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NEASPEC

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2-3 June 2020

NEACAP/SPC2/3

20 May 2020

Survey Result for NEACAP Priority Areas and Workplan 2021-2025

Introduction

- Following to the adoption of the Rules of Procedure of the North-East Asia Clean Air Partnership (NEACAP) Science and Policy Committee (SPC) at the 23rd Senior Officials Meeting (SOM) of the North-East Asian Subregional Programme for Environmental Cooperation (NEASPEC)[1], member States requested the SPC initiate extensive discussions on the *priority areas and workplan* in line with the NEACAP Terms of Reference adopted at NEASEC SOM-22 in October 2018[2], and submit the SPC recommendation to SOM-24 for consideration.

- In line with the decision of NEASPEC SOM-23, the Secretariat circulated a questionnaire on 14 April 2020 to the SPC members and focal points of NEACAP Technical Centers to collect their views on the initial indication of priority areas for 2021-2025, as input to the second SPC meeting to be held on 2-3 June 2020.

- The Secretariat received the responses from all SPC members.[3] This report presents the overall findings on the converging views shared among the members on the priorities and workplan of NEACAP for 2021-2025, followed by a detail analysis including comments and suggestions reflected by the members.

[1] Rules of Procedure of NEACAP Science and Policy Committee, see Annex http://www.neaspec.org/sites/default/files//NEASPEC%20SOM-23%20Meeting%20Report.pdf

[2] NEACAP TOR, see Annex in http://www.neaspec.org/sites/default/files//1.%20SOM22_Transboundary%20Air%20Pollution_0.pdf

[3] The Secertariat also received the survey response from the technical center designated by ROK, and included its response in the analysis of questionannire section B “Technical centers”.

Section 1: Main Findings

The following summary highlights the convergence among SPC members emerged from the questionnaire. The interpretation of the survey result should be contextualized in the agreed Terms of Reference of NEACAP (see Annex 1 for overview). The detail analysis including divergent views and specific comments can be found in Section 2 of the report.

A. Prioritization of NEACAP core programmes

1. On NEACAP core programmes and focus areas, SPC members prioritized the following work areas in the core programmes as per the NEACAP TOR:

   a. Exchange relevant information and data on **emission data of target pollutants**.

   b. Coordinate with relevant mechanisms and synthesize the results with NEACAP activities on **air pollution monitoring through existing programmes and frameworks**.

   c. Propose potential technical and policy measures to tackle air pollution through **sharing information and lessons learnt on relevant good environmental practices applied nationally.**

2. Among five **focus areas** as introduced in the survey, SPC members give "emission data and inventory" the highest priority, and rank "air pollution monitoring" next.

Emission Inventory

3. Majority (75%) SPC members agree with the overall idea as presented in the discussion paper on NEACAP Emission Inventory[4]. That is, to develop an inventory which includes not only the emission data of each pollutant, but also socio-economic parameters including indicators of economy, technology, energy, etc., in support of policy-oriented studies.

4. Majority (75%) SPC members state different levels of support on the proposed goals and approaches as presented in the discussion paper on NEACAP Emission Inventory. That is, to (a) develop the emission inventory with activity-based data and information submitted by member Countries, (b) support Integrated Assessment Modeling, and (c) the Scientific Assessment Report and other frameworks such as EANET, LTP, GEMS, etc. Among the SPC members sharing the supported views, 37.5% SPC members fully agree and another 37.5% partially agree with caution on the availability of activity-based data.

[4] Discussion Paper on the Work of the North-East Asia Clean Air Partnership (NEACAP): Emission Inventory, NEACAP/SPC-2/1, 14 April 2020

5. Subsequently, majority (75%) of SPC members agree to establish the Working Group on Emission Inventory (WGEI) to coordinate the process and methodology of emission inventory.

Policy Scenario and Integrated Assessment Modeling

6. Majority (75%) SPC members agree with the goals and approaches as proposed in the discussion paper on integrated assessment modeling[5]. That is, to develop (a) future emission scenarios in North-East Asia, (b) overall approach to IAMs and comparative analyses and (c) science-based clean air solutions utilizing multiple IAMs and taking into account national social-economic circumstances and policies.

