

Slovenia as a model of integral, low-carbon economy and society?¹

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Abstract: Draft Strategy for the Transition of Slovenia to Low-Carbon Society by 2050, submitted in September 2011 by the Government Office of Climate Change to public consultation, proposes the vision of Slovenia in 2050 as a highly integrated and inclusive society with an excellent business sector and a high quality of life, space and natural environment. The strategy focuses on reducing emissions through green growth (including green tax reform), adaptation and supporting horizontal strategies (innovation and education, local and regional initiative, awareness and communication, active role in international community). In the process of preparing the Draft Low-Carbon Strategy, a new Integral Approach proposed by Ronnie Lessem and Alexander Schieffer has been partially applied. According to this approach, every social system needs to find, in order to be and stay sustainable, a dynamic balance between its four mutually reinforcing and interdependent 'worlds' and its 'center'. In the case of Integral Economics:

- Center: Moral Economic Source, founded in religion and humanity
- South: Self-sufficient Economy, founded in nature and community
- East: Developmental Economy, founded in culture and spirituality
- North: Social Economy, founded in science and technology
- West: Living Economy, founded in finance and enterprise

Further development of the Low-Carbon Strategy within the Integral Approach framework would establish Slovenia as a model in the process of creating a more resilient global economic system, giving intrinsic value to cultural diversity and rediscovering the spiritual and moral economic core, from which our economic systems have been detached.

Keywords: *Integral approach, sustainable development, low-carbon society, climate change, green growth, social innovation*

SLOVENIJA KOT MODEL INTEGRALNE, NIZKOOGLJIČNE EKONOMIJE IN DRUŽBE?

Povzetek: Osnutek Strategije prehoda Slovenije v nizkoogljično družbo do leta 2050, ki ga je septembra 2011 v javno razpravo posredovala Služba vlade za podnebne spremembe, predlaga vizijo Slovenije leta 2050 kot vzajemno povezane in vključujoče nizkoogljične družbe z odličnim gospodarstvom ter kakovostjo življenja, prostora in naravnega okolja. Strategija se osredotoča na zmanjševanje emisij preko zelene rasti (vključno z zeleno davčno reformo), na prilagajanje in na podporne horizontalne strategije (inovacije in izobraževanje, lokalne in regionalne pobude, ozaveščanje in komunikacija, aktivna vloga v mednarodni skupnosti). V procesu priprave nizkoogljične strategije smo deloma uporabili nov integralni pristop avtorjev Ronnieja Lessema in Alexandra Schiefferja. Glede na ta pristop mora vsak socialni sistem za doseg in ohranjanje trajnostni najti dinamično ravnotežje med svojimi štirimi medsebojno podpornimi in neodvisnimi »svetovi« in svojim »centrom«. V primeru integralne ekonomije:

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- Center: moralni izvor ekonomije, temelječ na religiji in humanosti
- Jug: samo-zadostna ekonomija, temelječa na naravi in skupnosti
- Vzhod: razvojna ekonomija, temelječa na kulturi in duhovnosti
- Sever: socialna ekonomija, temelječa na znanosti in tehnologiji
- Zahod: »živa ekonomija«, temelječa na financah in podjetništvu

Nadaljnji razvoj nizkoogljične strategije pod okriljem integralnega pristopa bi uveljavil Slovenijo kot model v procesu vzpostavljanja bolj prožnega globalnega ekonomskega sistema, s priznavanjem intrinzične veljave kulturni različnosti in ponovnim odkritjem moralnega in duhovnega jedra, od katerega so bila naša gospodarstva ločena.

Ključne besede: *Integralni pristop, trajnostni razvoj, nizkoogljična družba, podnebne spremembe, zelena rast, družbeno inoviranje*

1. The Draft Low-Carbon Strategy² of Slovenia

Slovenia is among the first countries that have already drawn a comprehensive strategy for a transition to a low carbon society, defining the low-carbon society as a society (or economy), of which the greenhouse gas emissions are lower than the absorption capacity of the global ecosystem, and at the same time based on the principles of sustainable development. The purpose of the transition to a low carbon society is the reduction of greenhouse gas (GHG) emissions through a new quality of economic, social and environmental development.

Therefore, in addition to the three climate-related goals of

- contributing, in cooperation with other countries, to halt the increase of global average surface temperature below 2°C compared to the pre-industrial level;
- reducing GHG emissions by 80 % from current emissions which is equivalent to two tones of eq. CO₂ per capita annually by 2050 and
- ensuring that vulnerability of Slovenia to effects of climate change does not increase above the present level,

the Low Carbon Society Vision for Slovenia in 2050 is highly integrated (mutually connected) and inclusive society with an excellent low-carbon economy and quality of life, space and natural environment. This Vision is reflective of a 2008 scenario building exercise which has informed processes since then.

