NUDGING: PECULIARITIES OF THE GREEN DEAL PLANNING AND IMPLEMENTATION

Assoc. Prof. Krassen Stanchev, PhD
Public Administration Department, Faculty of Philosophy, Sofia University „St. Kliment Ohridski"[1]

Abstract

The European Green Deal (EGD) was designed as policy instrument that nudges the environmental performance of the Union towards reduction of the carbon footprint and positive impacts on climate. Many of the EGD initiatives were put on hold in response to energy price hikes of the post-COVID recovery and market and energy supply unpredictability resulting from the war of the Russian Federation in Ukraine. The paper examines the emergence and evolution of these initiatives in the first place. It makes an attempt to demonstrate that most if not all „greening" economic processes were underway before the Deal was drafted, agreed upon and built in the EU financial programs.

The first part of the paper analyses the core notions and objectives of the Deal as well as with the ways to monitor and interpret the process of the policies associated with the Deal.

The second part looks at funding aspects of the Deal, while the third compares the outcome of the past environmental performance of the EU with Deal's objectives. The conclusion is that the EGD resembles rather a central planning instrument than an instrument of „nudging" in the sense of Richard Thaler. In a nutshell, the paper tests whether „nudging" can substitute „planning" in the context of EGD policies. (Thaler & Sunstain).

1. EGD objectives and explanations

The EGD is presented by the European Commission as an economic policy instrument to „transform the EU into a modern, resource-efficient and compe-

[1] The author teaches Macroeconomic Analysis and Public Choice at Sofia University.

titive economy", which addresses climate change and environmental degradation as „an existential threat to Europe and the world".[2]

As it is well known, to achieve this state of affairs the following set of policy objectives are enshrined in the EGD:

- ensuring „no net emissions of greenhouse gases by 2050"
- achieving „economic growth decoupled from resource use" and
- making certain that „no person and no place left behind".

Existentially understood, these three objectives coincide with the sustainable development goals (SDG) of the United Nations (UN SDG), more specifically with SDG 6, 7, 11 and 13 - „Clean Water and Sanitation", „Affordable and Clean Energy", „Sustainable Cities and Communities", and „Climate Action" (UN SDG). The most comprehensive and recent review of the fulfilling SDGs (Kraker et. al.) found earlier this year that the climate action is missing. The author of the respective chapter (Popovski, 303-304) explains that Paris Agreement (on combatting climate change) complicates usual „top-down" and „bottom-up" policy practices, constituting „complex hybrid architecture" that needs time for non-State actors to own channels to enforce climate ambitions and objectives, defined by 200 years old climate science and recognised by government via international agreements".

One of the ways to interpret such complex enforcement mechanisms is the behavioral-economics concept of „Nudging", a central concept in Richard Thaler reconstruction of relations between „planners" and „doers" in which the former does not imposes the plan on the latter (Thaler, 509-510).

According to Thaler and Sunstain (2008, 2, 4-8) „to nudge" means „to push mildly or poke gently in the ribs, especially with the elbow"; „one who nudges in that manner - in disposed to „alert, remind, or mildly warn another". The nudging works, the authors believe, in a system resembling „Libertarian Paternalism" designed „to preserve freedom of choice, and to allow opt-outs, but also to favor self-conscious efforts to promote welfare by helping people to solve problems of bounded rationality and bounded self-control", a system under which „it is both possible and legitimate for private and public institutions to affect behavior while also respecting freedom of choice" (Thaler and Sunstain, 2003, 1, 23).

Applied to EGD this concept should provide for clear dissimilarity from „Planning", here understood as economic planning or „international, national or regional (local) government direction or „guidance of the economy, directly or through agencies" (Seldon and Pennance, 214).

The question arises how the progress in attaining EGD objectives can be monitored or measured, and the answer to this question depends on the definition of the processes or state of affairs the objectives envision.

---

[2] If not specifically mentioned, all references to EGD founding and implementing documents are from the EGD's website of the Commission.

The first objective „no net emissions of greenhouse gases" can be defined as „an overall balance between greenhouse gas emissions produced and greenhouse gas emissions taken out of the atmosphere" (Government of Australia).

