Interreg
Greece-Bulgaria
SMiLe
European Regional Development Fund

EUROPEAN UNION

Strengthening primary Medical care in IsoLated and deprived cross-border arEas

D.6.1.2.B

Impact assessment and sustainability

Lead Partner: 4th Health District of Macedonia Thrace
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Contract ID

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Target Audience

Leader	Description/Purpose	Audience
LB	Impact assessment and sustainability evaluates the impact of the project and assesses its sustainability, providing useful background for safeguarding the continuation of its positive impact	Project stakeholders Including the project sponsor, senior leadership and the project team

Project Partners

Role	Partner name	Country

Lead Beneficiary	4th Health District of Macedonia Thrace	Greece
Partner Beneficiary 2	Aristotle University of Thessaloniki - Special Account for Research Fund (Department of Medicine)	Greece
Partner Beneficiary 3	Multi-profile Hospital for Active Treatment of Ardino	Bulgaria
Partner Beneficiary 4	Municipality of Harmanli	Bulgaria
Partner Beneficiary 5	National Emergency Aid Centre	Greece

Short presentation of the programme

The Cooperation Programme "Greece-Bulgaria 2014-2020" was approved by the European Commission on 09/09/2015 by Decision C(2015) 6283. The total budget (ERDF and national contribution) for the European Territorial Programme "Greece-Bulgaria 2007-2013" is €129,695,572.00. The total financing consists of €110.241.234 (85%) ERDF funding and €19.434.338 (15%) national contribution. The eligible area of the Programme consists of the Region of Eastern Macedonia-Thrace (Regional Units of Evros, Kavala, Xanthi, Rodopi and Drama) and the Region of Central Macedonia (Regional Units of Thessaloniki and Serres) in Greece and the South-Central Planning Region and South-West Planning Region (Districts of Blagoevgrad, Smolyan, Kardzhali and Haskovo) in Bulgaria. The Priority Axes are PA 1: A competitive and Innovative Cross-Border area, PA 2: A Sustainable and climate adaptable Cross-Border area PA, 3: A better interconnected Cross-Border area, PA 4: A socially inclusive Cross-Border area.

Abbreviations

AF: Application Form

CBA: Cross Border (area)

JoB: justification of Budget

JS: Joins Secretariat

LB: Lead Beneficiary

MA: Managing Authority

PB: Partner beneficiary

STPP: Start-up Time Plan and Procurement Plan

WBS: Work breakdown structure

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1 Introduction

The following deliverable D.6.1.2.B Impact assessment and sustainability is part of the contract No 140/2018 Technical Assistance to the 4th Health District of Macedonia Thrace for the Project "Strengthening primary Medical care in IsoLated and deprived cross-border area" - SMiLe, within the framework of the Interreg V-A "Greece-Bulgaria 2014-2020" Cooperation Programme, between the 4th DYPE (Health District of Macedonia Thrace) and the planO_2 Consulting Private Company.

The intended audience for the D.6.1.2.B Impact assessment and sustainability iis all project stakeholders, including the project sponsor, senior leadership and the project team, as well as the general public.

2 The feasibility and added value of the evaluation and sustainability plan of the project

The Impact Assessment and Sustainability Plan of the project concerns the assessment of the impact of the project actions on health in the cross-border area as well as on the target groups.

Although knowledge, facts and information on program planning, implementation, and evaluation are common, those on health promotion program sustainability are less abundant and tend to be fragmented. The concept of sustainability refers to the continuation of programs and therefore accordingly a sustained program is defined as a set of durable activities and resources aimed at program-related objectives. There are at least four reasons why sustainability concerns public health decision makers and practitioners. First, sustained programs can maintain their effects over a long period allowing for the study of long-term effects. Second, there is often a latency period between the beginning of program-related activities and their effects on population health, so the program has got to be able to live through the latent period for it to realize its effects. In addition, if a program were perceived as being beneficial for the health of targeted populations, the absence of sustainability would lead to an investment loss for the organizations and people involved; and yet a discontinued community program brings disillusion to participants and therefore poses obstacles to subsequent community mobilization. For these reasons which are by no means exhaustive, sustainability is crucial for any intervention considered beneficial to the population.

3 The methodological approach for the implementation of the evaluation and sustainability plan

3.1 Tools and techniques

The assessment of the project impact and sustainability was based on a wealth of resources including:

- Study of international and national best practices in the health sector
- Socio-economic analysis
- Bibliographic overview
- Primary Research based on Health System Data
- Reports and publications on the health sector in the cross-border area
- Comments and suggestions from the group of experts supporting the project.

The methodological approach for the preparation of the Project's Impact Assessment and Sustainability Plan includes the following

Data collection

The data collection was based on secondary research, during which bibliographic references were collected for:

- detailed health information and statistics in order to calculate the main health indicators for the project intervention area
- development policies that are directly or indirectly related to the health sector in the project intervention area
- best practices on the sustainability and capitalization of European projects in the health sector
- Financial instruments at national and European level in the sector of health.

Indicative sources of data on the above information are:

- the Ministries of Health of Greece and Bulgaria,
- the 4th Health District of Macedonia and Thrace and the corresponding office in Bulgaria,
- the Greek Statistical Authority
- the European Statistical Authority (Eurostat),
- the policy documents of the two countries concerning the project's intervention area: the Operational Program of the Region of Eastern Macedonia and Thrace 2014-2020, the Operational Program "Regions for Development 2014-2020" of

Bulgaria, the Operational Program INTERREG VA "Greece- Bulgaria 2014-2020 ", the Third Health Action Program, the National Health Strategy and Health Sector Actions in the 2014-2020 NSRF, etc.

- databases of good practice in the health sector of the European Commission,
- policy guide for the European Structural and Investment Funds in the health sector

Furthermore, the current report takes advantage of the data from the platform for the assessment of the Primary Health Care that was developed through the project.

Data processing and synthesis of results

The processing and analysis of the secondary data was done by utilizing combinational methods of qualitative and quantitative research, with the ultimate objective in combination with the primary research to create a complete image for:

- the existing health situation in the project intervention area in order to assess the relevance, effectiveness and consistency of the principles, priorities and actions of the Interreg VA Cooperation Program "Greece - Bulgaria 2014-2020" in the provision of health care services quality in the cross-border area
- the best practices for the sustainability and capitalization of European projects in the health sector
- the proposals for utilizing the know-how and experience gained by the two project partners
- The recording of proposals for interventions and actions that can be implemented by both project partners in order to strengthen their position and optimize the services provided.
- financial instruments at national and European level that can support the implementation of the proposed interventions – actions

3.2 Methodology

The following section elaborates on the methodology that was applied for the quantitative evaluation of the project actions. The method that was applied is the Difference-in-Differences method which is a widely applied counter factual method for the evaluation of the policy interventions. Moreover, Difference-in-Differences is a method that is proposed as an evaluation method from the Interact programme.

3.2.1 Key Concepts: Difference-in-Differences

In empirical analysis, abrupt changes (also known as Treatment) in the economic environment, in government policy and in the institutional environment, constitute a very interesting category of experiments, natural experiments or alternatively quasi experiments (Campbell and Stanley, 2015). Physical experiments occurs when an exogenous event changes the environment in which individuals, families, businesses, cities, states operate, and always consists of a control group unaffected by policy change and a treatment group (Craig *et al.*, 2017), where the last one assumed to be affected by this change.[1] Unlike a controlled experiment, where the treatment and control groups are randomly and clearly selected, in physical experiments these groups result from the specific change in policy. To account for the systematic differences between the treatment and the control group two-period data, one before the change and one after, are required. The sample is therefore broken down into four groups: the pre-change control group, the post-change control group, the pre-change control group, and the post-change control group. The Difference-in-Differences method is used to evaluate and interpret the effects of these changes on the treatment team.

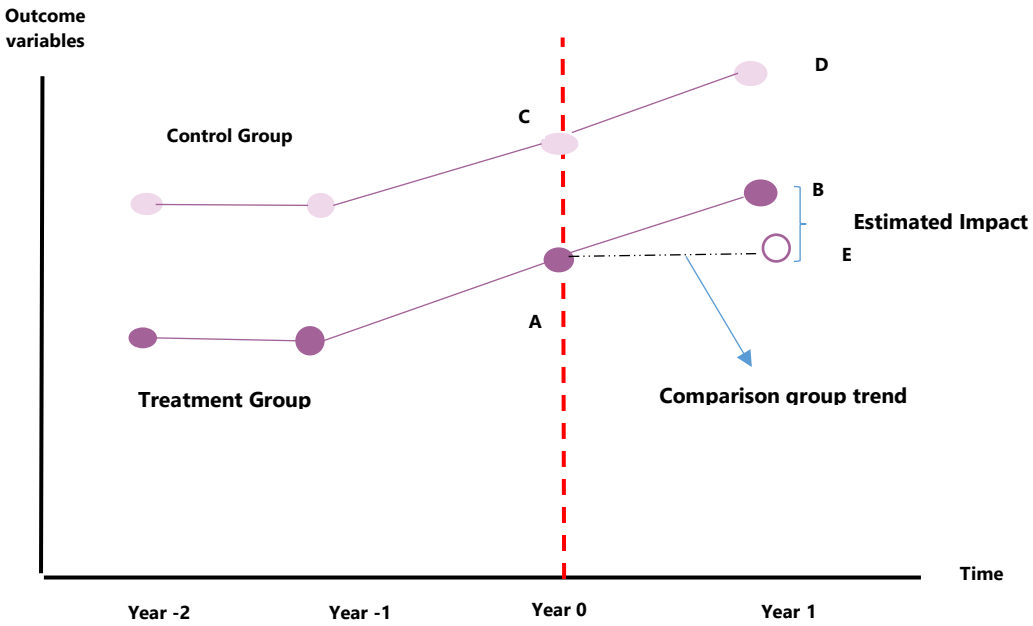
Difference-in-differences estimates the counterfactual for the change in outcome for the treatment group by calculating the change in outcome for the comparison group. This technique allows to take into account any differences between the treatment and comparison groups that are constant over time (Gertler *et al.*, 2011).

3.2.2 The Quasi-Experiment of 4th Health District of Makedonia Thrace.

Figure 1 illustrates the Difference-in-Differences method for the evaluation of the Smile Programme in the 4th Health District of Makedonia and Thrace. Year 0 (Year 2018) is the baseline year. In year 1 (2019), a treatment group treatment group of districts enrols in the project, while a comparison group of districts is not enrolled. While the project was already under implementation in 2019, the actions that were expected to have an important impact in the indicators monitored by the National Health Care systems and the programme were implemented in 2019. The outcome level (different outcomes variables such as visit and transfers) for the treatment group (four areas) goes from A, before the program starts, to B after the program has started, while the outcome for the comparison group (four areas) goes from C, before the program started, to D, after the program has started.

[1] As random experiments are very rare, economists have to rely on actual policy changes to identify the effects of policies on outcomes. These are called \natural experiments" because we take advantage of changes that were not made explicitly to measure the effects of policies (Gertler *et al.*, 2011; Deiana, Geraci and Meroni, 2019).

Figure 1 The Difference-in-Difference Method



Note: All differences between points should be read as vertical differences in outcomes on the vertical axis

The two counterfeit estimates of the counterfactual, which is, the difference in outcomes before and after the intervention for the treatment group (B − A) and the difference in outcomes after the intervention between the treatment and comparison groups (B − D). The difference-in-differences is the estimation of the counterfactual that is obtained by computing the change in outcomes for the comparison group (D − C), and then subtracting this from the change in outcomes for the treatment group (B − A). Thereby, using the change in outcomes within the groups (control and treatment) is assumed that, had the enrolled group not participated in the program, their outcome would have evolved over time along the same trend as the non-enrolled group: that is, the change in outcome for the enrolled group would have been from A to E, as shown in Figure 1.In summary, the impact of the program is simply computed as the difference between two differences (or else, Table 1):

$$DiD_{impact} = (B - A) - (D - C)$$

Table 1 Calculating the Difference-in-Differences Method

Role	After	Before	Difference
Treatment	B	A	B-A
Control	D	C	D-C
Difference	B-D	A-C	(B-A)-(D-C)

3.2.3 Validity of the DiD Method

Even if this method is very common for evaluating projects in EU and other International Organizations it not without problems or shortcomings. In this view, it is important to point out general problems that arise in drawing conclusions from empirical studies and may give a completely different interpretation to what is actually the case. Problems with validity can be of two forms. Internal validity problems and external validity problems. Internal validity refers to whether changes in the dependent variable are due to changes in the interpretative variables alone, whereas external validity refers to whether the results of a study can be generalized to different individuals and environments (Burke and Onwuegbuzie, 2004).

3.2.3.1 Internal Validity

Internal validity can be violated by:

- Missing variables: Events that affect pre- and post-intervention observations and are not included in the study.
- Time trends: Changes in units over time.
- Poorly defined variances causing overestimation of statistical tests.
- Measurement errors that results from changes in the terminology or method of the survey and may cause changes in the measurement of variables.
- Endogeneity of independent variables.
- Missed interactions terms: They show different trends in the control and response teams.

3.2.3.2 External Validity Problems

External validity problems are related to the possibility of significant interactions between policy change and individual characteristics, location, and time, such that the results of a study cannot be generalize in different units and environments. More specifically, these interactions are:

- Interaction between policy implementation and the control group. The control group is not representative of the population.
- Interaction between policy and location implementation: The impact of intervention may vary from region to region or from institution to institution.
- Interaction between policy implementation and time: The impact of intervention may vary across time periods.

3.2.4 Difference-Differences Method

The impact assessment of a physical experiment can be carried out with two other simpler methods, where the first compares the values of the treatment group with those of the control group for the post treatment period and the second compares the treatment group values before and after the policy implementation. These methods

have several weaknesses and are therefore used to give a more intuitive picture when there are no data from all four groups.

The fist method is known as *with-and-without* comparisons between units that choose to enrol and units that choose not to enrol. The Treatment Effect evaluation is performed by comparing the results of the treatment group and the control group. This method is usually used when no pre-treatment data is available. The second one is the *before-and-after*, or *pre-post comparisons* that compare the outcomes of program participants prior to and subsequent to the introduction of a program.

The combination of the two previous methods results in a new method of Difference-in-Differences. The cross-sectional comparison of the groups avoids the problem of time trends by comparing the two groups in the same time period. On the other hand, timely comparisons avoid the problem of unnoticed systematic differences that two groups may have, comparing the same cross-sectional units of the response team before and after the abrupt change. The DD estimator combines these two estimators. By applying the difference method is requires a two-period dataset, one before and one after the physical experiment, as well as two groups; the control group and the treatment group. The model of regression of differences in differences method is as follows:

$$y = \beta_0 + \beta_1 d + \beta_2 p + \beta_3 (d \times p) + u$$

Where, d the dummy variable describing which group each observation belongs to and receives the value of one if the observation belongs to the treatment group and zero if it belongs to the control group. p is the dummy variable which denotes the post period treatment of the treatment group, it takes value 1 if the observation refers to the post treatment period and 0, if it refers to the pre-treatment period, while $(\mathrm{d} \times \mathrm{p})$ denotes the interaction of the p and d. The interpretation of the coefficients β_0, β_1, $\beta_2$and β_3 is as follows: The coefficient $\boldsymbol{\beta_0}$ is the constant term of the regression equation; $\boldsymbol{\beta_1}$ reflects the systematic variations in the control and treatment groups, while $\boldsymbol{\beta_2}$s reflects the time trends between the group. Finally, coefficient and $\boldsymbol{\beta_3}$ shows the real treatment effect (policy impact) on the treatment group. Therefore, the $\boldsymbol{\beta_3}$ coefficient is the actual estimator of differences in differences method.

3.2.5 Policy evaluation with two periods panel data

The panel data sets are very useful for policy analysis and in particular for program evaluation. In the simplest evaluation program, a sample of individuals, companies, countries and so on is collected during the first period. Some of these units, those belonging to the treatment group, participate in a specific program at a later time, while others belong to the control group. The procedure described is identical to that of natural experiments, except that in this case the cross-sectional units appear.

$$y_{it} = \beta_0 + \beta_1 d_{it} + \beta_2 p_t + a_i + u_{it}$$

Let $\boldsymbol{y_{it}}$ denotes the dependent variable, the dummy variable $\boldsymbol{p_t}$ equals to one if the observation refers to the period after the treatment (program implementation) and zero

if it refers to the period before and the dummy variable d_{it} equals to one if the observation refers to the treatment and zero if not.

Estimating the differences for the elimination of the cross-sectional effects we get:

$$\Delta y_{it} = \beta_1 + \beta_2 \Delta d_i + \Delta u_{it}$$

The treatment effects in the treatment group is

$$E(\Delta y | \Delta d_i = 1) = \beta_1 + \beta_2$$

While in the control group is

$$E(\Delta y | \Delta d_i = 0) = \beta_1$$

By subtracting the two abovementioned equations we get the treatment effect in the treatment group which is equal to β_2. Hence,

$$E(\Delta y | \Delta d_i = 1) - E(\Delta y | \Delta d_i = 0) = \beta_2$$

This is a version of the difference estimator using panel data for two clustered layers. With the data panel there is the advantage of forming differences takes into account the unobserved effects for each cross-sectional unit.

3.3 Employed Variables

For the needs of the present evaluation analysis we employed data from eight rural areas of the 4th Health District of Makedonia and Thrace. Four of the rural health centres (Echinos, Iasmos, Stavroupoli and Paranesti) had treatment, or else they implement new policies funded by the SMiLe, while the other four did not (Sappes, Nea Zihni, Abdera and Rodolivos).

The main outputs of SMiLe project are:

1. the upgrading of 6 PHC units and 3 hospitals– all located in remote and disadvantaged CB territories (Paranesti, Nevrokopi, Echinos, Stavroupoli, Iasmos, Soufli, Didimoticho, Ardino and Harmanli),
2. the placement and operation of TETRA communication system for entire fleet of ambulances (including health centres) in the Regional Unit of Drama and TETRA communication system and ambulances management system for the Operational Centre,
3. the creation and operation of a modern Training Centre for Primary Healthcare Practitioners, that will be located in the Department of Medicine of the Aristotle University of Thessaloniki and will provide specialised training courses to primary healthcare practitioners of the cross-border area not only during the project lifetime but also after its completion,

The dependent variables of the analysis are, visits, emergency patient transfers and the numbers of x-rays. The idea behind the choice of these three variables are in line with the main outputs of the project.

More particular, the emergency medical patient transfers were employed since the treatment group place and operates TETRA communication system for entire fleet of ambulances and ambulances management system for the Operational Centre.

Thereby, possible impacts can be manifested in the following indicators:

- Number of x-rays in primary health care units
- Number of visits in primary health care units
- Number of patient transfers to a bigger hospital
- Reaction time of ambulances

The number of x-rays is in line with the upgrading of PHC in these areas. The expected effect is that due to the upgrading of medical equipment, nursing and medical staff consulates/ treats more patients. Thereby, the number of equipment is expected to increase within the treatment group. The same is expected with the visits. Once the health centres provide the proper service and have the necessary equipment, number of visits in the treatment group health centres is expected to increase.

Concerning the patient transfers, it is expected that since there is enhanced capacity for local treatment the total number will decrease. Similarly with a more sophisticated ambulance management system it is expected that the reaction time of the ambulances will decrease.

For the assessment of the above hypotheses we collected available data from the treated PHC and a number of a control sample PHC. The data is derived from the BiHealth system in the case of Greece. Unfortunately, the corresponding data for the case of the Bulgarian health centres were not readily available for both the intervention hospitals and a control sample. Similarly, there wasn't any available data on the reaction time of ambulances. Therefore, the analysis was made for indicators

- Number of x-rays in primary health care units
- Number of visits in primary health care units
- Number of patient transfers to a bigger hospital

and only for Greece.

