

Linking science and technology tasks from the state budget with the implementation of sustainable development goals in Vietnam: Efforts and suggestions

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Abstract

On May 10, 2017, the Prime Minister of Vietnam issued Decision No. 622/QĐ-TTg on the promulgation of the National Action Plan to implement the 2030 Agenda for Sustainable Development, in which science, technology and innovation are affirmed to play a central role. The realization of the Plan requires the availability of large and concentrated resources, thus requiring unity, clarity and targeting in the provisions of the policy. This report aims to provide an overview of linking science and technology tasks from the state budget with the implementation of sustainable development goals and propose policy recommendations to link the tasks with the implementation of National Action Plan.

Introduction

The report assesses the link of national science and technology (S&T) programs, one of the main types of S&T tasks from the state budget¹, with the sustainable development goals (SDGs) in Vietnam and proposes the solutions to link the programs with the implementation of SDGs in the National Action Plan.

The principle for selecting analytical programs is that the programs' objectives and outputs close to Vietnam's 17 SDGs outlined in the National Action Plan. Within the framework of this study, linking S&T programs from the state budget with the implementation of the SDGs has been analyzed based on the review of whether the objectives and outputs of S&T tasks provide scientific arguments, models, technology solutions to address the challenges posed by SDGs and the limitations in linking S&T programs with SDGs.

1. Current situation

The National Action Plan represents the Government of Viet Nam's view in implementing Agenda 2030 for sustainable development in which mobilizing all social resources, strengthening coordination among ministries, sectors, localities, agencies, organizations, unions, businesses and

stakeholders to ensure the successful implementation of the SDGs by 2030. Funding for SDGs must be integrated in the funding for the implementation of the 5-year and annual socio-economic development plans, in national target programs, other related programs and projects.

Implementing the Plan, linking national S&T programs with the implementation of SDGs have been specified in policy documents in which major orientations on sustainable development must be regarded as one of the bases for building national S&T programs.

By reviewing 37 national S&T programs implemented in the period 2016-2020, the author assessed the level of cohesion through the alignment of the goals and outputs of national S&T programs with the SDGs. With this criterion, national S&T programs associated with the SDGs are as follows:

- Linking with SDGs in identification and formation of national S&T programs: National S&T programs are built based on the national socio-economic development strategies and policies of ministries and sectors, including documents with great orientation on sustainable development. Decision No. 2158/QĐ-BKHDT dated December 31, 2019 of the Ministry of Planning and Investment on

¹ Article 25 of the Law on Science and Technology, 2013.

Guidance on integrating sustainable development goals into the 5-year socio-economic development plan of ministries, sectors and localities, Directive No. 13/CT-TTg dated May 20, 2019 on sustainable development, Decision No. 681/QĐ-TTg dated June 4, 2019 of the Government on the promulgation of the roadmap for the implementation of Vietnam's sustainable development goals to 2030, Action Plan of ministries, sectors and localities implementing the 2030 Agenda² etc. are an important basis for determining the goals and results of national S&T programs (Giang D.T et al, 2021).

- *Linking with SDGs in terms of the programs' goals and outputs:* Among 37 reviewed programs, there are 26 programs having goals and outputs linked to the implementation of SDGs through (1) Providing arguments and scientific bases for the implementation of SDGs, and (2) Proposing specific models, technical solutions and technologies for SDGs (see Figure). The level of linking divided into 03 groups: (i) The programs only provides databases and scientific arguments for the implementation of SDGs (5 programs); (ii) The programs propose specific models, technical solutions and technologies to serve the SDGs (8 programs); (iii) The programs provide arguments and scientific bases for the implementation of SDGs, and propose specific models, technological solutions and technologies to serve the SDGs (13 programs).

Limitation and explanations

Looking at the Figure, there is an unequal distribution of the goals and outputs of S&T programs for the implementation of SDGs. There are programs aiming at implementing six SDGs, meanwhile there are also programs aiming at implementing only one SDG. In the context that 10 SDGs will still face difficulties and challenges to achieve and two goals very difficult to achieve by 2030 (Ministry of Planning and Investment, 2021),

this unequal distribution implies a waste of financial resources.