One should note that there are different ways of „taking out" emission from the air: from reducing and/or stopping climate-environment damaging industrial processes to increasing forest lands, 26 indicators altogether. In principle, any voluntary implementation of environment cleaning policies allows or should allow for a relative freedom of choice which set of ways fit national peculiarities. E.g. from 2012 to 2018 Bulgaria increased its forest and wooded lands from 40.7% to 48% of territory, while the EU average increase is from 39.3 to 42.3% (but for a longer - 2009-2018 - period). Additionally, Bulgaria's performance under the Net Greenhouse Gas Emissions Index demonstrates significantly better (by 20 score points) than the EU average. However, the country delays closures of its lignite fueled power plants.[3]

The second objective (namely „economic growth decoupled from resource use") is well defined by GIZ as „delinking economic growth from resource use and from environmental impacts" and should be understood as both absolute and relative decoupling (Hennicke et. al). The notion seems self-evident as a meaning but as we shall see it is based on rather idealistic view that resource-free economic processes are not only desirable but achievable. The only indicator that reflects „decoupling" is „raw materials consumption" in terms of tons per capita. EU countries show a large variety in this measure, depending on different and not universally accountable factors as economic structure, infrastructure developments, demographic factors and population density.

The third objective is part of the „Just Transition Plan" but is rather difficult to define and measure.

It presumes that economic developments that helps combatting climate change shall be capable of compensating humans and localities - in full or partially - for the transition's costs. There is only one human-condition EGD indicator - the percent of „Population Unable to Keep Home Adequately Warm". Since 2010, in the EU it improved from 9.9 to 7.6%; in Bulgaria from 65.5 to 23%. Obviously, the dynamics depends on the starting point and the more disadvantage it is, the more visible the progress. But it is also evident that these advances took place before the EGD was approved.

To measure to what extend „no person and no place left behind" is not easy: the lack of „ability to keep home adequately warm" is the only EGD indicator that deals directly with measuring these objective headways. Theoretically, the measurement should indicate stages, evolution or transition between status quos of economic development. In 2018, a discussion paper by UNDP dedicated to this specific SDG cross-section criteria found that „people get left behind when they lack the choices and opportunities to participate in and

[3] If not specifically mentioned, the source of EGD indicators is EC's Visualize Statistics for the EGD.

benefit from development progress", and gave examples like extremely poor, discriminated, deprived and disadvantaged (UNDP).

An identical definition of „economic development" was proposed by Lord Bauer back in 1957, when he wrote that the term shall be understood as „an extension of the range of choice..., an increase in the range of effective alternatives open to people" (Bauer, 113). In economics, the extension of choices' range serves as both „the core objective and the criterion of economic development". If Bauer's reasoning is correct, the achievement of this EGD objective should not restrict but enlarge the spectrum of choice.

2. Background

The EGD was adopted and its action plan outlined in December 2019, before the COVID-19 pandemic. Since then, about 30 different policy measures and reports were published. The latest relevant documents (available before the submission of this report) are as recent as 16 and 17 of November 2022 remarks by EC's Executive Vice President Timmermans.[4] This rich history of EGD own evolution deserves separate research.

The EGD itself is not a single directive, regulation or recommendation but a new framework policy initiative that is based on 11 directives, intended to enhance their objectives to more ambitious levels of policy making. New amendments to the directives are to be discussed and enacted, as it is indicated by the Regulation 2021/1119, which sets the new framework for achieving climate neutrality establishing the framework and amending Regulations 401/2009 and 2018/1999 (of the „European Climate Law").

The COVID-19 pandemic delayed the EGD policies, but the overall spirit of the Deal was retained at the first half of 2020, and the EC sought ways to utilise it as a post-pandemic policy instrument. Thus, the EGD was linked to Recovery & Resilience Plans (Facility) and NextGenerationEU restating the overall purpose to make the recovery green, „for the people and the planet".

Before that second half of 2021 robust economic growth across the EU,[5] it was believed that the transition to cleaner economy and growth would require a „transitional source of energy" and this source was found to be the natural gas.