For the collected data the employed years are 2018 (baseline year and year of treatment implementation) and 2019 (after the treatment). The results of the analysis are presented in chapter 6.

4 Current situation analysis in the health sector in the project intervention area

4.1 The health sector in the intervention area / presentation of health indicators

4.1.1 Demographic

According to the Eurostat population projection the overall CBA in both countries host a population of around 2.5 with the around 32% living in Bulgaria. While in the Bulgarian side there aren't any major cities, this is not the case from the Greek side that includes Thessaloniki, the 2nd largest city in Greece that amounts for 64% of the CBA population.

The population in both countries, at a national and regional level is declining, a trend that is stronger in the Bulgarian side. The Bulgarian CBA shrank by 3.38% between 2015 and 2019, with Smolyan region declining by 7.5%.

Table 2: Population in the Programme Area

	2015	2016	2017	2018	2019	% Change 2015-2019
Bulgaria	**7,202,198**	**7,153,784**	**7,101,859**	**7,050,034**	**7,000,039**	**-2.81**
BG CBA	**819,278**	**812,134**	**803,998**	**797,553**	**791,558**	**-3.38**
Blagoevgrad	315,577	312,831	310,321	307,882	305,123	-3.31
Haskovo	237,664	236,383	233,415	231,276	228,141	-4.01
Smolyan	113,984	111,601	109,425	107,282	105,421	-7.51
Kardzhali	152,053	151,319	150,837	151,113	152,873	0.54
Greece	**10,858,018**	**10,783,748**	**10,768,193**	**10,741,165**	**10,724,599**	**-1.23**
GR CBA	**1,723,584**	**1,714,473**	**1,710,884**	**1,706,838**	**1,704,413**	**-1.11**
Evros	147,915	147,796	147,709	147,488	147,190	-0.49
Xanthi	112,532	112,275	112,112	111,885	111,631	-0.80
Rodopi	112,325	112,088	111,731	111,193	110,666	-1.48
Drama	97,466	97,041	96,836	96,760	96,845	-0.64
Kavala	136,252	135,304	134,411	133,849	133,391	-2.10
Thessaloniki	1,117,094	1,109,969	1,108,085	1,105,663	1,104,690	-1.11
CBA Area Total	**2,542,862**	**2,526,607**	**2,514,882**	**2,504,391**	**2,495,971**	**-1.84**

Source: Eurostat

The situation is equally problematic in the macroeconomic indicators. The GDP per capita based on current market prices was as low as 10.7% of the EU – 28 average in Haskovo for 2010 and all of the Bulgarian regions fall short of even 17%.

While the situation in Greece is better in all the prefectures, the economy is diverging from the EU average, while in the case of Bulgaria the economy is converging. The data represent the 2008 financial crisis in Greece which have led to an important contraction of the national GDP, which strongly affected the Greek CBA as well.

Table 3: GDP per capita based on current market prices

GEO/TIME	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
EU - 28	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**
Bulgaria	**18.7**	**20.0**	**19.9**	**21.5**	**21.5**	**21.5**	**21.4**	**21.7**	**23.1**	**24.3**
Blagoevgrad	12.7	13.5	13.0	14.5	14.5	14.5	14.0	13.9	14.5	15.0
Haskovo	11.6	11.6	10.7	12.0	12.2	11.7	11.9	12.3	12.7	13.3
Smolyan	14.3	14.1	13.9	14.4	14.3	13.6	14.0	15.0	15.1	16.6
Kardzhali	11.1	11.5	11.0	11.1	12.2	11.8	11.2	11.4	12.0	12.7
Greece	**83.6**	**87.2**	**79.7**	**71.2**	**65.0**	**61.4**	**59.2**	**56.3**	**56.0**	**55.8**
Evros	59.1	63.9	64.0	55.8	50.0	45.5	43.8	41.8	42.4	NA
Xanthi	55.6	56.5	55.1	46.2	41.9	40.2	35.2	33.2	34.2	NA
Rodopi	58.0	59.5	53.5	47.8	42.6	38.9	35.3	33.1	34.3	NA
Drama	51.2	54.5	51.1	44.9	41.2	38.9	38.3	36.9	35.8	NA
Kavala	70.4	72.7	67.1	56.2	53.7	48.3	48.9	46.1	45.8	NA
Thessaloniki	74.4	77.2	68.7	61.5	55.0	51.3	48.7	47.4	47.9	NA
Serres	43.7	45.6	43.5	39.5	37.1	35.9	34.1	33.5	33.7	NA

Source: Eurostat

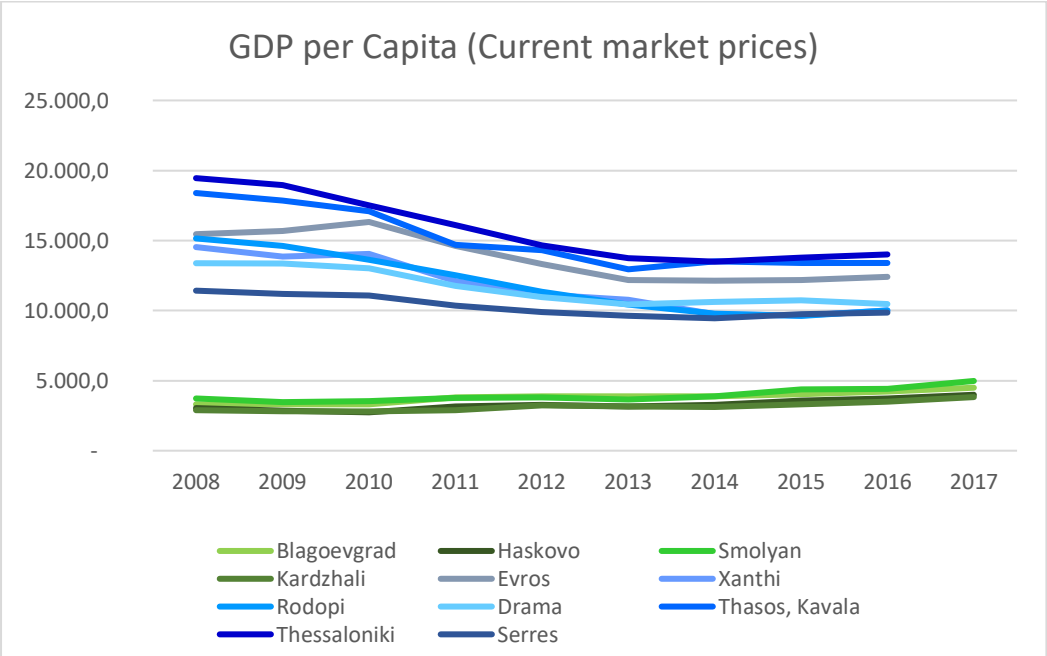


Figure 2: GDP per capita (current market prices0 in the CBA

Based on the NUTS 2 data on GDP per Capita expressed as PPS the different trends between the Greek and Bulgarian sides of the CBA area is more obvious. While the important increase in the Yugozapaden is due mainly to the effect of Sofia's contribution, there is an increase of 6% in Yuzhen Tsentralen, while in the Greek CBA there is a decrease of 20% and 23% in the same years.

Table 4: GDP per Capita PPS

Year	2009	2010	2011	2012	2013	2014	2015	2016	2017
EU - 28	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**
Yugozapaden	73	76	76	76	74	76	77	79	80
Yuzhen tsentralen	30	31	32	33	32	32	34	34	35
Anatoliki Makedonia, Thraki	68	63	54	52	51	50	48	48	47
Kentriki Makedonia	75	66	60	56	56	55	54	54	54

Source: Eurostat

Looking at the unemployment it is clear that the financial crisis affected severely the Greek CBA area. Even though the unemployment rates were high even before the crisis reaching e.g. in Drama 22.3%, the crisis has led to unemployment rates up to 38%. The recent years there is an overall tendency of decreasing unemployment rates that remain lower in the Bulgarian side of the CBA area. Unemployment is still an important concern in the Smolyan region that despite the overall decreasing trend still remains over 10%. The following diagram present the evolution of the unemployment rates in the CBA area from 2001 to 2018.

Table 5: Unemployment rates in the CBA

NUTS 3 Area	2014	2015	2016	2017	2018
GR CBA					
Drama	35.3	27.6	23.9	21.7	15.3
Kavala	22.4	16.8	16.3	14.9	9.8
Evros	20.8	28.5	24.2	17.5	13.0
Xanthi	31.8	26.9	30.2	25.5	23.7
Rodopi	15.6	17.7	19.8	18.2	16.5
Thessaloniki	30.2	27.0	25.4	22.2	20.4
Serres	25.0	29.1	24.9	23.6	21.1
BG CBA					
Blagoevgrad	14.1	10.3	8.3	4.5	4.7
Kardzhali	(4.9)	(2.3)	(1.7)	(1.6)	(3.3)
Smolyan	19.4	17.2	14.2	11.2	10.3
Haskovo	10.4	8.6	7.0	4.7	(3.0)

( ) - due to a small sample figures in brackets are not reliable

Source: Hellenic Statistical Authority, National Statistical Institute

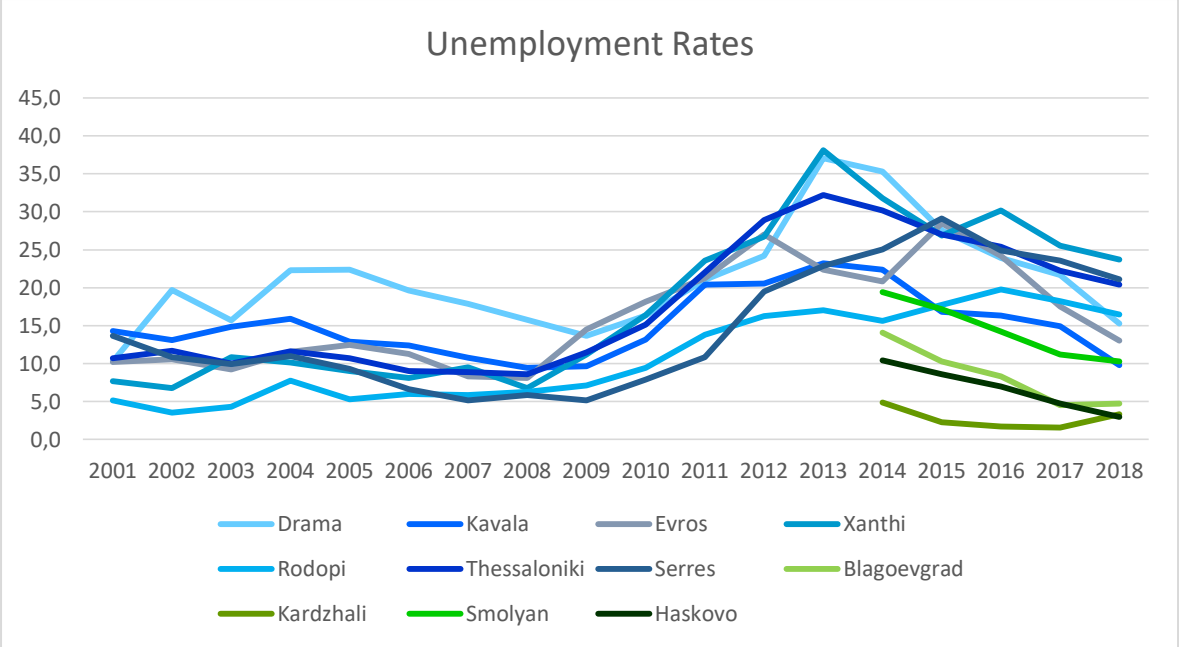


Figure 3: Unemployment rates in the CBA area

All of the above are mirrored in the level of People at risk of poverty or social exclusion in the region which remains high. All NUTS 2 regions have high percentage of people at risk of poverty or social exclusion, with the highest in Yuzhen tsentralen region of Bulgaria that almost reaches 38%. Nevertheless, the percentages are decreasing in the case of Bulgaria, where there are available data on a regional base. After 2015 the percentages are decreasing on a national level in Greece as well, though not in the extent of Bulgaria.

Table 6: People at risk of poverty or social exclusion

GEO/TIME	2015	2016	2017	2018
Bulgaria	**41.3**	**40.4**	**38.9**	**32.8**
Yugozapaden	30.0	30.1	29.3	23.0
Yuzhen tsentralen	48.6	46.2	43.8	37.9
Greece	**35.7**	**35.6**	**34.8**	**31.8**
Anatoliki Makedonia, Thraki				33.8
Kentriki Makedonia				30.4

Source: Eurostat

4.1.2 Health Infrastructure and Personnel

Both the Greek and the Bulgarian health systems have been under important reforms in the recent years. In particular reforms in Bulgaria "focused on controlling spending and enhancing efficiency (EU Commission, 2019), while recent reforms in Greece focused on

introducing and strengthening mechanisms to achieve better outcomes after a long period of structural reforms and cost reductions.

Table 7: Health Centres and beds in the Greece CBA

	Health Centres	Beds		
Year	**2018**	**2016**	**2017**	**2018**
Greece	204	928	903	901
E. Macedonia-Thrace	15	58	55	58
Central Macedonia	33	124	113	111

Table 8: Health professionals in health Centres in the Greek CBA

	Medical Doctors			Nurses			Other Personnel		
Year	**2016**	**2017**	**2018**	**2016**	**2017**	**2018**	**2016**	**2017**	**2018**
Greece	1674	1776	1797	3136	2215	2318	1657	1800	1967
E. Macedonia-Thrace	105	124	114	200	208	213	116	126	141
Central Macedonia	316	342	335	492	512	537	294	343	346

Source: Hellenic Statistical Authority

Table 9: health institutions and beds in the Greek CBA

	Public				Private		Total	
	Hospitals	**Beds**	**Health centres**	**Beds**	**Clinics**	**Beds**	**Hospital/ HC/Clinic**	**Beds**
Greece	**96**	**33630**	**204**	**901**	**168**	**16765**	**468**	**51296**
E. Macedonia-Thrace	6	2345	15	58	11	869	32	3272
Central Macedonia	11	4851	33	111	26	3270	70	8232

Source: Ministry of Health, Hellenic Statistical Authority

Table 10: Heath institutions and beds in the Bulgarian CBA

Districts	Establishments	Number	Beds
Blagoevgrad	Health establishments for hospital aid	11	1 650
	of which:		
	Multi profile hospitals	5	1 074
	Specialized hospitals	5	496
	Outpatient health establishments	75	39
	Diagnostic and consulting centres	-	-
	Medical centres	28	19
	Dental centres	-	-
	Medical-dental centres	5	20
	Medical-diagnostical and medical-technical laboratories	42	-
	Other health establishments	4	23
Kardzhali	Health establishments for hospital aid	6	826
	of which:		

Districts	Establishments	Number	Beds
	Multi profile hospitals	5	556
	Specialized hospitals	1	270
	Outpatient health establishments	20	12
	Diagnostic and consulting centres	1	2
	Medical centres	3	10
	Dental centres	-	-
	Medical-dental centres	-	-
	Medical-diagnostical and medical-technical laboratories	16	-
	Other health establishments	6	132
Smolyan	Health establishments for hospital aid	8	1 027
	of which:		
	Multi profile hospitals	4	555
	Specialized hospitals	3	432
	Outpatient health establishments	37	10
	Diagnostic and consulting centres	1	-
	Medical centres	9	10
	Dental centres	-	-
	Medical-dental centres	-	-
	Medical-diagnostical and medical-technical laboratories	27	-
Haskovo	Health establishments for hospital aid	11	1 120
	of which:		
	Multi profile hospitals	5	802
	Specialized hospitals	5	238
	Outpatient health establishments	62	41
	Diagnostic and consulting centres	2	10
	Medical centres	17	31
	Dental centres	-	-
	Medical-dental centres	-	-
	Medical-diagnostical and medical-technical laboratories	43	-

Source: National Statistical Institute

Based on the available data the number of beds per 1000 people is better in the Bulgarian CBA area. The highest number of beds per 1000 people is in Smolyan with 9.7, while the smallest is found in Central Macedonia with 4.3.

Table 11: Beds per 1000 people in the CBA

Region	Beds/1000 people
E. Macedonia-Thrace	5.5
Central Macedonia	4.4

Blagoevgrad	5.4
Kardzhali	5.4
Smolyan	9.7
Haskovo	4.9

Source: Ministry of Health, National Statistical Institute

4.1.3 Epidemiological Data

According to the statistics of the Greek Statistics Authority, births since 2008 (following the economic crisis) have been reduced, while at the same time, deaths increased. The result was that in 2011 births got less than deaths, as shown in Table 6, indicating a demographic challenge of aging populations.

Table 12: Natural Population movement 2008-2011

Year	2008	2009	2010	2011
Births	118.302	117.933	114.766	106.428
Deaths	107.979	108.916	109.084	111.099

Source: Hellenic Statistics Authority

During the same period mortality by age shows no serious fluctuations, while neither the main causes of death changed in hierarchy. The most significant category is still the one of heart diseases at a rate of 37.8%, followed by neoplasm diseases (32.7%), diseases of brain vessels (18%), respiratory diseases (8.1%) and accidents (3.3%).

Table 13: Most Significant Causes of Death (Greece)

Year	2008	2009	2010	2011
Heart Diseases	32.212	31.976	31.837	31.625
Neoplasms	21.386	27.345	27.177	27.357
Diseases of brain vessels	16.064	15.493	14.910	15.041
Respiratory diseases	6.794	7.095	7.053	6.815
Accidents	3.326	3.310	2.983	2.790

Source: Greek Statistics Authority, 2011

A significant diachronic fluctuation is observed only at the cause "Neoplasms", which presents a sharp increase from 2008 to 2009.

Figure 4: Percentage distribution of important categories of causes of death

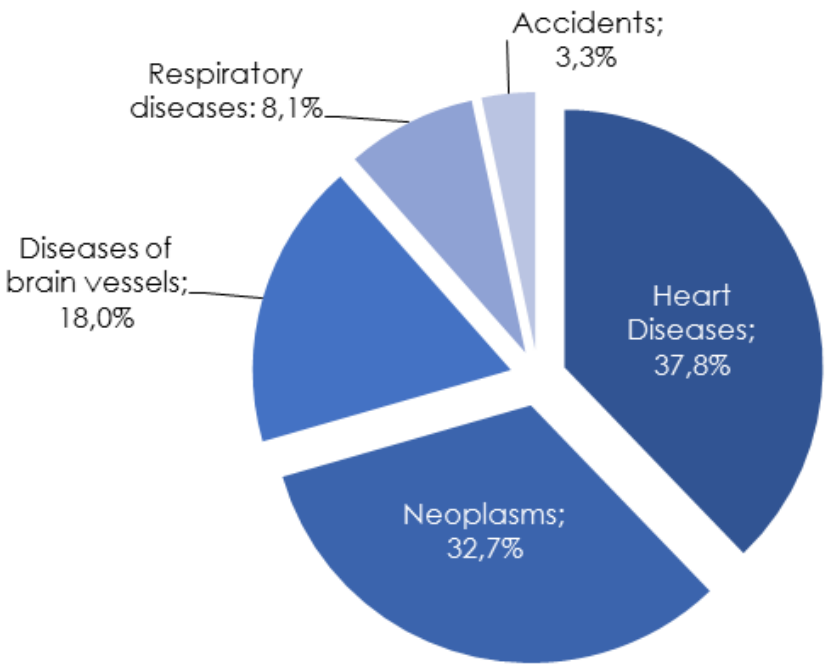


Table 14: Mortality by Age

Age of the diseased	2007	2008	2009	2010	2011	2012
0-14 years	599	432	585	630	565	469
15-34 years	2.050	1.857	1.986	1.739	1.553	1.469
35-49 years	3.944	3.731	3.755	3.589	3.617	3.558
50-64 years	11.152	11.327	11.308	11.450	11.514	11.702
65+ years	92.150	90.562	90.680	91.676	93.850	99.740
Total	109.895	107.909	108.314	109.084	111.099	116.938

Source: Greek Statistics Authority, 2011

At the same time and in the same period, an increase in life expectancy for both female and male population is observed.

