'autres, qui peut s'adjoindre des experts. Rend compte au ministère des affaires étrangères s'il n'y a pas accord unanime.	<b>Une fois par an au moins</b>	
<b>Italie</b>	<i>Décret du 24 octobre 1986 publiant accord du 26 mai 1983 relatif à l'entretien des bornes et de la frontière</i>	<b>Entretien des bornes et démarcation matérielle de la frontière</b> réception des compte-rendus et PV.	<b>«Agents responsables » Commission mixte, préfets</b>	Rapport annuel	Art. 10 L'entretien des bornes et la démarcation matérielle de la frontière sont confiés à des agents responsables dont les tâches sont les suivantes: a. Assurer la surveillance et le contrôle des bornes et autres signes de démarcation de la frontière., constater et communiquer aux autorités dont ils relèvent tous faits contraires aux dispositions prévues aux art. 1 , 2, 4 et 5 du présent Accord. Il est entendu cependant que chaque Etat a la faculté de faire assurer la surveillance et le contrôle des bornes et autres signes de démarcation par des services ou des organes administratifs autres que les agents visés au présent article ; b. vérifier, si cela est nécessaire, la position des bornes frontalières en vue de les replacer, éventuellement, à l'emplacement exact ; maintenir lisibles les indications ds différentes bornes ; réparer ou remplacer les bornes endommagées et rétablir celles qui ont disparu ; construire d'éventuelles protections pour les bornes en péril ; tenir à jour la documentation de chaque borne frontalière ; c. Dresser d'un commun accord un état annuel des travaux à effectuer pour l'entretien ou le remplacement des bornes et autres signes de démarcation; cet état doit comporter notamment un devis des frais relatifs à ces travaux; d. Faire exécuter, après accord des autorités visées à l'art. 7, les travaux incombant à leur Etat ou à effectuer par l'un des deux Etats pour le compte de l'autre. Cependant, lorsqu'il s'agit de travaux ayant manifestement un caractère d'urgence, les agents responsables visés au présent article peuvent prendre, de leur propre chef, les mesures conservatoires nécessaires, à charge d'en rendre

Pays	Source	Opérations	Compétence	Périodicité	Autres/textes
					<p>compte à la Commission mixte; e. Etablir un rapport annuel sur l'exécution des travaux d'entretien ou de remplacement des bornes et autres signes de démarcation; ce rapport doit indiquer les frais relatifs aux travaux exécutés. Les opérations prévues au présent article feront l'objet d'un procès-verbal, établi en deux exemplaires originaux, l'un en français, l'autre en italien, signé par les agents responsables des deux Etats; Ce procès-verbal sera adressé à la Commission mixte et aux autorités nationales compétentes (pour la France, aux commissaires de la République territorialement compétents, pour l'Italie à la Délégation italienne pour l'entretien de la frontière).</p>

**Source:** élaboré par l'auteur sur la base de documents originaux.

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