---

[4] See detailed presentation of the past and future EGD stages at: EDG Timeline.

[5] Without going into detailed reference to macroeconomic statistics, it is necessary to explain the background of this rapid recovery: the recession associated with COVID-19 was different by the fact that it was caused by blockages not of the financial but the human and physical processes of the global economy, by the fact that mobility of factors of production were restricted while the human and industrial capital remained available and preserved by extensive fiscal transfers from the EU and national budget and by banks' policies to delays payment on extended credit. When the restrictions were lifted the economic growth resumed but caused price inflation that was and still is most visible in energy and global delivery chains.

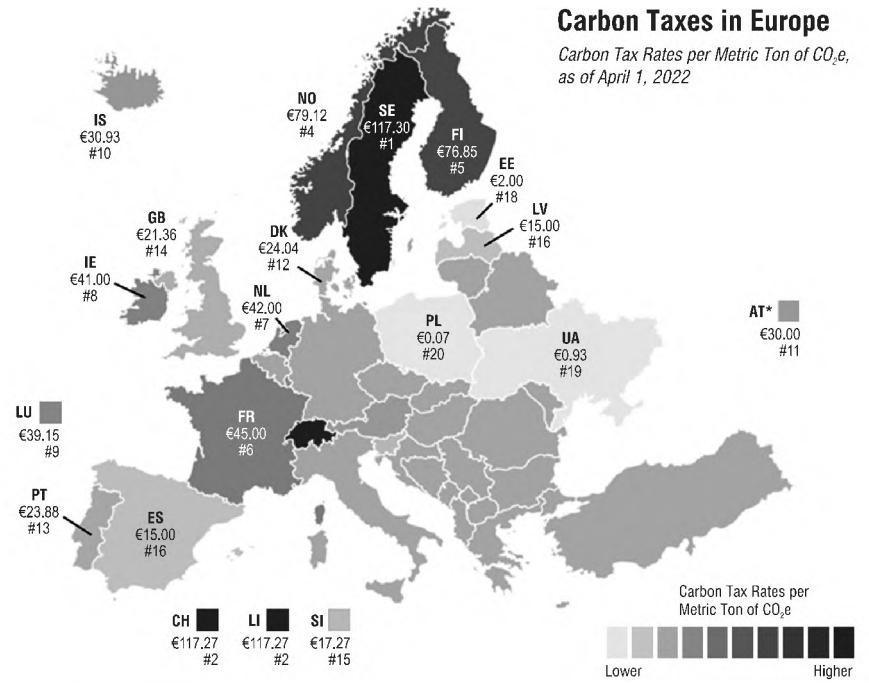
The 2021 restart of the EU and global economy had increased the demand for energy, and then the economic developments of 2022 were additionally complicated by the war of the Russian Federation against Ukraine, especially by the sanctions associated by the war and Kremlin policy to use energy export revenues to finance the invasion (Dubrovskiy and Stanchev).

Since the EGD anti-carbon focus was retained, and least nominally, the envisaged role of the natural gas as a transitional source of energy served as a quasi-subsidy to gas exporters to the EU, including Russian suppliers.

Besides this, the EGD link to NextGenerationEU requires „at least" EURO 1 trillion additional financing for the policies planned.

The original sources of revenue for financing Union's environmental actions were the Council Directive 2003/96/EC of 27 October 2003 restructuring the Community framework for the taxation of energy products and electricity (OJ L 283, 31.10.2003), the Emission Trading System (ETS) of the EU and the so called carbon taxes.

This tax is levied in parallel to ETS but, as it is shown by the map below, by mid-2022 member states and some neighboring countries apply very different rates, some symbolic (like in Poland), some very significant as, e.g. Sweden or Switzerland's carbon taxes.



Note: * Austria's carbon tax is due to start July 2022.
The carbon tax rates were converted using the EUR-USD currency conversion rate as of April 1, 2022.
Source: World Bank, "Carbon Pricing Dashboard."