Since most of deaths in Greece are due to vascular diseases and cancers, the risk factors for these diseases are currently considered the most critical aspects of public health. In this context smoking, poor diet, obesity, environmental pollution and lack of exercise contribute to the incidence of a number of organic disorders such as hypertension and diabetes, which have a negative effect on the level of health and mortality of the Greek population.

Figure 5: Main Causes of Death

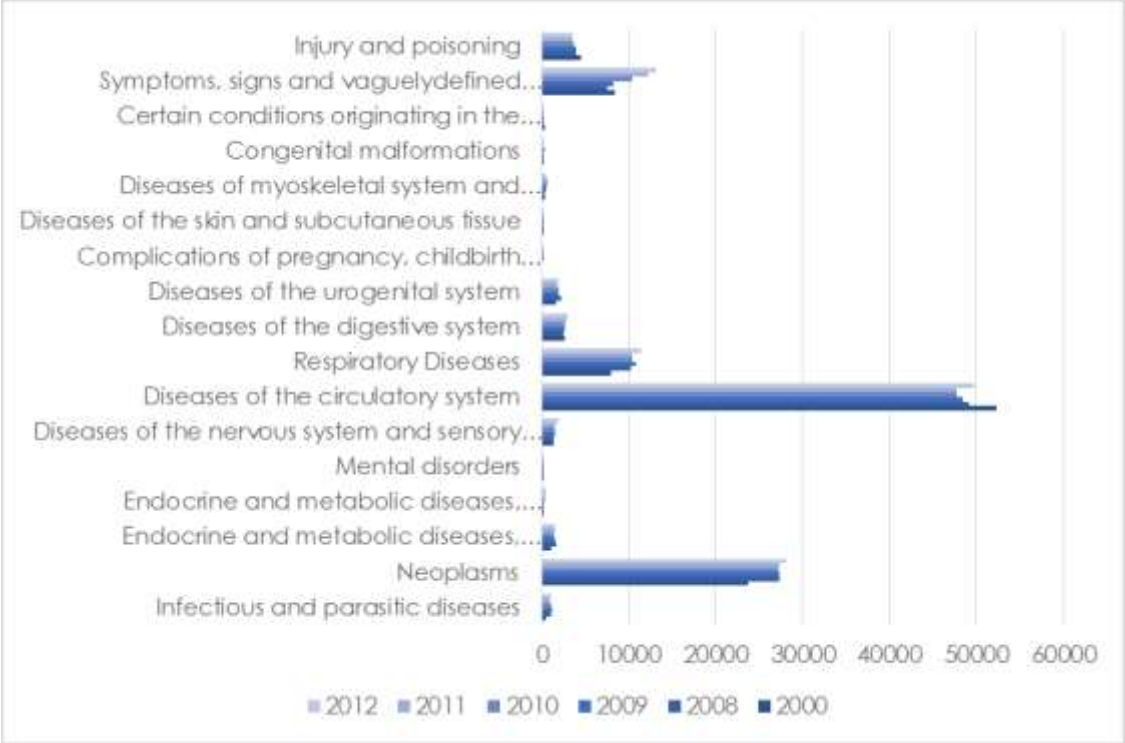
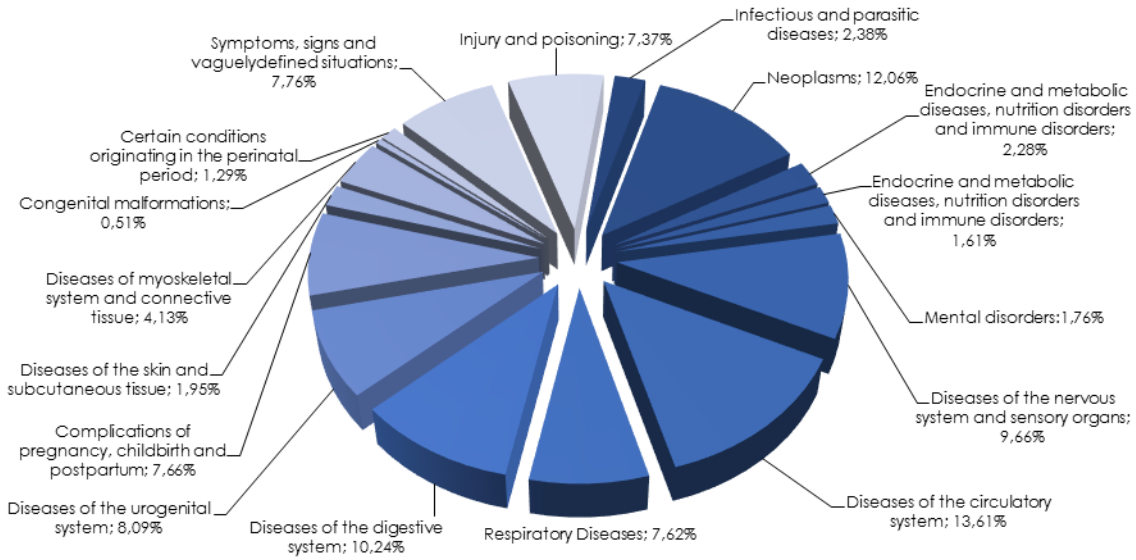


Figure 6: Participation rates of every disease in the diseases assemble of the 4th Health District



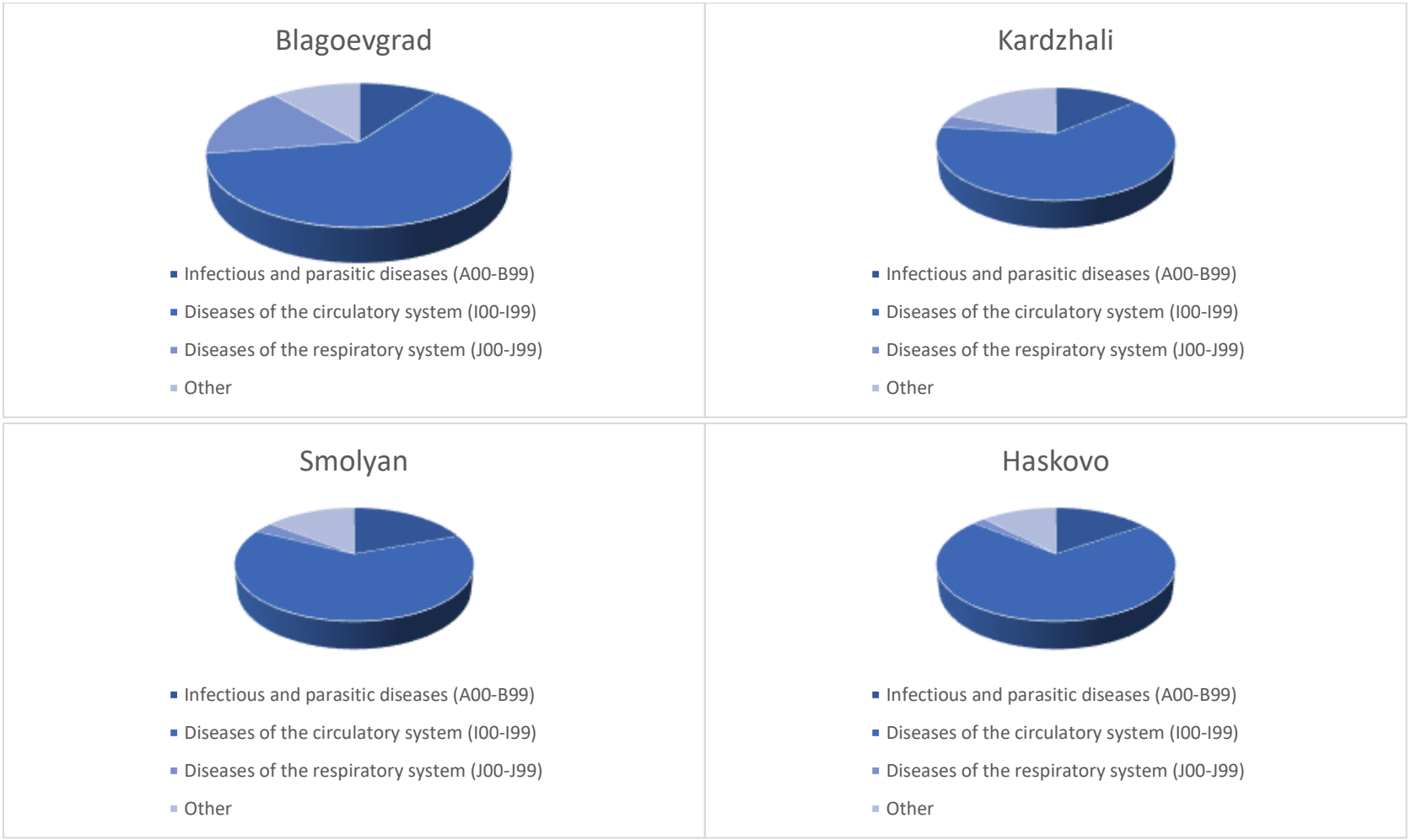
Observing the diagram, appears that the most significant differences between the area of responsibility of the 4th Health District and throughout the Greek territory are observed in injuries and poisonings, in circulatory diseases, diseases of the nervous system and sensory organs. Respectively, significantly lower than the average nationwide, appear respiratory and digestive system diseases and diseases of the skin and connective tissue.

For the Bulgarian Cross Border area the most significant causes of death for the years 2015-2018 include Neoplasms and Heart Disease., as it can be seen in the following table and diagrams.

Table 15: Main causes of death in the Bulgarian CBA

	2017					2018				
ICD, Xth Revision	BG	Blagoevgrad	Kardzhali	Smolyan	Haskovo	BG	Blagoevgrad	Kardzhali	Smolyan	Haskovo
Total	1551.6	2031.4	1765.8	1702.2	1652.3	1544.8	1323.3	1277.0	1569.3	1641.6
Infectious and parasitic diseases (A00-B99)	9.9	6.3	9.9	12.2	4.5	8.5	8.8	3.3	10.3	2.6
Neoplasms (C00-D48)	246.3	299.3	291.2	218.2	271.1	248.6	131.8	175.7	303.7	253.4
Diseases of the blood and blood-forming organs and certain disorders involving the immune mechanism (D50-D89)	2.0	2.8	2.1	2.6	1.3	2.1	0.3	-	0.9	1.3
Endocrine, nutritional and metabolic diseases (E00-E89)	22.4	35.4	20.2	22.7	20.2	24.3	3.6	5.3	18.8	4.8
Mental and behavioural disorders (F01-F99)	1.1	1.3	3.1	11.3	1.8	1.3	1.6	3.3	1.9	0.4
Diseases of the nervous system and the sense organs (G00-H95)	12.5	16.3	13.7	26.2	12.1	13.4	25.1	5.3	15.0	34.8
Diseases of the circulatory system (I00-I99)	1017.5	1376.1	1149.7	1140.0	1047.2	1004.2	826.1	806.0	987.3	1153.6
Diseases of the respiratory system (J00-J99)	64.5	76.2	64.5	94.3	66.1	69.3	217.6	46.1	48.9	34.8
Diseases of the digestive system (K00-K92)	54.8	57.6	67.1	63.7	74.6	56.2	23.2	36.8	82.7	43.1
Diseases of the skin and subcutaneous tissue (L00-L99)	0.8	0.7	2.2	0.9	4.9	0.7	-	0.7	-	0.4
Diseases of the musculoskeletal system/connective tissue (M00-M99)	0.5	0.5	0.6	-	-	0.5	-	-	3.8	0.4
Diseases of the genitourinary system (N00-N99)	21.9	27.4	29.7	21.0	30.6	21.9	13.7	19.1	24.4	12.2
Complications of pregnancy, childbirth and puerperium (O00-O99)	0.1	0.1	-	-	-	0.1	-	0.7	-	-
Certain conditions originating in the perinatal period (P00-P96)	2.9	2.9	3.1	0.9	3.6	2.5	1.6	1.3	0.9	3.5
Congenital malformations and chromosomal abnormalities (Q00-Q99)	1.5	2.6	1.5	1.7	2.2	1.4	1.6	-	0.9	1.7
Symptoms, signs, ill-defined causes (R00-R99)	54.9	69.5	63.6	55.0	71.9	53.9	47.0	140.1	35.7	57.0
External causes of morbidity and mortality (V01-Y98)	38.1	56.5	43.4	31.4	40.0	36.2	21.2	33.6	33.9	37.4

Figure 7: Main causes of death per district in the Bulgarian CBA



At this point, it is worth mentioning the main factors responsible for the poor quality of life and who - according to the European Commission - lead in many cases to instances of the abovementioned categories:

Table 16: Factors responsible for the poor quality of life

Disease	Factors of influence
Accidents	Driving under the influence of alcohol, non-compliance with security measures, defective products, poor services, environmental Problems
Cancer	Smoking, alcohol consumption, nutrition, genetic / hereditary factors, exposure to radiation, carcinogens
Cardiovascular diseases	Smoking, alcohol consumption, nutrition, genetic / hereditary factors, Anxiety / Stress, lack of exercise
Communicable / Infectious diseases	Poor hygiene, polluted / unclean drinking water, non-compliance with measures of sexual behaviour, use of drugs and formulations, nutrition, transfusion of infected blood
Use of drugs and formulations	Socio-economic problems, Psychosomatic disorders, Anxiety / Stress
Musculoskeletal	Low quality of work environment, physical stress, nutrition, lack of exercise.
Respiratory	Environmental problems, Smoking, Genetic / hereditary factors
Mental/Psychological Illnesses and Suicide	Socio-economic problems, genetic factors, Anxiety / Stress

Source: European Commission

Regarding the above factors and according to the European Commission's data it should be noted that both Greece and Bulgaria are very high in the percentage of smokers with 27 and 28% respectively, which is much higher than the EU average. On the contrary both countries have lower than average percentages of binge drinking. Nevertheless, regarding alcohol consumption, Greece holds the third place in the EU with an average per capita consumption of 11.1 litres. (average of EU 9.4). Concerning obesity Bulgaria has less obesity that the EU average and Greece more.

Factors mentioned above disclose a significant part of the acquired factors affecting the health of the citizens of a country and is therefore an important predictor tool of future morbidity. It

has been clinically proven that "bad habits" such as smoking, alcohol consumption and obesity are major causes of cancer, cardiovascular diseases.

4.2 Overall assessment of the current situation on health sector of the intervention area - SWOT analysis

An integrated planning for health on a cross-border level requires basic strategy configuration steps, which should result from a set of goals that will determine, in the medium term, the successful implementation of the policy based on the priorities selected. This process is methodologically supported by using the SWOT Analysis (Strengths - Weaknesses - Opportunities - Threats). SWOT analysis is a technique that lists and correlates Strengths with areas for improvement, at internal level, and Opportunities with Threats formed under the external activity environment.

Table 17: SWOT analysis

Strong Points	Improvement areas
▪ Coverage of a large number of patients and especially groups with high need for health services (ex. Aged population) ▪ Adequate area of service structures ▪ Incorporating modern technologies - availability of integrated data recording systems in most cases ▪ Monitoring systems in place ▪ Transnational agreements - cooperation. ▪ Stability Pact for South-eastern Europe - Transnational Cooperation Sector: Mental Health for South Eastern Europe. ▪ Health centre/hospital accessibility	▪ Improve overall productivity and efficiency of Health Units. ▪ Homogeneity and assurance of service quality. ▪ Implementation of the family physician model. ▪ Establishment of an integrated system of quality assurance and security of services. ▪ Enrichment of the specialized training programs of medical personnel. ▪ Enhancement of the participation of health professionals in training and education. ▪ Training in service quality issues and use of informatics and management systems ▪ Infrastructure improvement

Opportunities	Threats
▪ Existence of current European roads and opening new ones in the cross-border region. ▪ Available EU co financing ▪ Broadening possible cooperation with neighbouring countries in the Balkans. ▪ Financing Education Actions by Co financed Projects ▪ Utilization of highly qualified and experienced staff ▪ Increased requirements of the population for services and information ▪ Rapid development of technology, therapeutic techniques and equipment ▪ Developments of information technology systems ▪ New medicines and therapeutic techniques	▪ National policy of reducing healthcare and medical expenditure. ▪ Reduced capital investment in equipment and infrastructure. ▪ Reduced private expenditure on health care. ▪ Significant deficits in major National Insurance funds and hospitals ▪ Large immigration wave of qualified personnel due to the crisis. ▪ Lack of cooperation and coordination with relevant ministries. ▪ Continuous changes in the legislative framework. ▪ Lack of evaluation of policies, programs, institutions and individuals throughout the country's health system. ▪ Demographic rearrangements - aging population. ▪ Social transformations and emergence of new user groups. ▪ Displaying dangers with no borders (COVID-19, SARS, Bird Flu, and H1N1). ▪ Emerging infectious diseases worldwide. ▪ Degradation of the environment affecting the health of the population. ▪ Significant percentage of uninsured population in both countries. ▪ Delays in recruitment process and implementation of investment programs.

	▪ Operation of modern competitive private health units.

5 The Impact of the Interreg V-A Program "Greece - Bulgaria 2014-2020" in the field of health in the intervention area

The Cooperation Program Interreg V-A "Greece - Bulgaria 2014-2020" aims at the sustainable and innovative development of the cross-border area without social exclusion. In particular, the specific objectives of the project include the following:

- Further improve and strengthen cross-border cooperation,
- Development and promotion of the cultural and natural heritage of the cross-border area,
- Protection of the local population from the risk of natural disasters (e.g. fires, floods);
- Improvement of the management of water resources,
- Improvement of cross-border connectivity (e.g. reducing travel time, improving road safety);
- Expansion of social entrepreneurship in the cross-border area,
- Strengthening the tourist traffic in the border area,
- Creating growth and new jobs by stimulating entrepreneurial activity and improving the ability of small and medium-sized enterprises to expand their activities beyond local markets.

The total budget (ERDF and national contribution) for the European Territorial Programme "Greece-Bulgaria 2007-2013" is €130.262.835. The total financing consists of €110.723.409 (85%) ERDF funding and €19.539.425 (15%) national contribution.

The eligible area of the Programme consists of the Region of Eastern Macedonia and Thrace (Prefectures of Evros, Kavala, Xanthi, Rodopi and Drama) and the Region of Central Macedonia (Prefectures of Thessaloniki and Serres) in Greece and the South-Central Planning Region and South-West Planning Region (Districts of Blagoevgrad, Smolyan, Kardzhali and Haskovo) in Bulgaria.

According to the Operational Programme "Greece-Bulgaria 2014-2020", "the health status indicators in the cross-border area have not been satisfactory for a long time, despite the satisfactory levels (in terms of quantity) of healthcare infrastructure in the area, indicating a lack of effectiveness and proper spatial distribution of such resources.

The rise of poverty in the cross-border area now exerts increased pressure on health care systems, while it also places vulnerable groups (which have a significant presence in the CB area) at increased risk of peril. At the same time, economic recession and disinvestment prevent many CB area inhabitants from gaining access to healthcare services (uninsured civilians).