The strategic approach, proposed by the **Draft Strategy for the Transition of Slovenia to Low-Carbon Society by 2050** focuses on reducing emissions through green growth (including green tax reform), adaptation and supporting horizontal strategies (innovation and education, local and regional initiative, awareness and communication, active role in international community) that enable the preparation and implementation of other measures. The strategy further sets objectives and policies for 13 specific thematic areas: Energy, Transport, Low carbon technologies, Buildings, Industry, Services, Agriculture, Solid waste, Spatial planning, Forests, sinks, biodiversity, Waters, Health, Natural disasters. Across this thematic areas, a number of sectors and technologies are defined that are already or should be included in the green growth (from energy efficiency with intellectual services and building refurbishment to local communities providing local services that reduce the demand for transport).

The holistic feature of the Slovenian Low-Carbon Strategy is the result of several integrative processes in general policy planning and implementation as well as in relevant sectoral and cross-sectoral policies during the past decade. Two approaches are especially promising for the enforcement of integral policy planning, namely the scenario planning exercise in 2008 and the application of the *International Futures (IFs)* model in the project Slovenia – A Low Carbon Society. Furthermore, in the participatory process of building the strategy and preparing the first draft by the Government Office of Climate Change, the holistic

² Carbon in this expression represents the emissions of all greenhouse gases.

and systemic character of the process, in line with the principles of sustainable development, as well as the five constitutive elements of the new Integral Approach were carefully nurtured.

2. The three scenarios for 2035 in times of climate change

The scenario planning exercise in the project **Development Scenarios for Slovenia to 2035. Trends and opportunities in times of climate change** was undertaken in 2008. In the project financed by the Office of Growth of the Republic of Slovenia, Scenario Development – a UK based scenario agency – designed processes that facilitated the engagement of diverse stakeholders to articulate and shape the scenarios which reflected possible futures, whatever they might be. The scenario building exercise included interviews, scenario workshops and draft scenarios with a range of experts in a variety of fields related to climate change: representatives from the government, the private sector, international and national non-governmental organisations (NGOs), and foundations. All main sectors were represented: energy, economy, environment, agriculture, transport, education, finance.

The scenarios in the 2008 project were the result of a clustering exercise of “newspaper headlines” which were constructed using the driving forces:

- **Clueless** – a scenario showing pervasive lack of government action and denial of any impending environmental impacts, hoping that the problems solve themselves. The growing extreme weather conditions and negative impacts on Slovenia eventually justify the extreme and draconian measures implemented by an increasingly autarchic government. This is a scenario that does not believe in climate change impacts, and any corrective action is left until the very end – when it is ultimately too late.
- **Green Oasis** – the best possible outcomes are achieved through early technology-driven action and through attitudinal and value changes. The population buys into the plans; all recommendations, policies and regulations are implemented fully for maximum benefit. The economy changes to become less carbon-intensive and an overall national pride and “happiness” is central to effect lasting change. This is a scenario of “being ahead of the impact curve” in order to mitigate and prevent climate change impacts, as far as possible. Global collaboration is required for each country to reach this kind of scenario.
- **Chameleon** – this is an evolutionary story: small incremental adaptations and accommodative responses to deal with the impacts and consequences of climate change without taking a fully proactive stance to avert the impacts in the long term. Some action is taken but without coordination or conviction: many little steps but no new journey. This is a scenario that goes overall in the right direction because people feel that a response to climate change is mounted, however it is consistently too little and too late for any lasting impact and to avoid exposure to the climate change -related forces.

Each of the scenarios is described differently to convey the different perceptions and feelings that prevail in each of the described worlds. Scenario analysis consisted in defining the events to monitor, systems mapping, defining branching points between scenarios, and scenario comparison according to the key components that constitute each scenario.

3. Applying “International Futures” model for scenario creation and evaluation

Scenario creation using complex models is bringing policy development up to the scientific level of research and validation. *International Futures (IFs)* is a large-scale, long-term, integrated global modelling system. It represents demographic, economic, energy, agricultural, socio-political, and environmental subsystems for 183 countries interacting in the global system. The central purpose of *IFs* is to facilitate exploration of global futures through alternative scenarios. The model is integrated with a large database containing values for its many foundational data series since 1960. Through its web site *IFs* is freely available to users both on-line and in a downloadable form.

Global scenarios, available in the *IFs* modelling system that reflect different levels of compliance with the

principles of sustainable development, were proposed in GEO4 by UNEP (2007): Markets First, Policy First, Security First, Sustainability First. According to the result of the research project “Slovenia – Low Carbon Society” (CRP Sinoda): UNEP GEO4 scenarios applied to Slovenia showed suitable carbon emissions decrease only in the case of **Sustainability** scenario.

The main features of the Sustainability First scenario are:

- government, civil society and the private sector work collaboratively
- strong emphasis on equity
- equal weight is given to environmental and socio-economic policies
- accountability, transparency and legitimacy are stressed across all actors .

In the project “Slovenia – Low Carbon Society”, advanced low-carbon scenarios towards -80% CO₂ for Slovenia were developed applying the *IFs* model, and used as one of the key starting points for the Low-Carbon Strategy. The methodology included, among others: identifications of key parameters and indicators, comparisons of different databases and preparation of most suitable parameters in the initial year, preparation of base case scenarios, preparation of additional scenarios, validation of scenarios and sensitivity analysis.