The two reasons might be explained here are the *absence of direct and specific regulations on the linking of SDGs in the formation, review and evaluation of national S&T programs and lack of full presence of stakeholders in advisory board determining S&T programs.*

Firstly, the absence of direct and specific regulations on the linking of SDGs in the formation, review and evaluation of national S&T programs
















































There are still shortages in the government agencies' development, review and evaluation process of national S&T programs when still no direct and specific regulations on the linking of SDGs with national programs, leading to the programs depending heavily on the priorities of proposing organizations and individuals and the link with SDGs is in inevitably "random" status. Take the national program "S&T to respond to climate change, natural resources and environment management in the period 2016-2020" as an example. Despite of climate change is one of the outstanding issues of sustainable development, it has not seen the appearance of an important document the Vietnam Sustainable Development Strategy for the period 2011-2020 in this program. As a result, the content of the program has little in common with the priority orientations for sustainable development in the period 2011-2020.














Lack of full presence of all stakeholders in advisory board determining S&T programs

Ministries, sectors and localities are assigned to manage the organization of advisory board to determine S&T programs. Although consultations between ministries and stakeholders have been active in the process, consultations to determine tasks seem to be focused on avoiding duplication and not on achieving alignment between programs (WB, 2021) meanwhile SDGs are interdisciplinary and

² 17/22 ministries, sectors and 51/63 provinces and centrally-run cities have issued action plans to implement the 2030 Agenda.

Figure Linkage of national S&T programs from 2016 to 2020 with SDGs in terms of the programs' targeted results

No	National Programs	Implementation period	SDGs																
			1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
1	Fundamental and urgent issues on ethnic minorities and ethnic policies in Viet Nam to 2030	2015-2020																	
2	Scientific and technological research for environmental protection and disaster prevention	2016-2020																	
3	Climate change response technology 2016-2020	2016-2020																	
4	National science and technology program on space technology for the period 2016-2020	2016-2020																	
5	S&T program for socio-economic development in the Central Highlands	2016-2020																	
6	S&T program for socio-economic development in the Northwest region	2013-2020																	
7	S&T program for socio-economic development in the Southwest region	2014-2020																	
8	S&T program for new rural construction	2016-2020																	
9	The program studies important issues in the social sciences and humanities for socio-economic development	2016-2020																	
10	National program to support enterprises to improve productivity and quality of products and goods	2021-2030																	
11	Researching, applying and developing advanced technologies for public health protection and care	2015-2020																	
12	Research and development of educational sciences to meet the requirements of comprehensive fundamental renovation of Vietnamese education	2016-2020																	
13	Energy Technology Research and Development Program	2016-2020																	

14	Applied research program and development of new material technologies	2016-2020	
15	Scientific and technological research program for marine and island management and marine economic development	2016-2020	
16	National key S&T program for innovation and modernization of mineral extraction and processing technology by 2025	2013-2020	
17	The program supports the application and transfer of S&T progress to promote the development of rural, mountainous and minority socio-economic development	2014-2020	
18	Bilateral and multilateral research cooperation program on S&T until 2020	2016-2020	
19	Foreign technology search and transfer program until 2020	2016-2020	
20	Program on conservation and sustainable use of genetic resources until 2025, orientation to 2030	2010-2020	
21	S&T development program in 4 fields: chemistry, life sciences, earth sciences, marine science in the period of 2017-2025	2016-2020	
22	Key program for development and application of biotechnology in the field of agriculture and rural development by 2020	2017-2025	
23	National Program on Economical and Efficient Use of Energy for the period 2019 - 2030	2016-2020	
24	National Hi-Tech Development Program to 2020	2016-2020	
25	National Product Development Program to 2020	2016-2020	
26	National Technology Innovation Program to 2020	2008-2020	



Providing databases, scientific arguments



Providing technical and technological solutions



Providing databases, scientific arguments, technical solutions, technology

Source: Giang D.T (2021)

multidisciplinary.