Health inequalities in the CB area are shaped by the inequalities in availability, access and quality of services, by the financial burden these impose on people, and even by the linguistic, cultural and gender-based barriers that are often embedded in the way in which clinical practice is conducted.

Supply gaps are still a reality in the border-zone or buffer area, making the extension of health service networks across the border a priority concern. Further, service delivery reforms are needed to transform conventional healthcare delivery into primary care, optimizing the contribution of health services – local health systems, health-care networks, health districts – to health and equity while responding to the growing expectations for better health performance.

Especially in the low-income parts of the CB area, the opportunity exists to reorient existing health services towards primary care, to improve the health of affected communities".

As far as concerns the health sector, the Program includes actions concerning:

- the development of common cross-border plans and principles for the provision of high-quality health care services and the joint treatment of health risks,
- Acquisition of new / upgrading of existing medical equipment of health care facilities in the cross-border area,
- the exchange of good practices for upgrading the knowledge of human resources in the efficient provision of health services as well as the successful handling of emergencies and emergencies.

Those health projects are implemented under the Thematic Objective 9 - Promoting social inclusion, combating poverty and any discrimination / Investment priority 9a - Investing in health and social infrastructure which contributes to national, regional and local development, reducing inequalities in terms of health status, promoting social inclusion through improved access to social, cultural and recreational services and the transition from institutional to community-based services.

The total amount to be granted for the current Programming Period (2014-2020) within the "Greece-Bulgaria" Programme for projects within the within Investment Priority 9a is 12.641.234 €. The total budget of the MediciNet II project is 1.336.408€ which is a 10.5% of the budget for the Investment Priority 9a. The project is co-funded by the European Regional Development Fund (ERDF) and national funds of Greece and Bulgaria.

Below are presented the health projects that are implemented under the Investment Priority 9a.

Title	e-Social Health Care
Acronym	e-SOHECA

Start & End Dates	Oct 24, 2017 & Oct 20, 2019
Budget	764.751,16 €
Lead Beneficiary	Municipality of Nestos
Beneficiaries	Municipality of Topeiros Municipality of Zlatograd
Project Overview	The project idea is to establish a responsive e-social health care system which will include advanced medical equipment connected to a web-based system, in order to provide ad-hoc healthcare to anyone in need. The overall objectives of the project are summarised as follows: a) to create web medical files for the habitants of the area, where all of the data from the measurements will be uploaded and stored, and made accessible at any time via the system by doctors volunteers etc., b) to provide health and social care services to elderly habitants and disabled people and c) to give incentives to network participants, which will guarantee project success and sustainability; d) to eliminate social discrimination and promote equal treat and social inclusion of people no matter where they live. This system has an indirect effect which facilitates the prevention of medical emergencies and will also contribute to any studies regarding the medical situation of the area, as it will have the capacity to store the measured data (securely, anonymously) in order to provide vital demographic measurements and data for future use.

Title	Receive Emergency/Daily needed HEALTHcare through innovations in the cross-border area
Acronym	E/HEALTH
Start & End Dates	Sep 22, 2017 & Sep 21, 2019
Budget	1.391.408,01 €
Lead Beneficiary	Centre for emergency care Kardzhali
Beneficiaries	General Hospital of Kavala Medical Association of Kavala
Project Overview	E/HEALTH project includes activities that improve the cooperation between both countries in the health sector in the cross-border area, enhances the facilities for the provided services in key-role regional hospitals improving medical services quality, enhances the competence of the Emergency Unit and the Primary Health Care in

	Kardzhali and the Emergencies at the General Hospital of Kavala in terms of equipment and capacity of medical staff (doctors and paramedics), upgrades the networking of medical care providers in the CB area and improves the Civil Protection Stakeholders' cooperation in emergency situations. The telemedical tools for the ambulances and hospitals and also the mobile units in the targeted test sites will substantially add to the capacity of the limited number of medical specialists to react and response in the emergency situation caused by natural or human based disaster situations.

Title	Improving Healthcare Access through a Personal Health Monitoring System
Acronym	eHealth Monitoring
Start & End Dates	Oct 31, 2017 & Oct 30, 2019
Budget	629.753,24 €
Lead Beneficiary	Centre of Caring and Solidarity of Komotini Municipality
Beneficiaries	Association "EURORADAR" Central Union of Municipalities in Greece Democritus University of Thrace - Department of Economics Medical Association of Rodopi Municipality of Kirkovo
Project Overview	The main target of the project is to study, design and implement a novel, user friendly, flexible, highly efficient, interactive mobile application for health monitoring. The project contributes to E2020 strategy regarding "smart growth", "sustainable growth" and "inclusive growth" objective by promoting "access for all" to health care using telemedicine and telecare infrastructure and other technology-oriented health care provision methods

Title	Reducing access inequalities in primary healthcare for socially significant diseases at CB Area's deprived communities
Acronym	equal2health
Start & End Dates	Dec 15, 2017 & Dec 14, 2019
Budget	1.196.185,00 €
Lead Beneficiary	General hospital of Thessaloniki "G. Papanikolaou" - PHT Organic Unit Psychiatric Hospital of Thessaloniki
Beneficiaries	Cardiology Society of Northern Greece Diagnostic and Consulting Centre "Aleksandrovska" Ltd

	Intermunicipal Agency of Western Countryside of Thessaloniki 'Nefeli' Multispecialty Hospital for Active Treatment Devin JSC Regional Health Insurance Fund of Blagoevgrad
Project Overview	The general objective of the Project is to reduce health inequalities in CB area by protecting citizens from socially sensitive diseases, promoting health prevention, foster supportive environments for healthy lifestyles and encouraging innovation in health. The Project will focus on the following categories of diseases: a) main non-communicable diseases (NCDs) mainly cardiovascular diseases (including cholesterol), chronic respiratory diseases and diabetes 40% of the population affected b) Psychiatric (mental) diseases Both of the above categories of diseases are related to deprivation, poverty, inequality and other social and economic determinants of health. The main delivered outputs of "equal2health" project are: 1) 1 joint "Observatory equal2health for socially significant diseases" in CB area 2) 2 Mobile Units for providing medical exams and prevention awareness campaign in all CB area. 3) 2 Pilot Action implementation on deprived & isolated communities (1 in Roma community in Diavata Thessaloniki, 1 in Mountainous/rural isolated area of Nedelino Municipality in Rhodopi mountain). 4) Awareness campaign to main target population and to Medical Staff and Authorities 5) Policy recommendation on reducing health inequalities and dealing with the commonly and socially significant diseases.

Title	Improving quality and accessibility of social health care services in cross-border regions
Acronym	Health Care Centre
Start & End Dates	Oct 10, 2017 & Oct 09, 2019
Budget	1.125.370,50 €
Lead Beneficiary	Regional health inspection-Blagoevgrad
Beneficiaries	"Papageorgiou" General Hospital Centre for emergency medical care -Blagoevgrad Office of Social Protection, Solidarity and Sports and Education of Lagadas Municipality

	Organisation of Social Protection and Solidarity of Municipality of Chalkidona
Project Overview	The project supports the effective implementation of public health policy in the territory of Thessaloniki Region and Blagoevgrad Region for improving quality and accessibility of social health care services in cross-border regions in accordance with the legislation and the recommendations of the EU, with a view to preventing possible risks to the health of the population in the CB region by providing mobile medical equipment for the project partners - the supply of mobile health care units and specialized equipment for telemedicine in remote border areas, technical and laboratory equipment.

Title	Provision of Health care and Social services to vulnerable communities in the BG-GR CB area
Acronym	HS-Care
Start & End Dates	Oct 18, 2017 & Oct 17, 2019
Budget	791.718,47 €
Lead Beneficiary	Municipality of Strumyani
Beneficiaries	Association of Cancer Patients and Friends of Evros Prefecture - SinehiZO Municipality of Topolovgrad
Project Overview	The objective of the project is to promote social inclusion and to create conditions for the integration of persons with disabilities, disadvantaged children, persons sentenced to probation, elderly people with mental health problems, cancer patients and their families by opening new and renovation of existing centres for social services in the municipalities Strumyani and Topolovgrad and purchase of mobile unit in Evros.

Title	Integrated Territorial Synergies for Children Health and Protection II
Acronym	INTERSYC II
Start & End Dates	Sep 05, 2017 & Sep 04, 2019
Budget	902.452,00 €
Lead Beneficiary	The Smile of the Child
Beneficiaries	Municipal Development Agency Of Komotini Municipality Nadja Centre Foundation Regional Inspectorate of Education - Blagoevgrad
Project Overview	The addressing of crucial social problems such as trafficking, which is linked directly to the disappearances of children, the support of

	families in crisis and the ensuring of good health for children are decisive factors for keeping the local population in its residence, strengthening the relationships between the two sides and creating a favourable environment for the development of sustainable economic activities. The activities of INTERSYC II will cover even extended areas with the same and even more intensive needs of preventive medicine actions for children, especially under the current socioeconomic circumstances. The participation of Regional Inspectorate of Education of Blagoevgrad will give the opportunity to SOC to expand activities and project results.

Title	Improving access and quality of health services in inaccessible and remote settlements of the border region of Gotse Delchev Municipality and Municipality of Paggaio
Acronym	Med4All
Start & End Dates	Sep 05, 2017 & Sep 04, 2019
Budget	917.042,20 €
Lead Beneficiary	Municipality of Gotse Delchev
Beneficiaries	Municipality of Paggaio
Project Overview	The overall objective of the project is to reduce inequalities in terms of health status of local population by improve access to quality health care - primary care in difficult accessible/remote areas of the border region through introducing a telemedicine in CB region.

Title	Remote Healthcare Service Provision
Acronym	RemoteCARE
Start & End Dates	Oct 12, 2017 & Oct 11, 2019
Budget	927.549,94 €
Lead Beneficiary	Municipality of Oraiokastro
Beneficiaries	Institute of Informatics and Telecommunications (IIT)-National Centre of Scientific Research "Demokritos" MPHAT "SOUTHWEST HOSPITAL"
Project Overview	The cross-border area is a rather rural area including remote villages with difficult access to large urban centres where health-care units exist. As a result, the rural population does not receive primary healthcare services. The proposed project aims at solving this problem by providing healthcare services to the targeted population on a regular basis with an emphasis on prevention and early diagnosis.

	The project will develop two mobile health care units (one for each country) staffed with a multidisciplinary team (a general doctor, a nurse and a social worker) that will visit the population on a regular basis. Each mobile health unit is expected to serve 128 patients from the first month and 100 additional people during the second month.

Title	SMART MEDICINE
Acronym	SMART_MED
Start & End Dates	Sep 05, 2017 & May 04, 2020
Budget	1.163.516,92 €
Lead Beneficiary	Municipality of Dimitrovgrad
Beneficiaries	Eastern Macedonia and Thrace Institute of Technology, Department of Nursing Paranesti Municipality Legal Entity of Social Solidarity, Pre-school and Education
Project Overview	The overall objective of the project is to invest in health infrastructure which contributes to regional and local development, reducing inequalities in terms of health status. The purpose of the Project is to improve the effectiveness of the primary health care system and indirectly manage to provide better health coverage to deprived communities shifting from the institutional to community-based services. As such it concentrates on actions that promote the quality and efficiency of primary care services. The main output is the development of Joint eHealth Data Base of the citizens of the two partnering areas as well as the establishment of a Practice for Telemedical Services and a Trans-border team of specialists (3 from each side) through the Pilots. The project will also develop a sustainable Community-based primary health care network that will help to progressively shift from the institutional to community-based services in order to decongest hospitals service volumes and increase overall health care capacity and responsiveness. The network will cover the cross-border area of Drama, Evros and Haskovo.

Title	Strengthening primary Medical care in IsoLated and deprived cross-border arEas
Acronym	SMiLe
Start & End Dates	Oct 12, 2017 & Oct 11, 2019

Budget	1.327.661,62 €
Lead Beneficiary	4th Health District of Macedonia-Thrace
Beneficiaries	Aristotle University of Thessaloniki, Department of Medicine Multi-profile Hospital for Active Treatment of Ardino Municipality of Harmanli National Emergency Aid Centre
Project Overview	The main project aims are the (i) the upgrading of 6 PHC units and 3 small hospitals all located in remote and disadvantaged CB territories, (ii) the creation and operation of a modern Training Centre for PHC Practitioners, (iii) a set of studies focusing on the improvement of the accessibility in selected Healthcare Units in the CB area, including the preparation of a toolbox for Equal Health Provision and (iv) the development and operation of an IT Platform for the evaluation of PHC Services.

Title	Policies for Enhancing Access to Health Services in Deprived Areas
Acronym	The Healthy Municipality
Start & End Dates	Nov 01, 2017 & Oct 31, 2019
Budget	1.135.147,40 €
Lead Beneficiary	Regional Development Agency of Rodopi S.A.
Beneficiaries	Agency for Transnational Training and Development Aristotle University of Thessaloniki - Department of Economics Association of Rhodope Municipalities Municipality of Arriana Municipality of Iasmos Municipality of Krumovgrad Municipality of Momchilgrad Regional Health Inspectorate - Haskovo
Project Overview	The overall objective of the project is the designing and introducing of prevention policies at Municipality level to the remote CB areas. The project's objective contributes to the implementing of prevention actions addressing the local population, the introduction of prevention policies and capacity building at Municipality level in the remote areas (developing tools-pilot applications to support their prevention policy), by setting up a CB lab on Municipal health prevention. The project concentrates on actions that promote primary care services and actions of CB added value such as digital data base in each area with patient cards, digital alert system, digital Municipal health platform in

	each area, digital networking local health structures, all designed under a common methodology.

The implementation of the all the above projects will contribute to the achievement of program specific objective "t*o improve access to primary and emergency health care (at isolated and deprived communities) in the CB area*". The implementation of the planning activities of the projects will result will result in the strengthening of health infrastructures and social infrastructures that will contribute to national, regional and local development by reducing inequalities in the health sector by promoting social inclusion through improved access to social, nature and leisure services, as well as the transition from institutional care to quality care.

6 Identification - capitalization of knowledge from the project implementation - results of primary research

6.1 Difference in differences Analysis

6.1.1 Data

In the present analysis eight health centres, located in rural areas, are under examination. The treatment group is consisting of

Figure 8 Visits

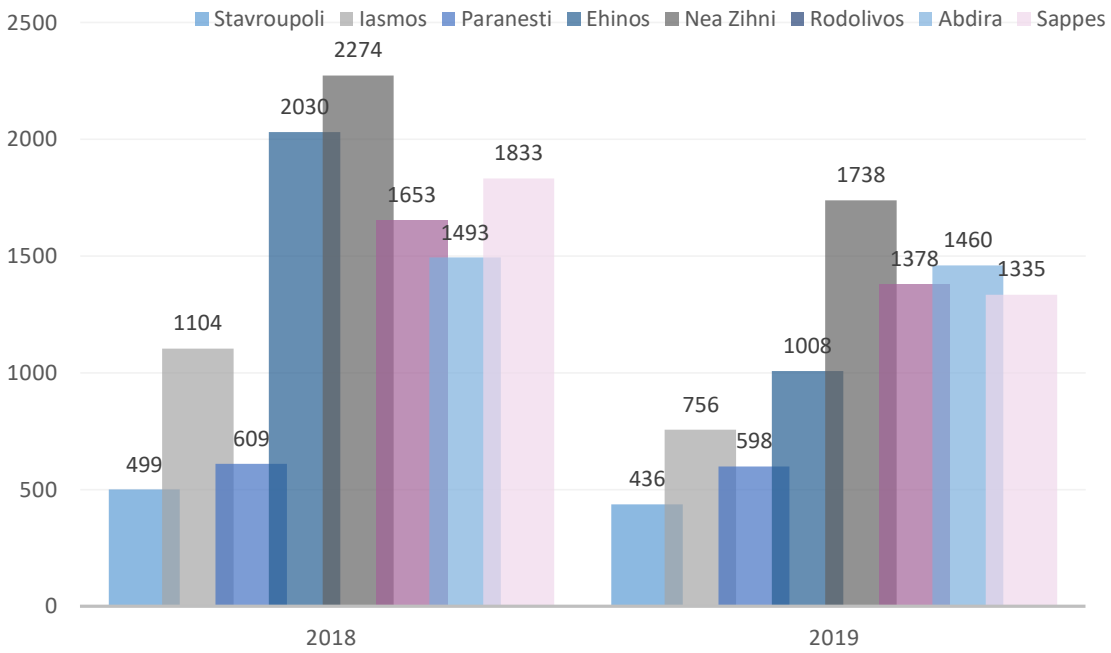


Figure 9 x-rays (number)

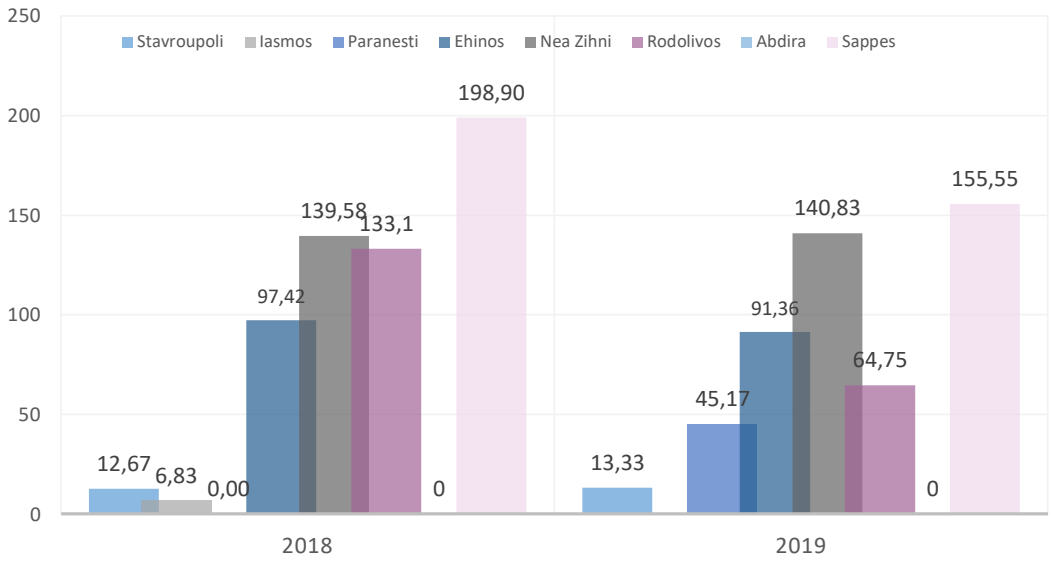
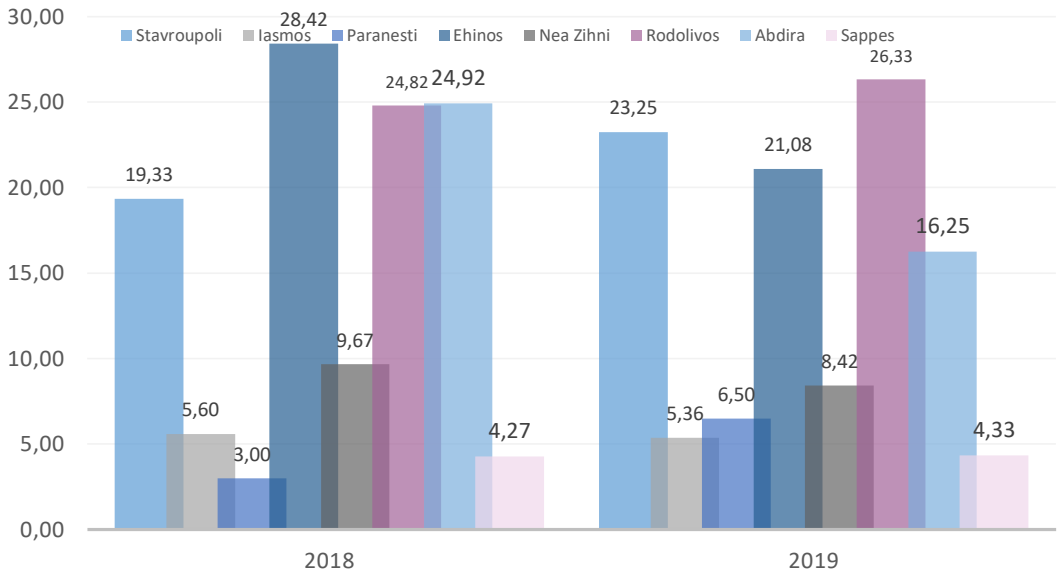


Figure 10 Patient transfers



The fist model was about the number of the visits. Although the differences between the two groups are statistically significant before and after program implementation, the interaction term is positive with a value of 80.21 and non-statistically significant (p-value = 0.519> 0.05). The test denotes that the impact of the project had no statistically significant impact on number of visits at the health centres involved in the program and get the treatment.