4. The Integral Approach framework

According to the Integral Approach developed by Ronnie Lessem and Alexander Schieffer (2010a), every social system needs to find, in order to be and stay sustainable, a dynamic balance between its four mutually reinforcing and interdependent ‘worlds’ and its ‘center’. In other words, a living social system consists of a:

- Center: the realm of religion and humanity
- South: the realm of nature and community
- East: the realm of culture and spirituality
- North: the realm of science and technology
- West: the realm of finance and enterprise

The same then applies to a sustainable approach to economics. An Integral Economy comprises as well of four ‘worlds’ and a center, articulated as:

- Center: Moral Economic Source, founded in religion and humanity
- South: Self-sufficient Economy, founded in nature and community
- East: Developmental Economy, founded in culture and spirituality
- North: Social Economy, founded in science and technology
- West: Living Economy, founded in finance and enterprise

The Integral Approach enables us to reframe economics in a way that it accommodates nature and culture, science and enterprise, across the whole world. The transformational paths that can support the renewal of society and economy are described by Lessem and Schieffer (2010b) as the four research-to-innovation paths to Integral Innovation, which include:

- Southern Relational Path (Community Building – Healing the Planet),
- Eastern Path of Renewal (Conscious Evolution – Peaceful Co-evolution of Peoples),
- Northern Path of Reason (Knowledge Creation – Open Society),
- and Western Path of Realization (Sustainable Development – Economic Opportunity).

According to the authors: based on the theoretical and methodological synthesis of the four research-to-innovation paths, transpersonal and ultimately transformational learning processes can and should be designed to redress states of local and global imbalance on an organizational, communal, and societal scale.

5. The integral character of the Draft Low-Carbon Strategy

The strategy elements developed through the participatory process of thematic workshops and emanating from research basis already partially included the four ‘worlds’ and the center as defined in Integral Approach. In finalizing the SWOT analysis and the strategy’s vision, these “integral pillars” were, on the basis of communication with Lessem and Schieffer, further stressed by Darja Piciga. In a rather simplistic form, these pillars are expressed by the statements in the SWOT and vision chapters as follows:

MORAL CORE:

Acceptance in principle of the values of sustainable development, high population awareness on climate change and the degree of motivation to act for the common good.

Slovenia is in 2050 a society with a developed value system and conscious/enlightened holistic individuals and organizations.

NATURE & COMMUNITY:

Healthy and biologically diverse ecosystems are adapted to climate change through natural processes and sustainable management. Preserved nature, including water quantity and quality, sustainable forests and biodiversity, provides ecosystem services.

Slovenia is in 2050 a welfare society and the land of equal opportunities with high social cohesion, individuals and organizations are connected with the social environment.

CULTURE & SPIRITUALITY:

Building on Slovenia’s cultural heritage and the rich diversity of cultural influences. Supply networks in sustainable food and energy wood; related health-spa, recreation, catering and tourism build on natural and cultural heritage of Slovenia.

Improved educational structure allows strengthening of civil society with strong social capital. Slovenia is actively participating in international efforts for sustainable development both through helping other countries but also by accepting “climate refugees”.

SCIENCE & TECHNOLOGY:

Slovenia is in 2050 distinguished by a high educational level of population, i.e. possesses high intellectual capital.

Development breakthrough was achieved by 2050 through innovation and investment in sustainable technology and non-technological solutions.

FINANCE & ENTERPRISE:

In Slovenia, there are a number of sectors that are already part of or have the potential for green growth; in the following decades the policy of greening of all sectors is strongly promoted. Slovenia is in 2050 attractive for investment and living and is a lead developer of selected low carbon technologies.

6. Possible further development: Integral Low-Carbon Slovenia

Based on Integral Approach to social innovation proposed by Lessem and Schieffer, further process of building the Low-Carbon Strategy would include setting out, and facilitating, the four paths to research and innovation that underlie the strategy, i.e., the respective relational path, and the paths of renewal, reason and realisation. Considering the progressive character of the existing draft strategy and since the Slovenian case is the only one, where the Integral Approach would be applied initially in the field of Policy Making, this development would establish Slovenia as a model in the process of creating a more resilient global economic system, giving intrinsic value to cultural diversity and rediscovering the spiritual and moral economic core, from which our economic systems have been detached.

With the words of the authors (personal communication): “We feel we would need to make it more visible, altogether, how the Low Carbon Strategy and the overall Vision for Slovenia that you represent, purposefully draws and builds on the particular cultural soil, richness and strength of Slovenia. ... All in all

such an integral vision would have to be underpinned by a carefully crafted transformational process, which requires the gradual participation of core players in society, and which would have to build purposefully on existing societal movements within the country. In time, Slovenia would not only become a role model of transformatively and creatively engaging with climate change (which is primarily a technical (northern) term), but you would simultaneously create a new environmental and social (Nature & Community) climate, an open cultural and spiritually infused climate of dialogue and co-creation (Culture & Spirituality), a relevant knowledge creation climate, supporting through science & technology the climate vision of society and beyond (Science & Technology), thereby creating ultimately a new living economy with a conducive and sustainable business climate (Finance & Enterprise). A crucial element would be the engagement and unleashing of Slovenia's own moral (economic) core thereby touching on your innermost belief systems.”

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