The composition of the advisory board has 11 members, including S&T experts, members of state management agencies, entrepreneurs and other related organizations³. However, in practice, the selection of the board's members is limited to the list of qualified professionals, not taking into account the full presence of other stakeholders. The advisory board determines the duplication of the programs rather than advising on the interdisciplinarity, multidisciplinary and integration of national S&T programs and therefore may lead to spread in funding investment, single issues solved, no synchronicity (WB, 2021). Stakeholders involved in SDGs such as businesses and social organizations have limited participation in the composition of task-defining advisory boards. This means that assessments are sometimes more research-oriented than oriented towards addressing the practical problems the SDGs set for science, technology and innovation.

3. Policy recommendations

After 6 years of implementing the National Action Plan for Sustainable Development, Vietnam has achieved some results, but the country's sustainable process still has difficulties and challenges, including limited financial resources⁴.

International experience, including experience from European Union (EU) has been providing valuable lessons for Vietnam to overcome limitations in linking S&T tasks with the SDGs. In an effort linking SDGs with research and innovation (R&I) programs, the Horizon Europe Programme-EU's flagship R&I programme for 2021-2027 period, affirms tackling with SDGs' challenges as one of three pillars of the Programme. To implement it, the EU develops an annual Strategic R&I Plan comprising R&I activities for a maximum period of

four years to promote consistency between European and national priorities, promote synergies between the Programme and other EU programmes, reduce fragmentation of efforts and avoid duplication and overlap between funding possibilities, ensuring a systematic, transdisciplinary, interdisciplinary and cross-policy approach so that R&I can address the challenges of sustainable development. The development of this Plan calls for early engagement and extensive exchanges with Member States, extensive exchanges with the European Parliament, consultations with stakeholders and the general public within the desired framework of stronger engagement with people and civil society in the co-design process.

In the context of Vietnam, some specific proposals are as follows to link S&T programs from the state budget with the implementation of the SDGs:

Requirements for integration of SDGs into S&T programs: The requirement to integrate SDGs into S&T programs should be specified in official guidance documents on S&T program planning to ensure the SDGs are mandatory bases in the identification and selection of S&T programmes.

The selection of S&T programmes should be based on the following criteria:

- Prioritize the objectives that need to have the role of S&T such as the goals of poverty eradication, ensuring food security, health, nutrition, water and sanitation, education, green industry and tourism, etc.
- Prioritize objectives in accordance with the "strategic breakthroughs" set out in the Socio-Economic Development Strategy for the period 2021-2030 and development strategies and plans of sectors and localities.

³ Specified in Circular 03/2017-TT/BKHCN stipulating the procedures for determining scientific tasks and state-funded national programs.

⁴ Resolution No. 136/NQ-CP of the Prime Minister dated 25/09/2020 on Sustainable Development.

- Prioritize highly feasible goals which can mobilize financial resources, create a spillover impact, make progress to achieve multiple goals at the same time.

The integration of SDGs into S&T tasks must be carried out sequentially from the stage of defining tasks, to the stage of building tasks.

Evaluating the implementation of national S&T programs with the implementation of the SDGs in the previous period: The results of the assessment provide a better view of the development situation of each industry, field and locality, providing important bases for the integration of the SDGs into the S&T programs in the next period. Ministry of Science and Technology shall coordinate with ministries and sectors in reviewing and resolving difficulties and obstacles that hinder the application of the results of the programs into practice to accelerate the application of technological solutions in the implementation of all SDGs.

Develop a S&T Roadmap to implement the SDGs to create a basis for focusing investment resources for S&T to implement the SDGs

The S&T roadmap for SDGs can be an independent document or part of other planning and implementation documents such as the National Development Plan or the S&T Plan and has to be a key element. It is important that the roadmap takes a systematic approach on how to use S&T to accelerate the achievement of goals and coordinate implementation. Indeed, it would be helpful to maximize coordination between existing sections with other planning materials to avoid duplication and reduce waste. It is possible to refer to and apply the different methodologies of international organizations such as the Bertelsmann Foundation and the Millennium Development Institute to examine and determine which goals to focus on and how to work towards achieving them most effectively.

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