Table 18 Difference-in-Differences Estimation Results, Visits

	Before		After	
Control	47		48	95
Treated	48		48	96
Outcome var				
Before	visits	S. Err.	|t|	P>|t|
Control	1958.489			
Treated	1096.604			
Diff (T-C)	-861.885	87.984	-9.80	0.000***
After				
Control	1641.750			
Treated	860.083			
Diff (T-C)	-781.667	87.520	8.93	0.000***
Diff-in-Diff	80.2196	124.101	0.65	0.519
R-square				0.51
**Inference: *** p<0.01; ** p<0.05; * p<0.1				

On the other hand, with regard to the number of x-rays, it appears that the areas that implement the project (upgrading medical equipment) increased the number of x-rays, which is an expected result. In this case the interaction term equals to 56.34 and is statistically

significant (p-value = 0.002> 0.05). In other words, the treatment effect of the project in the treatment group is positive in this case.

Table 19 Difference-in-Differences Estimation Results, x-rays

	Before		After	
Control	32		35	67
Treated	48		48	96
Outcome var				
Before	visits	S. Err.	|t|	P>|t|
Control	156.094			
Treated	29.229			
Diff (T-C)	-126.865	12.597	-10.07	0.000***
After				
Control	119.371			
Treated	48.851			
Diff (T-C)	-70.520	12.324	5.72	0.000***
Diff-in-Diff	56.344	17.623	3.20	0.002***
R-square				0.46
**Inference: *** p<0.01; ** p<0.05; * p<0.1				

Last but not least, the number of Patient transfers wasn't affected by the treatment policies or else, there are no statistically significant results (Table 4).

Table 20 Difference-in-Differences Estimation Results, x-rays, and Patient transfers

	Before		After	
Control	46		48	96
Treated	43		47	90
Outcome var				
Before	visits	S. Err.	|t|	P>|t|
Control	15.978			
Treated	15.256			
Diff (T-C)	-0.722	2.221	-0.33	0.745
After				
Control	13.833			
Treated	14.23			
Diff (T-C)	0.401	2. 149	0.419	0.852
Diff-in-Diff	1.123	3.091	0.36	0.717
R-square				0.01
**Inference: *** p<0.01; ** p<0.05; * p<0.1				

Although there are no statistically significant treatment effects in the areas under investigation it is found that in terms of medical services (x-rays), the treatment makes a difference. Of course, it is worth noting that this methodology can be repeated over the next few years to see the impact of the program in 1, 2 or 3 years.

Another argument that can be related to results is the employed variables. The choice of variables is directly proportional to the objectives of the program, however in the area of health services other factors may influence the effectiveness and influence of a particular policy. The use of instrumental variables in evaluation could abruptly change the results.

6.1.2 Conclusions

The above analysis was conducted based on the counterfactual impact evaluation method of difference in differences. The current method is proposed by the Interact Programme as one of the proposed counterfactual methods of programme impact analysis.

Based on the results of the analysis the SMiLe project has clearly been an effective project. As it is shown by the analysis the outputs of the project have been achieved. In particular, the increase on the locally conducted X-rays which has been the main output of the project has been shown to be significantly improved before and after the intervention.

Nevertheless, while the project has been shown to be effective. There are two possible explanations for this:

- The theory of change of the project is not valid
- The impacts of the project have not been yet manifested

Theory of Change

The problematic theory of change explanation should be the first explanation to be examined in detail, because it leads to important conclusions about the scope of the project and the programme in general. Based on this explanation, the actions implemented though successful are not contributing to the scope and specific objectives of the programme. If this case is valid it would mean that the scope of the projects should be different.

However, it seems that this should not be the case in the specific project. The project has been addressing the needs of Primary Health Centres and Hospitals of the Public Healthcare systems which are the most important healthcare providers in the CBA. The project improves the infrastructure and the capacity of the centres and hospitals supporting them in their effort to provide high quality healthcare. Therefore, the proposed theory of change is not only clear, but is also straight forward without complicated steps. Thus, it is difficult to make a case for a problematic theory of change.

That said it might be the case that the project does not have the expected impacts because other inputs that are not eligible within the project are missing, such as specialized personnel etc.

Impact lag

Another possible explanation is that the impact of the project has not yet been manifested in the monitoring indicators of the project. This might very well be the case since based on the data only one year of post treatment data have been taken into consideration. Changes in the number of visits in primary and secondary healthcare are not expected to change over a short period of time. Local communities need to get to know about the new capacity of the local primary health providers for the change to be manifested in the monitoring indicators. However, if that is the case the expected changes should be manifested in an analysis conducted at a later stage such as the post-implementation programme evaluation.

SMiLe has been shown to be effective as far as the outputs of the project are concerned. The main outcome expressed as number of x-rays conducted has been shown to be significantly improved. The analysis has not shown significant changes in the monitoring indicators of the programme, most probably because the post treatment period is short.

7 Presentation of Best Practices on the Sustainability and Capitalization of European Projects in the Health Sector

The establishment of cross-border cooperation in the health sector is a practice which began to be applied long before the implementation of Directive 2011/24 / EU "Cooperation for Health Care." These collaborations are formed mainly in order to meet the necessity of servicing patients who live in border regions. It is very important to understand both the motivations and the needs that had led to cross-border collaboration. The following questions should be answered:

- Why is this happening?

- Who benefits from this?

- Should this particular action be encouraged?

It is substantial to examine the tools through which institutions are linked to cross-border collaborations. It should be understood how the cooperation works, what is the level of difficulty and which are the necessary sources to be encouraged. The European Community is supportive in relative initiatives. In addition, it is crucial to understand how the cross-border cooperation interacts with the context in which it is implemented. There are three dimensions that must be borne in mind: the territorial context, the health system and the political system. All these factors affect the motives and pressures identified in cross-border cooperation.

The study of "good practices" in cases of cross-border cooperation in the health sector is carried out to extract specific conclusions related to the following:

- How the cooperation between hospitals which operate in different contexts could function, and how these differences could be surpassed. How the collaborative institutions handle the problems and difficulties that arise during the course of their cooperation.
- Who is related to the benefits resulting from the cross-border collaboration? It difficult to draw the motivation of partners and organizations cannot easily record them. However, if the required research to the beneficial of the cross-border cooperation is done, the incentives may arise from which the respective collaborations start, and thus obtain a more complete picture of the reasons for which they occur.
- What the role of the European Community is. While there are many collaborations which are named «European" or receive European funding, it should be investigated whether they could be independently performed to the potential aid or to regions outside the European Union.

- What the good examples from which one might benefit by learning are. In order to be able to identify the potential benefits, one should study cases of cross-border co operations from which one could adopt advantages and good practices which have been implemented.

One of the key objectives of cross-border cooperation in the health sector is to establish a balanced relationship between supply and demand in order to improve patients' mobility in the health system. In addition, the systematization of concurrent utilization methods and practices (which are considered effective and have been developed in an environment other than the particular health provider established in a region), are achieved through the cross-border cooperation. Knowledge and experience exchange between cooperating sides could improve their dedication and the results of the project.

7.1 Project Trisan

Table 21: Trisan' s project ID

Title	TRISAN - Optimising cross-border cooperation on healthcare to meet the needs of public authorities and healthcare providers
Object	The creation of a tri-national skills centres to coordinate and develop cross-border cooperation on health
Border area	Upper Rhine between France, Germany and Switzerland
European Programme	Interreg VA – France-Germany-Switzerland 2014-2020
Budget	€801.916
Status	Closed on 30/06/2019
Website	http://www.trisan.org/

TRISAN is a project co-financed by the INTERREG V A Upper Rhine programme. It stems from the collaboration of the AG health-care policy of the German-French-Swiss Upper Rhine Conference and the Euro-Institut. The main objective of the joint-cooperation in the healthcare sector is to encourage cross-border exchanges on health topics, with the aim to support or create stakeholder networks, to encourage the development of cross-border cooperation projects and to optimize cross-border cooperation on healthcare in the Upper Rhine. In order to strengthen this cooperation, the tri-national competency centre TRISAN was brought to life.

The tri-national cross-border project TRISAN aims to identify, coordinate and amplify the synergies born of several decades of cooperation on health in the Upper Rhine. It is intended to support administrations and healthcare providers on every side of the borders in order to best structure and develop partnerships and projects.

The idea for the TRISAN project came from the difficulties experienced by the Euro-Institut and its partners when conducting cross-border health projects. Not only do these projects involve rules and protocols which vary greatly from one side of the border to the other, but they also concern multiple administrative levels.

In 2015, in response to the experiences gained in the Upper Rhine area, the institutional partners came together in a healthcare working group to consider setting up a centre to develop cross-border healthcare cooperation in collaboration with the Euro-Institut. During the 18-month-long preparation and development phase, appropriate partners and funding were found for the actual launch of the project.

The TRISAN project was established in June 2016. It created a tri-national skills centre with multiple aims: networking healthcare actors, supporting project design and the improvement and dissemination of experiences in the matter of cross-border medical knowledge.

The project is organised by the Euro-Institut, on the French side by the Grand-Est regional health authority (ARS), on the German side by the Ministerium für Soziales und Integration Baden-Württemberg, the Regierungspräsidium in Karlsruhe, and the Ministerium für Soziales, Arbeit, Gesundheit und Demografie Rheinland-Pfalz, and on the Swiss side by the Bâle-Ville health department, the cantons of Bâle-Ville, Bâle-Campagne and Argovie, and the Swiss Confederation. The centre opened on 19 December 2016.

Obstacles

Although the partners have known and worked with each other for many years, setting up TRISAN was not straightforward; no cross-border healthcare project is. It appears that health systems differ widely from one side of the border to another, and consequently the parties involved had to work hard to identify and negotiate their common denominators. This solid basis was the essential precondition enabling the operators to plan the implementation of the project. Linguistic and cultural diversity, coupled with the differences in terms of background and working methods, also complicated the process.

Developing and piloting cross-border projects calls for certain aptitudes; for example, openness towards others and a real desire to learn about the neighbouring system. It is essential to show great flexibility and a capacity for innovation. These qualities do not enable to erase the differences between the systems concerned, but rather to overcome them by integrating them into the reasoning and modes of action within these territories.

The added value produced by health cooperation seems easier to identify in the field of research. Firstly, it enables the teams to develop synergies between their strengths; and secondly, it develops the capacity to work collectively. This type of scientific collaboration is a genuinely experimental field.

Key factors for consolidating cooperation

For such dynamics to succeed, it is essential to conceive the health project as a multi-sectoral project, consequently calling for solutions that are at the intersection of the sectors concerned (medical, administrative, policy, insurance, communication, managerial, legal, etc.). Common objectives must be established right from the start, with a continuously developing process of dialogue. The project also requires sufficient long-term political, financial and administrative support.

Communication, both external and internal, is an important aspect. Among the main obstacles identified to local cross-border healthcare is the lack of transparency as to the patient rights and the possibility or not of reimbursement. The low profile of cross-border healthcare is a major obstacle which must be resolved upstream, by disseminating the maximum possible information about current projects and, in particular, their results.

Finally, two other factors are indispensable: commitment and a sense of community. Success often relies on a few key people with unfailing commitment, often of a personal nature. This is both a strength and a weakness for healthcare cooperation, because some of these people may be assigned elsewhere. It is also essential for the project to develop a feeling of belonging that creates a real sense of community, drawing on methods of win-win cooperation for all the stakeholders, including patients.

7.2 Project INTERSYC

Table 22: INTERSYC' s project ID

Title	INTERSYC Integrated Territorial Synergies for Children Health and Protection
Object	Coordination of activities to improve prevention, protection and health for children and families
Border area	Central Macedonia, eastern Macedonia and Thrace (Greece) and the southern centre and south-west regions of Bulgaria
European Programme	European Territorial Cooperation Programme Greece – Bulgaria 2007-2013 2007-2013:
Budget	€624 362
Status	Closed on September 2015
Website	https://intersyc.eu/

The «Integrated Territorial Synergies for Children Health and Protection-INTERSYC» project was funded by the European Territorial Cooperation Programme "Greece - Bulgaria 2007-

2013"and was the big winner of the "Interreg 25 years Project Slam", a competition organised on the occasion of the celebration of the 25th anniversary of Interreg.

The border between Greece and Bulgaria runs through a mountainous region remote from any urban centres. This remoteness causes significant challenges on both sides of the border in terms of public services, in particular in the area of health.

This translates into gaps or even a total absence in healthcare provision in the area. This situation also creates shortfalls in prevention and social protection. It became also apparent that the remoteness was causing an even more serious absence of coordination in case where child abuse or trafficking were observed but not acted upon.

The INTERSYC project (INTegrated TERritorial SYnergies for Children, Health and Protection) was established between 2013 and 2015. It was set up by the organisation The Smile of the Child in coordination with the Bulgarian non-profit association Chance, the Bulgarian Nadja Centre Foundation, the towns of Kavala and Paggaion (Greece) and the Kardzali regional health inspectorate (Bulgaria).

Bringing together these diverse skills and expertise made it possible to overcome regional isolation. The partnership made it possible to carry out a series of measures, seminars and training courses to improve protection, prevention and healthcare, particularly for children and their families.

The INTERSYC project has included a range of activities targeted on children through three priority axes. The first addresses the emergency situations caused by the disappearance of children, the second concerns prevention and care, and the third offers health and social services to families and children in difficulty.

The first axis targets cases of child disappearance or trafficking. It offers training and knowledge transfer so that people can find information, and, above all, it focuses on taking action when these situations arise. On the Bulgarian side, the use of existing European tools in the field were encouraged, in particular the use of the missing child hotline 116 000 and the coordination platform combining the European Child Alert Automated System (ECAAS) and the Amber Alert system. The South-eastern European Centre for Missing and Exploited Children (SEEC) was also promoted in Bulgaria.

Secondly, INTERSYC develops activities to improve child health, particularly through prevention. This objective is achieved through mobile medical units and specialist visiting staff on both sides of the border. These mobile services include the medical prevention units run by The Smile of the Child, including a unit specialising in ophthalmology, and a mobile multi-clinic called Hippocrates which has audiology, cardiology, and paediatric and dentistry departments. These units are intended to provide support to local doctors, especially on the

Bulgarian side of the border. Prevention activities have exposed flagrant shortcomings in the prevention of ill-health, and in addition to the medical impact they have uncovered cases of child abuse or neglect. Prevention has therefore been extended beyond medicine into the psychological and social fields.

Finally, the third priority axis targets a more general improvement in the availability of health and social services directed to children and families in difficulty. It offers training courses for staff working with children. In both Greece and Bulgaria, it encourages the setting-up of aid centres for families. Seminars providing first-aid training are offered to volunteers and staff working with children. These courses are based on the commendations and principles of the European Resuscitation Council (ERC) or the Bulgarian Red Cross and are organised in the municipality of Paggaio in Thessaloniki in Greece and in Kardzhali and Razlog in Bulgaria.

As part of the preventive medicine activities of the project, 7579 medical examinations were carried out in Greece to a total number of 2,022 children. Respectively preventive medicine actions took place in Bulgaria in the cities Sandanski and Kardzhali. The mobile medical unit "Hippocrates", the medical ophthalmologic unit of "The Smile of the Child" and staff of the Greek NGO visited Bulgaria in order to provide support to the local doctors. In Bulgaria, 5.594 medical examinations were undertaken for 1.594 children in total

The project has definitely improved the situation of children and families, but its success does not stop there. In more general terms, it has encouraged public stakeholders, NGOs and associations to collaborate on both sides of the border and together to establish sustainable actions for children. It is interesting to highlight the diversity of the partners who have been involved in setting up this project, including educational institutions, health bodies, and national police services through the ECAAS platform and the fight against the disappearance of children.

The strength and expertise - dating back to 1996 - of The Smile of the Child in Greece, in collaboration with numerous organisations, have enabled the partners to share the now-how and facilities required.

Another key to this success was the fact that The Smile of the Child and the Nadja Centre Foundation in Bulgaria had already worked together for many years in the South Eastern Europe Centre for Missing/ Exploited Children (SEEC) and that different partners of the same nationality were already working together locally.

The question of capitalising on good practices has also been integrated into the approach by organising training. Social workers now have the necessary knowledge, in particular for the local management of first aid. The dissemination of information about prevention and communication with local populations has been developed, in particular using brochures.

The SEEC, which takes action in missing child cases or child exploitation, has expanded its work in Bulgaria through a National Plan to combat child trafficking headed by the Bulgarian foreign affairs ministry.

7.3 Project Healthy mother and child - a pilot cross-border health care program

Table 23: Healthy mother and child project ID

Title	Healthy mother and child - a pilot cross-border health care program
Object	Improvement of health care for mother and child and thus improvement of quality of life in the PL-LT borderland
Border area	Poland and Belarus
European Programme	2014 - 2020 INTERREG V-A Lithuania - Poland
Budget	€1 000 000
Status	Closed on 31/12/2017
Website	http://lietuva-polska.eu/en/interreg.html

The project of Dr. Ludwik Rydygier Voivodeship Hospital in Suwalki and Hospital in Marijampole is a response to the identified problems of unequal access to high-quality medical services in the Polish-Lithuanian borderland for mothers and children. It includes the implementation of a pilot cross-border health care program "Healthy mother and child" which, because of its complexity and innovation, should be seen as an added value representing a significant cross-border effect.

The programme is targeted to the population perceiving an unmet need for health care, including people at risk of poverty and social exclusion and includes activities concerning improvement of quality of infrastructure, training courses for medical personnel, cross-border Academy of Health Leaders, preventive examinations for women and children.

The overall objective of the project was to develop the cooperation of healthcare institutions of the Polish-Lithuanian borderland in favour of equal opportunities in access to improved health services for mother and child, and thus improve the quality of life in the region. Objective achieved through the implementation of a pilot cross-border healthcare programme "Healthy mother and child."