TAX FOUNDATION @Tax Foundation

Except Estonia, Latvia and Poland none of the new member states have such tax, the case of Belgium and Germany is the same. Austria planned such tax to be introduced in mid-2022, then it was delayed but eventually entered into force from October 1: it is roughly - of the Swedish tax. The experience with the carbon taxes is not unquestionably positive, as analysis of the Sweden's case suggests (Anderson).

The new EGD financial needs will require additional revenues raised by the Union not as a contribution of the member states, co-financing by national budgets is envisaged to be at the level of about 11% of the total amount.

3. Fiscal costs of the EGD

The average EU taxes related to the environment declined from 6.3% to 5.65% of tax revenues of the member states from 2010 to 2020. Originally, i.e. for the same period, the environmental protection expenditures were about 2% of GDP, or EUR 0.3-0.4 trillion (assuming that 2022 GDP will be EUR 16.6 trillion). This means that the new EGD projection would require additional EUR 0.6-0.7 trillion revenues.

An assessment of ECB published in mid-2022 (Delgado-Tŭllez et.al.) found that:

- The EGD initiatives have a clear fiscal angle,
- The energy taxes in the euro area amounted to 4.8% of total public revenues in 2019,
- Transport associated taxes represented on average around 1.2% of revenues in the euro area in 2019,
- ETS covers only 3.2% of the global total CO2-equivalent of greenhouse gas emissions, and
- Only 1/4 of total public investment is climate-related (transport, energy and environmental investment), or around 1% of euro area GDP.

The rest of the environmental and climate related expenditures (to about 2% of GDP) are finance directly by the enterprise sector or by the taxpayers' contributions to member states budgets.

The above quoted Regulation 2021/1119 plan is to review relevant climate and energy legislation which will be adopted in a package covering, inter alia, renewables, energy efficiency, land use, as well as the energy taxation, CO2 emission performance standards for light-duty vehicles, effort sharing and the EU ETS.

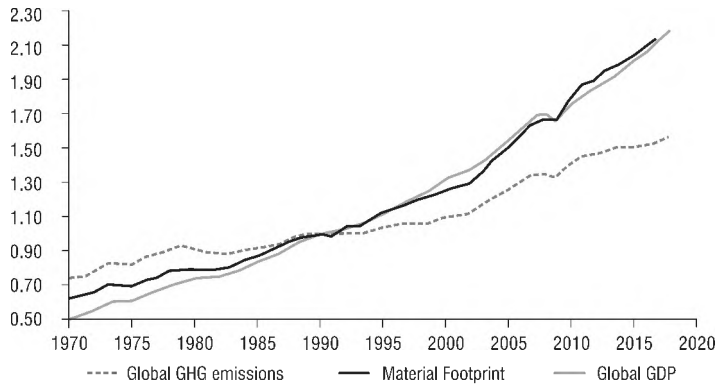
4. Past EU experience: test to EGD objectives

In order to assess the EGD future challenges it makes sense to review the past EU experience with environment policies and climate related damages.

The main source for such a review should be the most recent report of the European Environmental Agency (EEA). It reconstructs the performance of indicators like global GDP, Green House Gas Emissions (GHGE) and Material Footprint as a measure of resources used to produce units of GDP. The report was last updated in September 2022.

The graph gives the dynamics of the processes associated with the second EGD objective (decoupling growth from resources used). It is obvious that after 1989-1990 the GHGEs began to lag behind the GDP growth and the material footprint.

It is difficult to speculate about causalities associated with this performance. It seems that Kuznets' Environmental Curve was in play. On the other hand, 1970-1990 were the decades of implementation of environment protection policies launched by many countries of the world. Last but not least, in Eastern Europe ex-Communist economies (including those of the former USSR), as inefficient and as polluting as they were, collapsed, many enterprises bankrupted of were privatized and the economies were restructured. The new owners, as a rule, were not held responsible for past environmental damages but had no choice but comply with environment protection standards. The new member states performance as monitored by the Environmental Performance of the Index (EPI) of the University of Yale, have moved from the segment of medium to worst performers to the group of the best performance, along of the old member states.



