

Rating of adaptation to the Climate Change activities of EU states

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Summary

Comprehensive approach to measure EU countries activities on adaptation to climate changes is not known. Authors propose methodology for creating rating of EU member states activities for Adaptation to the Climate Change and apply that methodology to actual data.

There are 7 countries with low rating which belongs to Mediterranean area - Cyprus, Bulgaria, Croatia, Malta, Slovenia, Italy, Greece. According to forecasts these areas will be most seriously influenced by Climate Change (especially concerning water supply, agriculture, wildfires etc.). Additional attention need to be paid to adaptation measures in these countries.

Introduction

Various ratings (sometime in form of scores) are effective mechanism for decision making in various areas - from “traditional” credit or fire-resistant ratings to energy² or food ratings³. Rating is relative estimate or evaluation (in simple words - measurement of how good, difficult, efficient, etc., something or someone is)⁴. Such estimate is done in accordance of with the goal or rating and allows comparison of objects via one scale. Regarding states ratings are used to compare (and measure) different characteristics – not only credit rating, but also other, like freedom rating⁵.

It is known that there were a number of approaches to apply rating approach to different climate changes issues (e.g. Climate Change Performance Index⁶ or Countries Rating⁷). Adaptation to climate changes is one of the most urgent problems related to Climate Change (e.g. UNFCCC⁸ or European Environment Agency⁹). At the same time known rating regarding adaptation are not known. This gap is partly covered by proposed methodology and results of its application.

Methodology

¹ www.ceeec.eu

² Energy rating, Australian Government- see <http://www.energyrating.gov.au/>

³ Products rating Netherlands NGO – see <http://www.thequestionmark.org/en>

⁴ Merriam-Webster Dictionary – see <http://www.merriam-webster.com/dictionary/rating>

⁵ Freedom House – see <https://freedomhouse.org/report/freedom-world/freedom-world-2016>

⁶ Germanwatch – see <http://germanwatch.org/de/download/10407.pdf>

⁷ Climate Action Tracker – see <http://climateactiontracker.org/countries.html>

⁸ http://unfccc.int/press/fact_sheets/items/4985.php

⁹ <http://www.eea.europa.eu/media/newsreleases/climate-change-evident-across-europe>

Proposed rating goal is to rank EU states (which will allow comparison of effectiveness of their current and further activities) for adaptation to Climate Change. It is based on 6 indicators described below. Indicators were selected to include all areas related to adaptation where comparable figures exist for EU. Full methodology and all figures are available at www.ceec.eu.

Indicator 1 – Economy

It includes 3 parameters:

- * Gross Domestic Product (GDP) per capita¹⁰ (higher GDP - more opportunities to adapt to the Climate Change);
- * ratio of budgets debts and GDP¹¹ (less debt - more opportunities);
- * corruption perception index¹² (less corruption - more efficient usage of funds).

Indicator 2 - Climate Change Directive (non-financial)

It includes one parameter – existence of Climate Change Adaptation Strategies¹³.

Indicator 3 - Climate Change Directive financial

It includes 2 parameters:

- * ratio of finances, allocated for the implementation of climate change adaptation measures to the total amount of money included in Partnership Agreements between EU and member countries¹⁴;
- * ratio of property insurance premiums to the GDP (latest data from December, 2014)¹⁵.

Indicator 4 - Flood Directive

It includes data from table 7.1 and 7.2 from Commission staff working document “Report on the progress in implementation of the Floods Directive”: (which reflect climate change consideration when assessing flood risks and flood maps¹⁶).

Indicator 5 - Natural Hazards - Hyogo Convention

Preparation of countries to natural hazards (National Reports about implementation of Hyogo Convention)¹⁷

Indicator 6 - Renewable Energy

Development of renewable energy sources show country political will work seriously on Climate Change issues. For that purposes two parameters were used:

- * share of renewables in total energy consumption;
- * in which extend 2020 national renewable energy targets are achieved in the present time¹⁸.

Results and discussion

¹⁰ http://ec.europa.eu/eurostat/statistics-explained/index.php/National_accounts_and_GDP

¹¹ <http://ec.europa.eu/eurostat/tgm/table.do?tab=table&init=1&language=en&pcode=teina225&plugin=1>

¹² <https://www.transparency.org/cpi2014/results>

¹³ <http://climate-adapt.eea.europa.eu/countries>

¹⁴ http://ec.europa.eu/contracts_grants/agreements/index_en.htm

¹⁵ <http://www.insuranceeurope.eu/uploads/Modules/Publications/statisticsno50europeaninsuranceinfigures.pdf>

¹⁶ http://ec.europa.eu/environment/water/water-framework/pdf/4th_report/CSWD%20Report%20on%20the%20FD%20.pdf

¹⁷ http://www.preventionweb.net/english/hyogo/progress/reports/index.php?o=pol_year&o2=DESC&ps=50&hid=0&cid=rid3&x=11&y=7

¹⁸ <http://ec.europa.eu/eurostat/documents/2995521/6734513/8-10032015-AP-EN.pdf/3a8c018d-3d9f-4f1d-95ad-832ed3a20a6b>

Final results are presented in Table below.

Table Final rating of EU states on activities for adaptation to the Climate Change (from high to low scores).

| | Final rating |
|----------------|--------------|
| Austria | 5,43 |
| Denmark | 5,34 |
| Finland | 5,19 |
| Sweden | 4,93 |
| Lithuania | 4,49 |
| United Kingdom | 4,41 |
| France | 3,96 |
| Germany | 3,96 |
| Ireland | 3,77 |
| Netherlands | 3,58 |
| Slovakia | 3,36 |
| Romania | 3,34 |
| Latvia | 3,26 |
| Portugal | 3,21 |
| Spain | 3,19 |
| Belgium | 3,01 |
| Estonia | 2,76 |
| Luxembourg | 2,76 |
| Poland | 2,71 |
| Cyprus | 2,56 |
| Bulgaria | 2,54 |
| Croatia | 2,51 |
| Czech Republic | 2,46 |
| Hungary | 2,40 |
| Malta | 2,38 |
| Slovenia | 2,13 |
| Italy | 1,56 |
| Greece | 1,11 |

* 9 EU states have high rating of adaptation to the Climate Change activities - Austria, Denmark, Finland, Sweden, Lithuania, United Kingdom, France, Germany, Ireland.

* 10 EU states keep average positions - Netherlands, Slovakia, Romania, Latvia, Portugal, Spain, Belgium, Estonia, Luxembourg, Poland

* 9 EU states are rather low - Cyprus, Bulgaria, Croatia, Czech Republic, Hungary, Malta, Slovenia, Italy, Greece.

* In last group 7 countries belong to the Mediterranean area, according to forecasts Climate Change influence can be the most serious (especially concerning water supply, agriculture, wildfires etc.). Additional attention should be paid to adaptation measures in these countries.