Overall objective consists of a series of specific objectives, which will be possible to achieve through the implementation of mentioned pilot programme, including:

- increase of awareness of women as well as children and their parents from Polish-Lithuanian borderland area about the necessity of preventive examinations, including in particular diagnostics tests laboratory
- increase of availability of Polish and Lithuanian medical personnel to specialized modern medical knowledge
- enable to exchange experience and good practices among medical personnel of Polish-Lithuanian borderland area
- increase of quality of medical infrastructure in the field of mother and child healthcare of Polish-Lithuanian borderland area
- increase of access of inhabitants of Polish-Lithuanian borderland area to the preventive examinations, in particular laboratory
- develop active attitudes and integration among the local community for the implementation of local imitative in the area of health promotion, especially for mothers and children
- increase the level of use of the health care system for the promotion and health education
- increase in the level of the inhabitants of the Polish-Lithuanian borderland satisfaction with the quality of healthcare

The project "Healthy mother and child" is an effective innovative tool of improving health care system by combining a wide complex activities, aiming at improvement of quality of infrastructure of Polish-Lithuanian borderland region, personnel's increase of medical specialist knowledge, enabling of exchange of experience and good practices, increase of awareness of borderland inhabitants of the importance of preventive examinations for the quality of life, activation of representatives of organizations and communities of borderland region to undertake joint local initiatives in the field of health promotion.

The project is co-financed by the EU within the Interreg V-A Lithuania-Poland Programme 2014-2020. The pilot cross-border health care program is such solution that could be continued in the future in the field of mother and child and other fields of healthcare.

This project provides added value to the project through its complexity, and thus its innovation. It is an effective tool for equal opportunities in access to modern medical services, which consists of an optimal range of actions, i.e. the improvement of infrastructure, specialized training for medical personnel, training workshops to prepare local leaders in the field of health promotion and preventive examinations.

The project can be considered as a good example of successful cross-border cooperation of health care units in the Polish-Lithuanian border area in order to improve the quality of health

care. Developed during the implementation of the implementation methods and established contacts should be treated as the basis for further cooperation of the partner institutions of the project, but also to extend this partnership to other health care providers in Poland and Lithuania.

7.4 Healthacross for future

Table 24: Healthacross for future project ID

Title	Healthacross for future
Object	set further steps to improve the quality of life and conditions of life for the population in the border region and to guarantee and expand access to high-calibre health care close to where they life
Border area	Austria – Czech Republic
European Programme	INTERREG V-A Austria – Czech Republic programme
Budget	€1 653 000
Status	Under implementation
Website	-

The main objective of the EU co-founded project "Healthacross for future" between Lower Austria and South Bohemia is to set further steps to improve the quality of life and conditions of life for the population in the border region and to guarantee and expand access to high-calibre health care close to where they life.

The project is co-funded through the INTERREG V-A Austria – Czech Republic programme and it includes all relevant stakeholders from the health sector in the border regions. Regular meetings and events between the project partners guarantee the implementation of the project.

The project focuses on two main pillars:

1. Cross-border health care provision

Bring the benefits of the respective health systems in line with the needs of the local population to allow equal access to medical care on both sides of the border. This is to be achieved by the mutual and optimal use of health infrastructure and resources by focusing on. Main objective is to ensure inpatient cross-border healthcare and expand it to inpatient care for CZ patients.

2. Cross-border health cube

Numerous international scientific studies show a stronger orientation of the health care system towards a decentralized, comprehensive primary health care for Europe. This primary care covers not only the general medical field, but also areas such as physiotherapy, logo therapy as well as the social component. To achieve this, a repositioning of the health professions as well as the establishment of corresponding structural and organizational framework conditions in the extramural care area is necessary. Therefore, the project will plan and prepare a "Cross-border health centre" for the border region.

The main outcomes of the project are:

- Ensuring inpatient cross-border healthcare and expand to inpatient care for Czech patients
- Analyse possibilities of the exchange of medical treatments between Austria and Czech Republic.
- Organise study visits between the participating hospitals for different professional groups
- Analyse opportunities for a long-term cooperation
- Planning and prepare a "cross-border health cube" (= cross-border health / primary health care centre)
- Analyse of performance spectrum, personnel and financial situation for a "cross-border health cube"

The project aimed to provide optimum usability of health services and equal access to health care by all people living in the border region of Lower Austria and South Bohemia (Czech Republic), especially in the "divided" City Gmünd - České Velenice, through close cooperation among health service providers. Especially this region makes evident how cross-border cooperation makes people's everyday lives easier – after all, the hospital in Gmünd is situated directly on the border – and on the Czech side the nearest emergency doctor's vehicle is over 30 km away; indeed, the nearest hospital is 60 km away.

The precursor project "Healthacross" was the first large-scale project on cross-border cooperation in health care between an old and a new EU Member State and acts as a model for other border regions and the current EU enlargement. The follow-up project, "Healthacross in practice", enabled Czech patients from the border region of Lower Austria and South Bohemia to have simple and uncomplicated access to medical treatment at the hospital Gmünd in Austria. In the pilot period from 25 February 2013 to 30 June 2013, around 100 Czech patients received outpatient treatment in Austria. The pilot project was institutionalized and now about 4000 Czech patients have received outpatient treatment at

hospital Gmünd. The new project "Healthacross for future" will use this already good foundation and will set further step in the field of cross-border health care.

The project serves as a best practice in cross-border healthcare for other regions within Europe. The project partners will share their experiences within their own networks (both nationally and internationally). The lead partner is a member of various European networks and ensures a transfer of knowledge to other regions of Europe. The procedures for medical treatment are available and can be transferred to other hospitals as an example for the transfer of knowledge, as well as the experience gained in in-and outpatient cross-border health care, as well as the planning and preparation of a cross-border health cube.

Key learning points

Since the fall of the Iron Curtain, Lower Austria has moved closely to its neighbours, the Czech Republic and Slovakia. Unfortunately, health care is one of the few aspects of daily life that does not work well in cross-border aspects. Therefore cross-border cooperation is gaining in significance in the health sector. Cooperation arrangements between hospitals can help balance out regional demands and guarantee a better provision of health care to the population to reduce health and social inequalities. It can also help in optimizing costs due to the shared use of resources and a better return on resource investment. By leading and carrying out EU-co-founded projects, Lower Austria, through the Health and Social Fund of Lower Austria (NÖGUS) has not only taken responsibility for its own population but also for the population of the neighbouring regions: It's not about moving borders, but about reducing their separating character.

7.5 A hospital for the cross-border region: creation of the new Cerdanya Hospital

Table 25: Creation of the new Cerdanya Hospital project ID

Title	The cross-border hospital in Cerdanya
Object	The creation, construction and cross-border management of a hospital in a mountainous area, integrating French and Spanish staff and receiving French and Spanish patients under the same conditions
Border area	France-Spain-Andorra - Cerdanya plateau / Montagne Catalan, in the Pyrenees
European Programme	Interreg III; Interreg IVA – France-Spain 2007-2013:
Budget	€28 615 385

Status	Closed
Website	www.hcerdanya.eu

The cross-border cooperation project to create the Cerdanya Hospital is the first European new plant configuration initiative that will provide healthcare services to patients of two different countries and health systems.

The idea of creating a new hospital in the border area began in the 1980s. This project would cover the need of the residents of northern Cedranya for quick access to the hospital. More specifically, the time needed to reach the nearest French hospital in Perpignan, especially in bad weather, could severely burden public health. While access to Puigcerda Hospital was easy, in the early 1990s the French patients were very few.

According to various sources, Catalonia developed the original idea to build a hospital in the cross-border area, but no one took seriously the task until the mid-1990s. The reason for reconsidering the idea was the relationship between the director of Puigcerda hospital and the mayor of Puigcerda area. It was observed that there was an increase in the number of hospital visits by French patients without any compensation from the French authorities. Between 1997 and 2002 the number of French patients hospitalized or arrived at the emergency hospital in Puigcerda approximately tripled, while the payment of the proposed compensation was still pending.

This problem was solved with the signing of an agreement between hospitals Puigcerda, Perpignan & the Languedoc – Roussillon Regional Health Agency to make ex post payment of compensation.

A second agreement with the same partners was signed in 2003 (a year after), setting out the relevant procedures for emergencies and births in Puigcerda hospital. These movements for the establishment of the hospital in the border area began in 2002 by the mayors of Puigcerda & Bourg-Madame who submitted a proposal to the French parliament and then approached with serious proposals to other competent institutions. Eventually, after considerable effort, they managed to secure funding from the European Regional Development Fund (ERDF). At the same period, the presidents of the Government of Catalonia and Languedoc - Roussillon signed a letter of intent to prepare a sustainability study for the creation of a new hospital in the Cerdanya.

The elaboration of this study led to some conclusions:

- The project would be viable if there were a joint ownership of the new hospital in the cross-border area of Languedoc –Roussillon Regional Health Agency & Catalan Health Service.

- The new hospital would totally replace the Puigcerda Hospital and provide services to acute cases in the entire region of Sardinia.
- It should be established in Puigcerda and provide integrated services to two different administrative directorates.
- It should respect the particularities in the field of culture and health in both countries.

The project was fully supported by both countries because both sides were secured of the achievement of their individual goals. Catalonia would be able to create local hospital network, which was a government priority, utilizing European funds. On the other hand, France would be able to ensure the provision of high-quality health services in the remote area of northern Sardinia. This motion coincided with the reorganization of the health system in France.

The elements that concerned the cooperating partners were mainly related to the financial support of the project. It was decided that the operating costs of the hospital for the first five years of operation would be covered by 40% from France and 60% from Spain.

The hospitalization costs that should be common to all patients were defined and the number of patients that would visit the unit was determined.

Meanwhile, the French government had to face another major political issue related to its decision to disrupt the operation of treatment/rehabilitation centres for patients with respiratory problems, due to economic factors, while deciding to finance a new hospital. The problem was addressed by entering a new cross-border program within which two new rehabilitation centres would be created in the region, to meet the needs of patients with respiratory problems.

While the project related to the creation of the new unit in the cross-border area was being panned, several issues encountered.

The main issue was the way in which "two cultures, two governments and two countries with different political system" might be combined. The obstacles were overcome because there was a commitment from both sides that believed in the feasibility and implementation of this project.

One of these individual subjects was the choice of equipment. In order for the equipment to become commonly accepted, both sides should agree on the non-application of national protocols and the prevalence of scientific criteria, so as there are commonly accepted solutions. Moreover, hospital computing systems should support both the accounting system of France and Spain and would have to operate in three languages. The cost of computing systems of the hospital approached the 1/3 of the total investment for the equipment.

The application of protocols created difficulties in defining the diseases management method. There were significant differences in the way each country chose to deal with specific diseases. It was decided to use the Spanish protocols in obstetrics and French protocols in radiology.

Even the nationality that a new-born child would take was a problem to be solved, since the parents were French, and the child was born in Spain

The European Union played a crucial role in the described project, because without the resources of ERDF it could not have proceeded even as an idea.

The construction of the hospital began in 2008 and ended in 2012. The opening was anticipated in early 2013. Its capacity was 64 beds, 11 daily hospital positions, 13 emergency beds, 13 laboratories, 4 utility rooms and a magnetic resonance imaging (MRI) scan. The investment reached 31 million Euros; the total cost of equipment amounted to 10 million Euros of which 3 million related to IT systems. According to the planning for the operation of the unit, 201 people - scientific staff will be employed. This figure is increased by 46% of the staff employed in Puigcerda hospital.

8 Suggestions for utilization of the acquired know-how and experience from the partners

After the implementation of two successful projects MEDICINET I και MEDICINET II projects partners have acquired important experience in project management and the use of EU and national funding for improving their capacity to provide health services for the local population, in the cross-border area.

Moreover the proximity of the two hospitals and their good road connectivity are factors that can enhance their cooperation in the future, in order to increase the sustainability of the projects. Moreover the common problems and the similarities both areas face (poverty, social exclusion, aged population etc) make the cooperation in the future necessary.

- Based on a series of interviews with health professionals in both Hospitals (General Hospital of Komotini and Multi-profile Hospital for Active Treatment "Dr. Atanas Dafovski" AD) as well as the systematization of the evaluation reports from the training and other relevant documents that were produced throughout the project's duration, the following issues proposed as more important for the cooperation of the health services in the cross border areas of Rodopi and Kardzhali: Training of medical staff
- Training of Nursing and Paramedic staff
- Disease surveillance (infectious disease and chronic disease) in the cross-border area.
- Planning and training for mass casualties' accidents response in the area of their responsibility
- Planning and training for serious health threats (pandemics, technological accidents and natural disasters)
- Hospital preparedness and share of medical intelligence and information.
- Improvement of Primary Health services in order to limit recourse to specialized Hospital Services.
- Performance of Specialised Awareness Campaigns to the general public about major health hazards in cross-border region. Planning and Implementation measures against harmful habits (smoking, alcohol, etc.)
- Implementing targeted identification of hazards and promoting health protection policies in the fields of education, employment etc. as well as through the action coordination of the social policy institutions operating in these fields
- Development of screening programs for major diseases with high burden in the cross-border area like cardiovascular disease and malignant neoplasms.

9 Evaluation of interventions and actions proposals that can be implemented by both project partners in order to strengthen their position and optimize the services provided

A modern health system at both national and Regional Health Administration, under the European objectives embodied in the National Strategic Plan for Health, should be governed by the following principles:

- Ensure the economic viability
- Be measurably efficient and effective by providing upgraded health services
- Use and promote using e-health services, utilising technology for better access to health services.
- Have a competent, experienced and well-trained staff at all levels and specialties
- Be extrovert and friendly to the environment
- Contribute to increasing the active population of the area of responsibility
- Enhance the protection of citizens against hazardous factors for public health
- Promote the mental health of the citizens of the liability region
- Conduct investigations of risk factors and treatment of diseases and benefit from the results
- Utilise social and health infrastructures to ease the inequalities among the population
- Prioritise the protection of health and not just the management of the disease
- Be effective and combine the quality of the provided services with the efficiency of the system.
- Be flexible with customisation and continuous upgrading without being hampered by cumbersome bureaucratic procedures.
- Be complete - including all levels - and utilise the entire health care staff to the benefit of citizens.
- Ensure workers in the healthcare sector, decent and safe working conditions and adequate remuneration.
- Act rationally, with responsible economic management and not overspending.

In relation to the previous section where the main pillars and strategic objectives for regional institutions in the cross-border area were mentioned, they are identified and further analysed at the level of strategic actions, as follows:

Pillar 1: Sustainability of the Health System in the region

The viability of the health system on a regional level involves improving the relation cost – outcome that characterises the current system. This can be achieved by the rearrangement of the health service model, both nationally and regionally. Moreover, the completion of the quality of health services provided to citizens should be ensured by investing in the field of health in the form of co-financed projects, or other forms, which are characterized by innovation and smart specialization, simultaneously with the rational operation and management of the services. Administration and the continuous measurement of effectiveness and efficiency (cost compared to the result). Regional inequalities should also be balanced, taking into account the special morphology of the area, the particular demographic characteristics of the population and socio-economic developments in the region as well as in the country.

Strategic Objective 1.1: Ensuring financial sustainability of the health system

- Reinforcement of the Planning Systems, Compilation of Budgets and Monitoring their execution by all Health Units, Regional and Central: Central Electronic monitoring of the implementation of budgets.
- Reinforcement of the Systems and Procedures Internal Control: Strengthen existing processes, implementation (where not applicable) and strengthen the internal audit function at all administrative levels.
- Introduction of modern Procurement Procedures: Standardisation of procurement procedures at central and regional levels, introduction of electronic procurement systems and price monitoring, warehouse management (WMS) and modernisation of the supply chain (Logistics), control consumptions and stocks.
- Control and Restriction measures of Pharmaceutical Expenditure: Introduction of polypharmacy reduction measures and especially the excessive use of antibiotics, introduction of pricing mechanisms that encourage the use of generics, ensuring proper prescription information to patients, staff and insurance institutions for the rational use of medicines.
- Rationalization of resources employed in order to reduce operating costs through standardization of the separation of jurisdiction among employees of medical and nursing staff
- Reduce the cost of providing health services by increasing efficiency and effectiveness

Strategic Objective 1.2: Improving the effectiveness and efficiency of the health system and upgrading the quality of provided services

- Determination of Cross-Border Strategy for Health Protection and Empowerment of national regional health institutions: Establishment of a cross border management

body in health issues. This body should be staffed by personnel of the local regional institutions in the cross-border region, should be self-funded by support from the regional institutions and should essentially monitor and handle the health issues of the regional institutions, both including them and promoting the functioning of the Health Units to across border level.

- Improvement of Primary Health services in order to limit recourse to specialised Hospital Services: Rearrangement of service (types of services and geographical points providing it) corresponding with demand as well as ensuring full and fair access to quality services and providing continuous care to cross-border region citizens. Providing integrated, effective mental health services and introducing the institution of general practitioners (GPs) and referral system in order to relief the Departments of Emergency and hospital clinics.
- Improvement of Hospital Care: Introduction to modern operating models (business models) in hospitals, review procedures applied. Pilot mergers of laboratory and administrative units of neighbouring cross border hospitals. Evaluating the performance of target-based units.
- Introduction of Health Units Compensation Methods based on Cost or Quality of Provided Services: Introduction of cost referring to activity (Activity Based Costing) in Health units.
- Development and introduction of quality systems both in the hospitals of the region and in primary health care
- Planning and implementation of Measurement and Evaluation System of Effectiveness in the Health Sector.
- Develop Accountability systems (systemic and individual) in providing health services to the citizen
- Support decision-making by systems and processes
- Improve administrative procedures and reduce bureaucracy by modernizing management methods
- Measure the performance of development and organisations of hospital
- Monitor implementation of operational planning
- Utilization of biomedical technology
- Enrichment of service and health care
- Reduce waiting lists and increase users' satisfaction

Strategic Objective 1.3: Digital modernization of the Health System, Promotion of informatics and e-health services

- Introduce "electronic health" (e - Health) systems and processes: Referring to the Introduction of Systems that support the complete cycle from prevention to diagnosis, treatment, monitoring and management in terms of health and broader lifestyle issues.
- Development of online auction health products.

Strategic Objective 1.4: Upgrading human resources in the Health Sector

- Improvement of a balanced allocation of staff among key business sectors and specialties, as well as regional distribution. Connection with programming in university hospitals and education. Encourage the professional development of staff, introduction of non-financial incentives (working conditions, career planning). Utilisation of databases and developed indicators for the mapping and monitoring of all categories of human resources in relation to the incidents of health units, in order to support long-term planning of their employment, appropriate to the needs of the regions in the area. Create an electronic file of the staff of Health Units by digitising the existing file.
- Collection of the required population, epidemiological and other data that will support programming the staff on the demand side.
- Developing assessment policies of the Medical staff and assessment methodologies of all the staff.
- Planning and implementation of targeted staff training programs in scientific fields, new processes and operating systems, structural reforms, etc. as well as specialised individualized theoretical and practical training programs.

Strategic Objective 1.5: Improving the environmental performance of the health sector

- Support energy efficiency and use of renewable energy sources in the Health Units.
- Promote high efficiency heat and electricity cogeneration in hospitals.
- Effective management of infectious waste.
- Effective management of radioactive pollutants in hospitals

Strategic Objective 1.6: Improving openness of the Health System

- Cooperation with hospitals and institutions outside the cross-border area, either within or outside Greece and Bulgaria.
- Epidemiological surveillance.
- Development and consolidation of Health Tourism.
- Determination and application of innovation in the daily operation of hospitals

Pillar 2: Health as an investment in human capital

Investment in health is considered, even with narrow economic terms, as a productive expense that promotes economic growth, mainly through the positive effect on labour productivity, staff attraction in the region and life expectancy. The improvement in environment and work hygiene as well as the investment in prompt prevention assist people in keeping healthy for a longer period, limiting future treatment costs from diseases and contribute to reducing the cost of system maintenance and development. Metrics of the Organisation for Economic Cooperation and Development indicate that an additional year of life expectancy of the population can lead to increased Gross National Product by about 4%. ["Investing in Health"].