Global Picture: Relative change in main global economic and environmental indicators from 1970 to 2018

Source: EEA

The statistics of global climate-related damages (CRD) from natural events and the expenditures to deal with such damages is one of the reliable sources that allows for a comparison between the world and the EU.

„Between 1980 and 2020, weather and climate-related extremes accounted for around 80% of total economic losses caused by natural hazards in the

EEA Member States, amounting to EUR 487 billion", approximately EUR 11.9 billion a year (EEA, Losses). As a share of EU GDP, the amount is negligible. But in term of lost human lives in the EU, the estimated figure is close to 140 thousand.

According to reinsuring industry reports (Swiss Re & Munich Re), from 1980 to 2019, global CRDs had grown about 10 times, and for the EU they had grown from approximately EUR 9 billon to EUR 18 billion a year.

The ultimate EGD impacts of climate should be also assessed in relation to global pollutants. The following table demonstrates that in 2020, only the largest EU economy, that of Germany is among the top ten CO2 contributors in the world. The Economy of Russia, which by the end of 2022 is likely to shrink to about 1/11 of the EU GDP in 2022, is likely to emission two to three times more CO2 than Germany.

Similar is the picture of carbon emission per country and per capita: China and USA lead the charts (Deshkund and Smith).

Top 10 CO2-emitting countries in the world (Total CO2 in Mt)

China	11680.42
United States	4535.3
India	2411.73
Russia	1674.23
Japan	1061.77
Iran	690.24
Germany	636.88
South Korea	621.47
Saudi Arabia	588.81
Indonesia	568.27

Source: World Population Review

5. Conclusions

The inflation of 2021 and 2022 and the impacts of the Russia war on Ukraine had resulted in „spontaneous" revisions of the EGD, the most important among them are the following:

- High prices served as an incentive to invest in alternatives but the links to EU transfers delay the investment, innovation.
- Plans to close nuclear power plants are being given up and nuclear energy has been accepted as a „clean" energy resource.

- Same is true for coal thermal power plant: at least six countries of the EU, including Germany and the Netherlands delayed the facing out of their plants.
- Other fiscal challenges are mounting up as well, e.g. defense budget is expected to hoover towards 3% of GDP or more and post-war reconstruction of Ukraine is expected to cost at least EUR 0.5 trillion.
- In a move to speed up EGD, in the second week of November, the German Bundestag agreed that the country should exit the European Energy Charter, since it is believed that it slows down the transition to cleaner and more ambitious energy sector reform.

As mentioned by Popovski, the EU is best performing and most active global jurisdiction in climate change. With regard to changing the picture globally, however, it is certain that the EU progress may not change the global picture.

With regard to objectives of the EGD, the EEA report concluded that in global-scale, long-lasting and absolute decoupling may not be possible. The EU perspective looks better because of the share services in GDP but the reconstruction of the value chains and perspective onshoring to avoid geopolitical uncertainty may lead to larger material use in economies of the Union. The EEA also stated that 100 % circularity is impossible, while Europe's fundamental values are not materialistic, but still need to be agreed between the member states. The EGD (and related initiatives) require not only technological change but also changes in consumption and social practices that are difficult to impose on the citizenry.

With regard to the interplay between nudging and central planning in designing and implementing the EGD policies, it looks as if the planning and regulatory element is stronger than and prevailing over the nudging element. In terms of Richard Thaler, it is far from clear whether the EGD is providing for a sustained freedom of choice, and to what extend allows opt-outs.

Bibliography

- Anderson, Julius J., Carbon Taxes and CO2 Emissions: Sweden as a Case Study, American Economic Journal : Economic Policy, vol. 11, No. 4, November 2019, pp. 1-30: https://www.aeaweb.org/articles?id=10.1257/pol.20170144 .
- Bauer, Peter T., Economic Analysis and Policy in Underdeveloped Countries, Durham, N.C.: Duke University Press, 1957.
- Bray, Sean, Carbon Taxes in Europe, Tax Foundation, June 14, 2022: https://taxfoundation.org/carbon-taxes-in-europe-2022/
- European Commission (EC), The EGD: https://ec.europa.eu/info/strategy/priorities-2019-2024/european-green-deal_en.