Health Ministry of Greece plans to promote the development and monitoring of the Population Health Protection Index (Health Safety Net), a set of indicators that will demonstrate emerging and / or most dominant health risks to the whole population or specific groups. Thus, each health district in the region will be able to develop the hazardous management policies, prevention as well as planning and implementation therapeutic methods as appropriate, which will affect and benefit the entire population of the cross-border region. The objective is to maintain citizens' health at a sufficient level that allows active participation in the productive and social network of the region.

Strategic Objective 2.1. Enhancing Employability and increasing the active population

- Improvement Measures Introduction of the Work Environment and Restriction of Accidents
- Development of management programs of chronic diseases and comorbidity hypertension, diabetes mellitus, chronic obstructive pulmonary disease)

Strategic Objective 2.2: Improving the defence of citizens against hazardous factors for public health

- Performance of Specialised Awareness Campaigns to the general public about major health hazards in cross-border region. Planning and Implementation Measures against harmful habits (smoking, alcohol, etc.) Implementing targeted identification of hazards and promoting health protection policies in the fields of education, employment etc. as well as through the action coordination of the social policy institutions operating in these fields
- Prompt Prognosis of Hazards related to Health
- Development of screening programs for major diseases.
- Development of impact management programs of environmental hazards on the quality of drinking water, in the subsoil and in the air

- Maximize the coverage of patients' needs in the range of diseases / therapies and number of patients

Strategic Objective 2.3: Promoting Mental Health

- Remodelling and modernisation of the system providing mental health services
- Connection of Mental Health Centres in primary care.
- Development of psychiatric departments in general hospitals and create post-hospital hostels in selected points of the cross-border region
- Development of mental health services for children and adolescents
- Ensuring sustainability for mental health and rehabilitation structures, restructuring and modernizing the service Charter.
- Enact and establish treatment protocols and clinical guidelines.
- Utilization of medical, diagnostic and therapeutic protocols in order to build on the overall experience, to structure the medical service in hospitals and increase control of the operations by the management, and the responsible related institutions (ministries of health and social security funds).
- Promotion of social economy and social enterprises by developing alternative employment and occupational rehabilitation of Mental Health Services Recipients.
- Development of support interventions for the families of the mentally ill.
- Develop and provide specialised mental health services due to new emerging needs as well as establish specialised structures (Alzheimer, autism, etc.).

Strategic Objective 2.4: Utilization of health system research products to address risk factors and diseases treatment

- Improving the quality of the research results obtained by the systematic research and development in the health sector mainly by entering into lasting collaborations with major pharmaceutical companies
- Pre-standardisation and application (spin off) of the research results, carried out within the National Health Systems and related to advanced diagnostic and therapeutic methods and medical technology products. This aims to address risk factors, stabilise the progression or cure of diseases and therefore the protection and improvement of citizens health in the cross-border region.

Pillar 3: Reduce inequalities in health

Nowadays, the population groups with lower income and education level, as well as many of those identified as "vulnerable groups" have lower life expectancy and health level, mainly

due to the more difficult conditions of life and serious obstacles in accessing the health services. This phenomenon is more intense in the Bulgarian side of the border region where inequalities are more, and the health system is not as modernised and broad as it should. Large disparities in health (apart from the obvious moral problem raised) constitute a huge reason for the decrease of Gross National Product.

Strategic Objective 3.1: Investments in health facilities and other social infrastructure which contribute to reducing regional disparities in the health sector

- Development of specialized structures for the management of pain, haemodialysis units, rehabilitation and recovery centres, Daily Care Units as well as other specialised structures where they do not exist.
- Expansion and upgrading of existing structures and infrastructures

Strategic Objective 3.2: Utilization of innovative technologies to ensure access to health services

- Further development of telemedicine and access of lagging structures
- Complete and implement of telecare systems (introduction of innovative Information Systems for continuous post- hospital tele-care and rehabilitation) through transfer of technology to the Health Units lagging behind

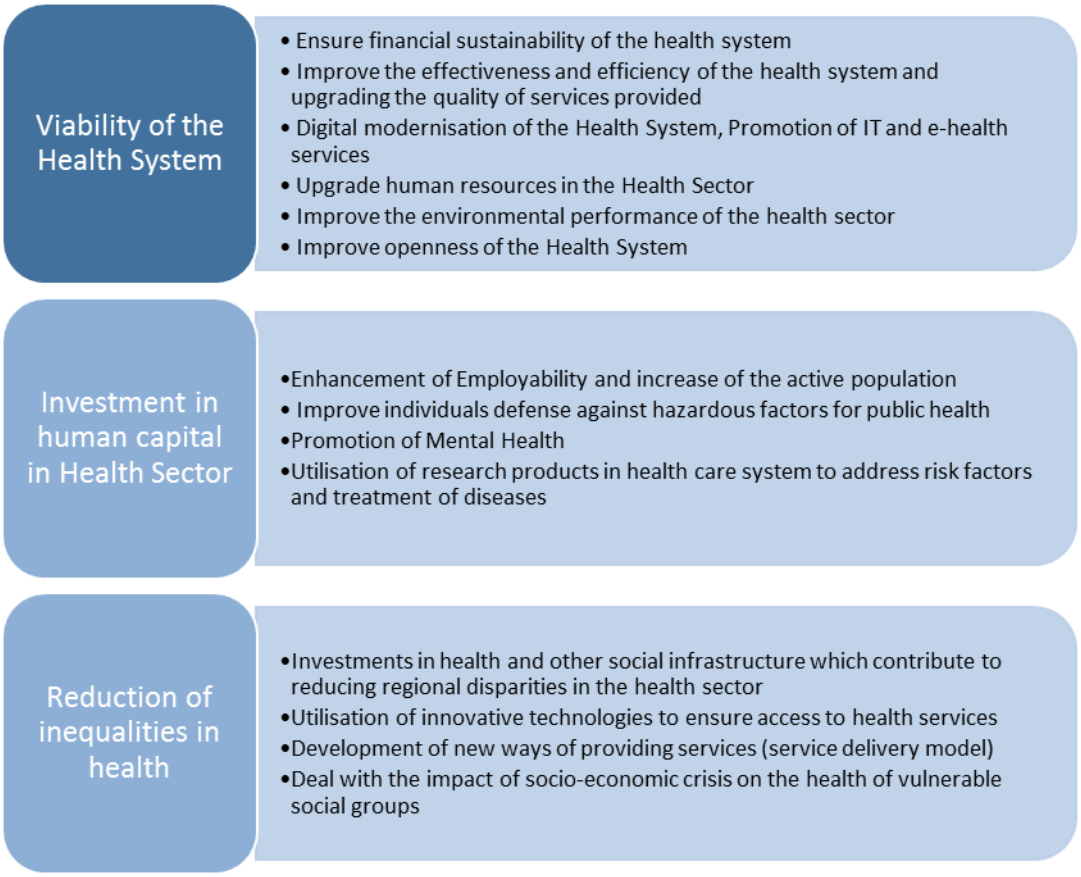
Strategic Objective 3.3: Developing new ways of providing services (service delivery model)

- Further development and specialisation of new healthcare services models (e.g. home care, etc.) in order to facilitate access to quality health services for lower-income and vulnerable social groups as well as to address language and cultural inequalities, which can be based on volunteer movement or utilising alternative ways of funding.
- Strengthening the patient role in health management and adoption of a patient-centred health service model.

Strategic Objective 3.4: Addressing the impact of socio-economic crisis on the health of vulnerable social groups

- Development of education and health promotion programs, management of chronic diseases, preventive screening tests, vaccinations, prenatal screening tests, etc. in selected social groups at increased risk of social-economic exclusion.
- Develop social awareness actions of healthcare personnel (medical, nursing and paramedical) to eradicate discrimination in the provision of services in selected social groups.

Figure 11: Strategic Pillars and Main proposed Strategic Objectives



10 Roadmap" on the use of national and European funding tools in the field of health for the implementation of the proposed interventions – actions

The following section is dedicated in the use of national and European funding tools in the field of health for the implementation of the proposed interventions – actions. Nevertheless, since the programming period of most EU funding schemes is coming to an end and no new calls for projects are expected the following sections is indicative of the possible actions that will be available for funding in the next programming period. In particular, while there will be some changes in the focus of the different programmes, it is not expected that the overall scope and goals of the programmes will change significantly as some of the main challenges remain. The Greek – Bulgaria CBA is still one of the least favourable, with one of the less healthy populations, while the commitment of the Greek government for an economy of zero CO_2eq by 2050 will keep the focus on energy transition and energy efficiency.

10.1 Regional Operational Program of Eastern Macedonia and Thrace

The Operational Program (OP) of the Region of Eastern Macedonia and Thrace for the period 2014-2020 was approved by the European Commission on 13 December 2014 with a total budget of EUR 507.7 million in terms of public expenditure, co-financed by the European Regional Development Fund and the European Social Fund.

With a view to addressing the needs and problems and exploiting the potential and advantages of the Region to become a dynamic competitive pole of international reach, the resources of the OP are directed towards the financing of actions within the following four axes Priority Axis, plus Technical Assistance:

	Priority Axis
1	Enhance the competitiveness of the local economy
2	Enhance the attractiveness of the region as place to invest and live
3	Human resources - Social Cohesion
4	Human resources - Social Cohesion

Studying the content of the priority axis, the following specific objectives are particularly relevant:

Priority Axis 2 - Specific Objective 8 "Energy Saving in Public Infrastructure"

Within the framework of the Investment Priority 4c "Supporting energy efficiency, smart energy management and the use of renewable energy sources in public infrastructure, including public buildings, and in the housing sector" and in particular Special Objective 8 "Energy Saving in Public Infrastructures" the aim is to achieve energy savings, notably through interventions for the energy upgrading of public buildings in education, health, and public administration and, secondarily, through energy savings interventions in other public infrastructures (e.g. street, park, square, etc.) in the context of integrated spatial interventions.

In particular there are foreseen

- Interventions of energy upgrade of public buildings in all sectors (e.g. Education, Health, Public Administration)
- Interventions for energy upgrading of public infrastructure in the context of integrated spatial investments.

Especially in the context of the implementation of Action 4c.8.1, energy upgrading operations will be stepped up in public buildings where significant energy savings are expected (e.g. large consumers such as Hospitals, Schools, public gatherings, sports centres, swimming pools, Student Centres , and generally documented buildings have large heat losses).

Priority Axis 3 - Specific Objective 18 "Improvement / upgrading of health and social care infrastructure

Under the Investment Priority 9a "Investments in health and social infrastructures contributing to national, regional and local development, reducing inequalities in the health sector, promoting social inclusion through improved access to social, nature and leisure services and the transition from institutional care to community-based care", and more specifically to Specific Objective 18" Improvement / Upgrading of Health and Social Infrastructures, the aim is to maintain the citizens' health at a high level, which will allow their active participation in the productive and social fabric of the country.

Priority will be given to health and social care infrastructure in areas where there is a serious under-hindrance and degradation of the services provided to their residents. New infrastructure and equipment will be selected on the basis of a mapping of existing infrastructures and the needs of the region and should be consistent with the policy pursued in the field. Particular attention should be paid to the location of the infrastructure (accessibility, served population, possibility of expansion) in the cost-benefit ratio and in ensuring the necessary staff for its operation.

At the moment there are no open invitations to the above axes and specific objectives.

10.2 Sectoral Operational Programs

Sectoral Operational Programs concern one or more sectors of economic and social life and have a geographical scope throughout the country. In total, NSRF 2014-2020 includes six (6) Sectoral Operational Programs plus Technical Assistance, while Health Bodies are included in the design of three (3) of them, in particular:

- Operational Program of Transport Infrastructure, Environment and Sustainable Development
- Operational Program Public Sector Reform
- Operational Program Human Resources Development, Education and Lifelong Learning

10.2.1 Operational Program of Transport Infrastructure, Environment and Sustainable Development

The Operational Program "Transport Infrastructure, Environment and Sustainable Development" has a total budget of public expenditure of EUR 5.186.665.141. Its goal is to protect the Environment, to move towards an environmentally friendly economy, to develop, modernize and complement infrastructure for economic and social development.

The programme includes in total 16 priority axes, divided amongst transport and environment. It bases itself upon the following Thematic Objectives:

- Supporting the shift towards a low carbon economy in all sectors
- Promoting climate change adaptation, risk prevention and management
- Preserving and protecting the environment and promoting resource efficiency
- Promoting sustainable transport and removing bottlenecks in key network infrastructures.

Relating to transport, the OP:

- Promotes the completion of part of the infrastructures of the core TEN-T (road and rail) and develops/improves the comprehensive TEN-T (with emphasis on road and rail, but also with focused interventions on ports and airports).
- Promotes combined transportation and the modernisation of the transport system.
- Improves the safety of transportation.
- Develops and expands sustainable and ecological urban transportation (urban transportation of fixed trajectory and other clean modes of surface transportation).

Relating to the environment, the OP:

- Aims to implement important environmental projects and provides compliance to the European Environmental acquis mainly in the sectors of solid waste, waters and waste waters and biodiversity.
- Focuses on the tackling of climate change and flood risk prevention and management.
- Undertakes focused actions in reducing environmental pollution and in particular air pollution and noise.
- Promotes sustainable urban development and promotes smart energy efficiency projects in public buildings and broader use of tele-heating.

The Indicative actions related to the Sismanogleio Hospital concern the Support of the transition to a low-carbon economy in all sectors, such as:

- Promotion of low carbon strategies for all types of regions, especially urban ones, including the promotion of sustainable urban mobility, clean urban transport and related mitigation and adaptation measures.
- Supporting energy efficiency, smart energy management and the use of renewable energy sources in public infrastructure, including public buildings and housing.
- Promote the use of high efficiency heat and electricity cogeneration based on the demand for useful heat.

Of particular interest for the transition to a low-carbon economy in hospitals is Priority Axis 10 "Implementing Low-Carbon Strategies emphasizing in Urban Areas" and the call entitled "Energy Efficiency of public buildings - Energy efficiency by using RES in Hospitals" (call 10.4c.15.1-2).

The relative call is active from 09 July 2018 and will close on 31/10/2019. Furthermore, the call includes the following indicative intervention categories:

- Intervention Category 1: Energy Upgrading and Energy Saving (ESA) interventions.
- Intervention Category 2: Demonstration actions for the installation of cogeneration plants (SATH) and Renewable Energy (RES) actions
- Intervention Category 3: Medical Equipment Replacement
- Intervention Category 4: Actions to Prepare and Submit the Financing Proposal Folder
- Intervention Category 5: Advisory Services
- Intervention Category 6: Preparatory Actions up to € 200,000, where the proposal concerns Energy Upgrading and Energy Saving (ESA) actions and up to € 400,000 where the proposal concerns co-generation installations heat

10.2.2 Operational Program Public Sector Reform

This programme aims to support the Greek administration to become coherent, well-coordinated, flexible, outward looking and effective, to restore trust relationship with citizens and businesses providing citizen centred and continuously upgraded services constituting one of the key pillars for the recovery of the country. The program has 3 Priority Axis:

- Strengthening organisational, institutional and operational capacity of public administration and local authorities for the benefit of citizens and businesses.
- Promotion of e-government in the public sector.
- Development of human resources in the public sector, through the rational allocation of human resources, the provision of upgraded services, and training.

The indicative actions foreseen for the health sector under the "Public Sector Reform 2014-2020" are presented below, per investment priority and category of action under the A & B axes:

Investment Priority	Action Category	Indicative actions in the health sector
11i: Investing in the institutional capacity and efficiency of public administrations and services at national, regional and local level in the face of reforms, better regulation and good governance	A.2.1: Implementation actions for reorganization of public sector bodies and improvement of its operation	Strengthening the National Health Insurance Strategy
	A.2.2: Actions to reduce administrative burdens, simplify and standardize services to citizens and businesses	Improving Primary Health Services Provided to Limit Recourse to Specialized Hospitals
	A.3.1: Actions to develop and implement targeting systems for public bodies	Design and Implementation of a Health Sector Efficiency Measurement and Evaluation system
	A.3.2: Actions to strengthen internal control of public sector bodies, transparency and combating corruption	Enhancement of Internal Control Systems and Procedures
2c. Strengthening ICT applications in e-government, e-learning, e-inclusion, e-culture and e-health	B.2.1: Actions to upgrade, develop and operate ICT tools to provide e-services to citizens	Primary Health Care Information System and Development of Patient Electronic File, Introduction of Modern Procurement Procedures - Purchasing Awareness

Finally, Priority Axis C aims to improve the horizontal HR policy of the public sector and its simultaneous development through training actions. In this context, the financed actions focus on:

- Improve staff policies and to develop and implement human resources management systems
- development of public sector knowledge, skills and abilities
- improvement of the quality of curriculum design and educational material

10.2.3 Operational Program Human Resources Development, Education and Lifelong Learning

The operational programme "Human Resources Development, Education and Life Lifelong Learning" for the implementation of the European Social Fund and the Youth Employment Initiative (YEI) in Greece aims to tackle unemployment, focusing on creating quality education opportunities, skills upgrading and sustainable employment for all and with a view to enhance social cohesion. Its total volume is €2.104 billions of which €1.933 billion from the ESF budget and €171 million from the Youth Employment Initiative. The programme will contribute directly or indirectly to the national objectives for employment, education and combating poverty as part of the development strategy of the Europe 2020 Strategy which in particular aims to increase the employment rate to 70%, reduce the number of people at risk of poverty or social exclusion by 450,000, reducing early school leaving to 9.7% and achieve a tertiary attainment rate of 32%.More specifically, the programme promotes employment and supports labour mobility (53% of total funding), invests in education, skills and lifelong learning (43%), and marginally promotes social inclusion and combating poverty (3%) since such actions will be covered by the 13 Regional operational programmes and finally technical assistance (1.7%).

Under the Investment Priority 8i "Access to employment, including the long-term unemployed and long-term outside the labour market, including job seekers and inactive people, including through local employment initiatives and supporting the mobility of the workforce", and namely the Specific Objective 8.1i "Access of the unemployed to employment, with emphasis on long-term unemployed, women, and unemployed aged 30 to 44" is including the type of action "Social Work Program".

Among the priority areas of these programs are the improvement of health services provided: health infrastructure cleanliness, public service, information system support and digital modernization of the health system

10.3 Territorial Cooperation Programmes

10.3.1 Interreg V-A "Greece - Bulgaria 2014-2020" Programme

The Cooperation Programme "Greece-Bulgaria 2014-2020" was approved by the European Commission on 09/09/2015 by Decision C(2015) 6283. The total budget (ERDF and national contribution) for the European Territorial Programme "Greece-Bulgaria 2007-2013" is €129,695,572.00. The total financing consists of €110.241.234 (85%) ERDF funding and €19.434.338 (15%) national contribution. The eligible area of the Programme consists of the Region of Eastern Macedonia-Thrace (Regional Units of Evros, Kavala, Xanthi, Rodopi and Drama) and the Region of Central Macedonia (Regional Units of Thessaloniki and Serres) in

Greece and the South-Central Planning Region and South-West Planning Region (Districts of Blagoevgrad, Smolyan, Kardzhali and Haskovo) in Bulgaria.

The programme Interreg V-A Greece-Bulgaria aims to increase entrepreneurial activity in the eligible area and to improve SME capacity to expand beyond local markets. Furthermore, the programme will improve cross-border cooperation in flood risk management and will develop and promote the border area's cultural and natural heritage for tourist purposes. Additionally, the foreseen actions will lead to better joint surface and groundwater management systems and will improve cross-border accessibility leading to reduced travel times for people and goods as well as improved traffic safety. Finally, the programme aims to expand social entrepreneurship in the border area leading to increased employment in social enterprises and increased delivery of social services to communities with poor socio-economic indicators.

The program has four (4) Priority Axis:

1. A Competitive and Innovative Cross-Border Area
2. A Sustainable and Climate adaptable Cross-Border area
3. A Better interconnected Cross-Border Area
4. A Socially Inclusive Cross-Border Area

Particular interest has the investment priority 9a

Thematic objective: Promoting social inclusion, combating poverty and any discrimination

Investment priority: Investing in health and social infrastructure which contributes to national, regional and local development, reducing inequalities in terms of health status, promoting social inclusion through improved access to social, cultural and recreational services and the transition from institutional to community-based services

Specific objective: To improve access to primary and emergency health care (at isolated and deprived communities) in the CB area

The purpose of the CP is to improve the effectiveness of the primary health care system - which exhibits a better territorial and social coverage than secondary and tertiary health care and hence covers better deprived communities - in order to divert a significant volume of health care services from hospitals to primary care facilities and indirectly manage to provide better health coverage to remote and/or socially excluded communities. As such it concentrates on actions that promote the quality and efficiency of primary care services and actions of CB added value such as tele-medicine and mobile health services.

Types of Actions:

- Support centres of reference (for health threats, rare diseases, organ donation) and develop joint cross-border plans and principles for the sharing of
- human and information resources;
- Promote cooperation between healthcare authorities by implementing the shared use of resources and expertise in the cross-border healthcare
- provision wherever added value can be achieved;
- Support to renovation and equipping of existing and new primary health care practices in CB areas with serious limitations in access to primary
- health care;
- Development of cross-border mobile services, telemedicine and telecare infrastructure and other technology-oriented health care provision methods will be supported, in order to alleviate the local lack of healthcare workers;
-

10.3.2 Interreg V-B "Balkan-Mediterranean" Programme

The Transnational Cooperation Programme (TNCP) "Balkan-Mediterranean 2014-2020" supports the sharing of experiences, knowledge and the improvement of public policies between national, regional and local authorities and other territorial actors of eligible regions of the Balkan- Mediterranean area.

It includes regions from three (3) different EU countries and two (2) candidate countries.

The Programme is co-financed by the European Regional Development Fund (ERDF) as well as by the Instrument of Pre-Accession Assistance (IPA) and has a total budget of 39.727.652 of Euros for the 2014-2020 programming period.

Its main purpose is to contribute to the long-term development of the Balkan-Mediterranean area and strengthen transnational cooperation between regions and participating countries

The Programme focus on two main priorities:

- "Entrepreneurship and Innovation" promoting entrepreneurship and targeting the innovation capacity of SMEs.
- "Environment" focusing on an efficient management of the natural ecosystem and of the resources within the waste sector, the soil and the water sector.

Particular interest has the investment priority 6F: Promoting innovative technologies to Improve environmental protection and resource efficiency in the waste sector, water sector and with regard to soil, or to reduce air pollution / specific objective 2.2 Sustainable territories: fostering transnational cooperation for resource efficiency and climate change resilience

Indicative actions to be financed include energy saving and / or renewable energy projects as follows:

- Joint development of integrated strategies and tools to reduce the use of resources, enhancing their efficiency and decoupling economic growth from resources consumption;
- Joint elaboration of inter-sectoral resource management plans to promote climate change resilience, resource and energy efficiency, renewable energy,
- Implementation of innovative pilot and demonstration projects in the field of energy
- efficiency, renewable energy, material life cycle, soil protection also from long chemical treatments that consist a continuous threat of environmental balance and resources' pollution, air pollution, pollution of groundwater, considering among others, alternative and environment-friendly technologies

10.3.3 Interreg V-B "Mediterranean (MED)" Programme

The MED transnational programme supports the sharing of experiences, knowledge, and the improvement of public policies between national, regional and local authorities and other territorial actors of eligible regions of the MED area.

It includes 57 regions from 10 different EU countries and 3 candidate countries. It is co-financed by the European Regional Development Fund (ERDF) with 224,322,525 € ERDF for the 2014-2020 period.

The main purpose of the MED Programme is to contribute to the long-term development of the Mediterranean area and strengthen transnational cooperation between regions and participating countries. This objective will be supported by the implementation of the following 4 priority Axes:

- Priority axis 1: Innovation capacity
- Priority Axis 2: Low-carbon economy
- Priority Axis 3: Environment
- Priority Axis 4: Enhancing Mediterranean governance

Particular interest has the Specific objective 2.1 Upgrading skills to better manage energy in public buildings at transnational level.

10.3.4 The 2014-2020 ENI CBC "Mediterranean Sea Basin Programme"

The 2014-2020 ENI CBC "Mediterranean Sea Basin Programme" is the largest Cross-Border Cooperation (CBC) initiative implemented by the EU under the European Neighbourhood

Instrument (ENI). The Programme brings together the coastal territories of 14 countries in view of fostering fair, equitable development on both sides of the Mediterranean. The overall EU contribution of the Programme for the 2014-2020 period is € 209 million, out of which €188 for project financing.

The general objective of the Programme is to foster fair, equitable and sustainable economic, social and territorial development, which may advance cross-border integration and valorise participating countries' territories and values. The strategy is based on the following two overall objectives:

- Promote economic and social development
- Address common challenges in the environment

The strategic framework of the Programme is structured in 4 Thematic Objectives and 11 Priorities as a contribution to the main socio-economic and environmental challenges of the Mediterranean area.

Particular interest has the Priority B.4.3 - Support cost-effective and innovative energy renovations relevant to building types and climatic zones, with a focus on public buildings

Possible actions / outputs under this priority could be considered:

- Administrative and legal provisions for sustainable urban design through innovative approaches regarding sustainable building and energy efficiency.
- Energy-mix efficiency plans/strategies developed to stimulate cost-effective deep renovations of buildings.
- Cross-border case studies that demonstrate potential replication of proposed measures and solutions (including technologies, methodologies, systems or tools).
- Twinning and knowledge sharing activities involving public authorities.
- Implementation of pilot cost-effective technologies for energy efficiency and renewable energy.
- Energy performance certificates.
- Renewable energy systems (solar, etc) application to public buildings.

10.4Third Health Action Program 'Health for Growth'

The Health Programme is a funding instrument to support cooperation among EU countries and underpin and develop EU health activities. The legal basis for the Health Programme is agreed with the European Parliament and the Council for a period of several years. The EU Health Programme outlines the strategy for ensuring good health and healthcare. It feeds into the overall Europe 2020 strategy which aims to make the EU a smart, sustainable and inclusive economy promoting growth for all – one prerequisite for which is good health.

The general objectives of the project are:

- Improve the health of EU citizens and reduce health inequalities
- Encourage innovation in health and increase sustainability of health systems
- Focus on themes that address current health issues across Member States
- Support and encourage cooperation between Member States

With a budget of €449.4 million and throughout 23 priority areas, the Health Programme serves four specific objectives:

1. Promote health, prevent disease and foster healthy lifestyles through 'health in all policies',
2. Protect EU citizens from serious cross-border health threats
3. Contribute to innovative, efficient and sustainable health systems
4. Facilitate access to high quality, safe healthcare for EU citizens.

The operational objectives are:

- Identify, disseminate and promote the up-take of evidence-based and good practices for cost-effective disease prevention and health promotion activities
- Identify and develop coherent approaches and implement for better preparedness and coordination in health emergencies
- Identify and develop tools and mechanisms at Union level to address shortages of
- resources, both human and financial, and facilitate the voluntary up-take of innovation in public health intervention and prevention strategies
- Increase access to cross-border medical expertise and information for medical conditions of low prevalence, high specialisation or rare diseases
- Facilitate the application of research results and developing tools towards quality healthcare and patient safety

10.5 European ERASMUS + Program

Erasmus+ is the EU's programme to support education, training, youth and sport in Europe. Its budget of €14.7 billion will provide opportunities for over 4 million Europeans to study, train, and gain experience abroad.

Set to last until 2020, Erasmus+ doesn't just have opportunities for students. Merging seven prior programmes, it has opportunities for a wide variety of individuals and organisations.

The aim of Erasmus+ is to contribute to the Europe 2020 strategy for growth, jobs, social equity and inclusion, as well as the aims of ET2020, the EU's strategic framework for education and training.

Erasmus+ also aims to promote the sustainable development of its partners in the field of higher education, and contribute to achieving the objectives of the EU Youth Strategy.

Specific issues tackled by the programme include:

- Reducing unemployment, especially among young people
- Promoting adult learning, especially for new skills and skills required by the labour market.
- Encouraging young people to take part in European democracy
- Supporting innovation, cooperation and reform
- Reducing early school leaving
- Promoting cooperation and mobility with the EU's partner countries

The specific objectives pursued by the Erasmus+ Programme in the field of education and training are to:

- improve the level of key competences and skills, with particular regard to their relevance for the labour market and their contribution to a cohesive society, in particular through increased opportunities for learning mobility and through strengthened cooperation between the world of education and training and the world of work;
- foster quality improvements, innovation excellence and internationalisation at the level of education and training institutions, in particular through enhanced transnational cooperation between education and training providers and other stakeholders;
- promote the emergence and raise awareness of a European lifelong learning area designed to complement policy reforms at national level and to support the modernisation of education and training systems, in particular through enhanced policy cooperation, better use of EU transparency and recognition tools and the dissemination of good practices;
- enhance the international dimension of education and training, in particular through cooperation between Programme and Partner-Country institutions in the field of VET and in higher education, by increasing the attractiveness of European higher education institutions and supporting the EU's external action, including its development objectives, through the promotion of mobility and cooperation between Programme and Partner-Country higher education institutions and targeted capacity building in Partner Countries;
- improve the teaching and learning of languages and promote the EU's broad linguistic diversity and intercultural awareness

The specific objectives pursued by the Erasmus+ Programme in the field of youth are to:

- improve the level of key competences and skills of young people, including those with fewer opportunities, as well as to promote participation in democratic life in Europe and the labour market, active citizenship, intercultural dialogue, social inclusion and solidarity, in particular through increased learning mobility opportunities for young people, those active in youth work or youth organisations and youth leaders, and through strengthened links between the youth field and the labour market;
- foster quality improvements in youth work, in particular through enhanced cooperation between organisations in the youth field and/or other stakeholders;
- complement policy reforms at local, regional and national level and to support the development of knowledge and evidence-based youth policy as well as the recognition of non-formal and informal learning, in particular through enhanced policy cooperation, better use of EU transparency and recognition tools and the dissemination of good practices;
- enhance the international dimension of youth activities and enhance the capacity of youth workers and organisations in their support for young people in complementarity with the European Union's external action, in particular through the promotion of mobility and cooperation between stakeholders from Programme and Partner Countries and international organisations.

10.6European HORIZON 2020 Program

Horizon 2020 is the biggest EU Research and Innovation programme ever with nearly €80 billions of funding available over 7 years (2014 to 2020). Horizon 2020 is the financial instrument implementing the Innovation Union, a Europe 2020 flagship initiative aimed at securing Europe's global competitiveness.

By coupling research and innovation, Horizon 2020 is helping to achieve this with its emphasis on excellent science, industrial leadership and tackling societal challenges. The goal is to ensure Europe produces world-class science, removes barriers to innovation and makes it easier for the public and private sectors to work together in delivering innovation.

- Excellent Science: Activities under this Pillar aim to reinforce and extend the excellence of the Union’s science base and to consolidate the European Research Area in order to make the Union’s research and innovation system more competitive on a global scale.
- Industrial Leadership: This pillar aims to speed up development of the technologies and innovations that will underpin tomorrow's businesses and help innovative European SMEs to grow into world-leading companies.

- Societal Challenges: Horizon 2020 reflects the policy priorities of the Europe 2020 strategy and addresses major concerns shared by citizens in Europe and elsewhere.

More specifically, the Axis of · Societal Challenges includes (i) health, demographic change and well-being, (ii) safe, clean and efficient energy and (iii) Europe in a changing world - multicultural, innovative and thoughtful societies

The Action plan for 2018-2020 includes 2 Calls with various types of actions.

The 1st call Better Health and care, economic growth and sustainable health systems includes actions for the following priorities:

- 1.1 Personalised medicine
- 1.2 Innovative health and care industry
- 1.3 Infectious diseases and improving global health
- 1.4. Innovative health and care systems - Integration of care
- 1.5 Decoding the role of the environment, including climate change, for health and wellbeing
- 1.6 – Supporting the digital transformation in health and care

The 2nd call includes actions about the Digital transformation in Health and Care.

10.7 EEA Grants

The EEA Grants 2014 – 2021 represent the financial contribution of three donor countries Norway, Iceland and Liechtenstein, in order to reduce the economic and social disparities in the European countries and to strengthen bilateral relations with beneficiary countries. For the period 2014-2021, a total contribution of €2.8 billion has been agreed for 15 countries: Bulgaria, Croatia, Cyprus, Czech Republic, Estonia, Greece, Hungary, Latvia, Lithuania, Malta, Poland, Portugal, Romania, Slovakia, Slovenia, and Spain.

The funding allocated to Greece is 116.7 million € and the key areas of support are:

- Innovation, Business Development and SMEs
- Roma inclusion and Empowerment
- Local Development and Poverty Reduction
- Water Management
- Renewable Energy, Energy Efficiency
- Good governance, Accountable Institutions, Transparency
- Asylum and Migration (Capacity building of national asylum and migration management systems)
- Asylum and Migration (Addressing urgent needs for the reception and screening of asylum seekers and for the accommodation of vulnerable groups)

- Civil Society

10.8 Funding opportunities from other sources

10.8.1 Stavros Niarchos Foundation

The Stavros Niarchos Foundation [(SNF) (www.SNF.org)] is one of the world's leading private, international philanthropic organizations, making grants to non-profit organizations in the areas of arts and culture, education, health and sports, and social welfare. Since 1996, the Foundation has committed more than $2.7 billion, through more than 4,500 grants to non-profit organizations in 124 nations around the world.

The SNF funds organizations and projects, worldwide, that aim to achieve a broad, lasting and positive impact for society at large, and exhibit strong leadership and sound management. The Foundation also supports projects that facilitate the formation of public-private partnerships as an effective means for serving public welfare.

There is no deadline for submitting applications, except that the Foundation will not be able to consider a new donation request from the same organization unless one (1) year has elapsed. Applications are evaluated by the Donation Management Department and all applicant organizations receive a written response.

In September 2017, the Stavros Niarchos Foundation (SNF), following discussions with the Ministry of Health, announced its intention to fully support a series of infrastructure and education projects to enhance the Health sector in Greece, with a budget exceeding $480 million.

The SNF signed a Memorandum of Understanding (MoU) with the Greek State at the Maximus Megaron marking the beginning of SNF's major grants throughout the country. On March 21st, 2018, the MoU was signed between the Greek Prime Minister, Mr. Alexis Tsipras, and the Co-President of the SNF, Mr. Andreas Dracopoulos.

Specifically, the SNF grant initiative includes the following projects:

- The design, the construction and the outfitting of the new Stavros Niarchos Foundation General Hospital of Komotini
- The design, the construction and the outfitting of the Stavros Niarchos Foundation University Paediatric Hospital of Thessaloniki
- The design, the construction and the outfitting of the new General Hospital of Sparta
- Support for the Nursing Sector
- The procurement and the installation of equipment for the General Hospital "Evangelismos"
- The procurement of new equipment, as well as the maintenance of existing equipment, with the aim of strengthening the capability and efficiency of the National Centre for Emergency Care's (EKAV) air ambulance services

- The procurement and the installation of special medical equipment (PET – Positron emission tomography and the creation of radiopharmaceutical production units) in selected public medical institutions across the country
- Funding the formulation and the implementation of educational programs regarding the treatment of trauma\

The grant initiative follows on the heels of a series of SNF grants of more than $168 million for the support of health programs in Greece, which include, among others, the SNF grant to the National Centre for Emergency Care (EKAV), totalling $15 million, for the procurement of 143 state-of-the-art ambulances. Past grants in the health sector include the grant, totalling $23 million, to support the replacement of ten linear accelerators in seven public hospitals around the country, the grant for the renovation of all Paediatric Intensive Care Units (ICUs), as well as the grant for the construction and complete outfitting of hostels to house the relatives of patients in hospitals around the country. In addition, the SNF's initiative for the establishment of the Mobile Medical Units, in collaboration with the NGO "Regeneration and Progress", has wielded significant results in providing healthcare programs to residents of islands and remote areas in Greece.

10.8.2 Onassis Foundation

Similarly, the Onassis Foundation implements grant programs exclusively to non-profit organizations in the fields of art and culture, education, health and social solidarity. All applicant organizations can submit their requests electronically by completing the relevant Request Model. The Foundation receives donation requests throughout the year, which are assessed by regular meetings of the Foundation's Board of Directors in accordance with internal procedures and then the applicant organizations receive a written response.

The Foundation does not encourage the submission of a new donation request by the same Agency, as well as the re-financing to already sponsor Organizations.

10.8.3 Bodossaki foundation

The Bodossaki Foundation helps NGOs, schools, research centres as well as hospitals around the country meet their current needs through its grant schemes. All grants awarded are linked to the Foundation's strategic objectives and support its vision for a society of equal opportunities for everyone.

The Foundation supports vulnerable groups to access medical and social welfare services and upgrades equipment and health services provided by public hospitals. In addition, the Foundation channels donations towards scientific research in the health sector.

Through its programme "Combatting Poverty and Social Exclusion", which the Foundation has implemented since the beginning of the economic crisis in Greece, people coming from socially vulnerable groups can increasingly gain access to welfare services and claim their integration to the society, which is their basic human right.

Applications for donations to the Bodosaki Foundation are submitted electronically until 30th of September each year, In addition, the amount requested by the Foundation should not exceed € 50,000.00 in the case of the purchase of equipment for hospitals or research centres, where the amount of the donation may be up to € 50,000.

10.9 Sponsorships from private sources

10.9.1 Banks

Interesting are the sponsoring programs of the Greek banks in the framework of their Corporate Social Responsibility Programs.

Indicatively, it is reported that Piraeus Bank has in recent years supported seven (7) public health units: Athens Children's Hospital "Agia Sofia", Children's Hospital of Penteli, G.N. Nikaias Piraeus "Saint Panteleimon", Regional General "Papageorgiou" at Thessaloniki, Ph.D. Heraklion, G.N. Thessaloniki "Agios Dimitrios", Athens Ophthalmology Clinic.

Accordingly, ALPHA BANK's Corporate Social Responsibility framework receives, examines and responds on a case-by-case basis to requests for sponsorships in the fields of Culture, Society, Sport, Environment and Education.

The prerequisite for the consideration, acceptance and performance of a sponsorship is that the applicant must be a Legal Entity under Public or Private Law (NPID) or a Non-Governmental Organization (NGO).

In particular, in the framework of the Together for Health Program, ALPHA BANK offered for the fourth consecutive year medical equipment and medical supplies to enhance medical facilities and health services in the Greek islands. The Program was launched in 2014 and is being implemented in partnership with the Urban Non-profit Association "AGONI GRAMMI GONIMI" with the aim of empowering health services through the coverage of medical needs in local clinics, as well as contributing to improving the quality of medical care and life for the islanders.

10.9.2 TAP gas pipeline

TAP's voluntary Social and Environmental Investment (SEI) program in Greece has a budget of € 32 million and focuses on four pillars:

- Environment

- Education and training
- Socio-economic development, with an emphasis on agriculture and tourism
- Quality of life in the community, with an emphasis on social support and cohesion

10.9.3 OPAP

As part of its Corporate Responsibility Program, OPAP has put Health, along with Sport, Employment and vulnerable social groups, at the heart of its initiatives. Recent actions include renovations of the two largest children's hospitals in Greece, "Agia Sofia" and "Panagiotis & Aglaia Kyriakou".