- EC, EGD Timeline: https://ec.europa.eu/info/strategy/priorities-2019-2024/european-green-deal_en#timeline
- EC, Visualise statistics for the EGD: https://ec.europa.eu/eurostat/web/products-eurostat-news/-/wdn-20220325-1
- EEA, European Environmental Agency, Economic losses from climate-related extremes in Europe, February 2022: https://www.eea.europa.eu/ims/economic-losses-from-climate-related
- EEA, Growth Without Economic Growth, Briefing by EEA, first published: 11 January 2021; last modified: 5 September, 2022: https://www.eea.europa.eu/publications/growth-without-economic-growth
- EPI, Environmental Performance Index: https://epi.yale.edu/
- EU, NextGenerationEU: https://next-generation-eu.europa.eu/make-it-green_en
- EU, Regulation (EU) 2021/1119 of the European Parliament and of the Council of 30 June 2021 establishing the framework for achieving climate neutrality and amending Regulations (EC) No 401/2009 and (EU) 2018/1999 ('European Climate Law'): https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32021R1119
- EU, The European Green Deal Investment Plan and Just Transition Mechanism explained: https://ec.europa.eu/commission/presscorner/detail/en/qanda_20_24
- Delgado-Téllez, Mar, Marien Ferdinandusse and Carolin Nerlich, Fiscal policies to mitigate climate change in the euro area, ECB Economic Bulletin, Issue 6/2022: https://www.ecb.europa.eu/pub/economic-bulletin/articles/2022/html/ecb.ebart202206_01~8324008da7.en.html
- Deshkund and Smith, Anshool Deshmukh and Miranda Smith, Visualizing Global Per Capita CO2 Emissions, December 2021. www.visualcapitalist.com
- Dubrovskiy and Stanchev, Vladimir Dubrovskiy and Krassen Stanchev, Sanctions against Russia: Why and how they work, or should work, Foreign Policy Center, 10 August 2022: https://fpc.org.uk/sanctions-against-russia-why-and-how-they-work-or-should-work/
- Hennicke, Peter, Ashok Khosla and co-authors: Decoupling Economic Growth from Resource Consumption. (A Transformation Strategy with Manifold Socio-economic Benefits for India and Germany), GIZ, 2014: https://www.giz.de/de/downloads/giz2014-en-IGEG_2_decoupling-econimic-growth.pdf
- Government of Australia, Australia Climate Council, What does Net Zero Emissions Mean: https://www.climatecouncil.org.au/resources/what-does-net-zero-emissions-mean/
- Kraker et. al., Kraker, Narinder, Vesselin Popovski and Nocholas A. Robinson, Fulfilling the Sustainable Development Coals: On the Quest for a Sustainable World, Abingdon (UK) and New York, Routledge, 2022
- MunichRe, Climate Change: https://www.munichre.com/en/risks/climate-change-a-challenge-for-humanity.html
- Popovski, Vesselin, Missing Climate Action, chapter 9, Kraker et. al.

- Seldon, Arthur & Frederick G. Pennace, Everyman's Dictionary of Economics, The Collected Works of Arthur Seldon, Volume 3, Indianapolis, Liberty Fund, 2005.
- SwissRe, Fact & Figures, 2021: https://www.swissre.com/institute/research/sigma-research/sigma-2021-01.html
- Richard H., From Cashews to Nudges: The Evolution of Behavioral Economics, Noberl Prize Lecture, 8 December 2017: https://www.nobelprize.org/uploads/2018/01/thaler-lecture.pdf
- Thaler, Richard H. & Cass R. Sunstein, Nudge: Improving Decisions About Health, Wealth, and Happiness, New heaven & London, Yale University Press, 2008, p. 4, 4-6.
- UNDP, What does It Mean to Leave No One Behind?, A UNDP discussion paper and framework for implementation, July 2018: https://olc.worldbank.org/system/files/1-5%20Pages%20from%20Discussion_Paper_LNOB_EN_Ires-2.pdf
- UN SDG: https://sdgs.un.org/goals.
- World Population Review, Carbon Footprint 2020