7. Most (87.5%) SPC members agree on the activities of: (a) facilitating institutions to participate in IAM on emission pathways and cost-effective control measures in North-East Asia, and (b) developing a report as a reference for technical and policy cooperation. 62.5% SPC members also agree to (c) compare IAM results including through annual gathering of modeling results.

8. Subsequently, most (87.5%) SPC members agree to establish the Working Group on Integrated Assessment Modeling (WGIAM) that coordinates the specific work on the identified activities.

Transport and deposition modeling of air pollutants

9. On national and regional transport and deposition modeling of air pollutants, majority (75%) SPC members agree to work on (a) exchanging data and information and (b) coordinating with existing relevant mechanisms, including the Model Inter-comparison Study for Asia (MICS-Asia Phase III) and the Joint Research Project on Long-range Transboundary Air Pollutants in North-East Asia (LTP) that carry out modeling of transport and deposition of air pollutants in North-East Asia.

10. SPC members favor NEACAP to work on exchange of data and information through regular seminar of modelers and researchers.

Air pollution monitoring

11. Most (87.5%) SPC members agree that NEACAP works on air pollution monitoring through existing programmes and frameworks including national networks and multilateral initiatives, and work on the compilation and analysis of national monitoring data.

12. All (100%) SPC members agree that NEACAP facilitates the joint utilization and assessment of satellite-based monitoring data, such as with the Geostationary Environment Monitoring Spectrometer

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[5] Discussion Paper on the Work of the North-East Asia Clean Air Partnership (NEACAP): Integrated Assessment Models (IAMs), NEACAP/SPC-2/2, 14 April 2020

(GEMS), and low Earth orbit (LEO) satellite instruments such as Moderate Resolution Imaging Spectroradiometer (MODIS) and Tropospheric Monitoring Instrument (TROPOMI).

13. SPC members favor to support such work through "organizing regular seminars", and rank "capacity building on data processing and application (for satellite-based data)" next.

Policy and technology cooperation

14. SPC members favor organizing "policy dialogue, possibly in collaboration with the Tripartite Policy Dialogue on Air Pollution (TPDAP)", to facilitate the exchange of information on emissions control technologies and national policies, and propose mitigation measures via science-based, policy-oriented consultations, policy scenarios and information exchange.

15. SPC members suggest that the policy and technology cooperation could focus on "overall national policy" and "rules and regulations" in key sectors such as "transport" (industry and residential ranked next).

B. Technical centers

16. SPC members identify "emission inventory", "air pollution monitoring", and "policy and technology cooperation" as main thematic areas for NEACAP Technical Center.

17. More SPC members favor designating one technical center for one thematic area, than designating two or multiple technical centers working on one thematic area based on the interest/capacity of nominated technical centers.

C. Stakeholder engagement

18. SPC members suggested over 30 experts or organizations in the areas of emission inventory, integrated assessment modeling, transport and deposition modeling, air pollution monitoring, policy and technology cooperation for the NEACAP work. The full list is contained in the section 2 of this report.

Section 2: Survey Analysis

A. NEACAP Core Programme

Convergence:

1. SPC members prioritized the following work areas in the core programmes as per the NEACAP TOR:
   a. Exchange relevant information and data on **emission data of target pollutants**.
   b. Coordinate with relevant mechanisms and synthesize the results with NEACAP activities on **air pollution monitoring through existing programmes and frameworks**.
   c. Propose potential technical and policy measures to tackle air pollution through **sharing information and lessons learnt on relevant good environmental practices applied nationally.**
2. Among five focus areas as introduced in the survey, SPC members give "**emission data and inventory**" the highest priority. "Air pollution monitoring" ranks next.

1. The Terms of Reference of NEACAP identifies core programmes and work areas. Please rank activities of the core programmes using the numbers 1-4 in the order of priority during 2021-2025. 1=highest priority and 4=lowest priority and explain the reason you have prioritized the following.

Core Programmes		Rank priority (1= Highest; 4= Lowest)				
		1	2	3	4	N/A
i. Exchange relevant information and data on:	a. Emission data of target pollutants	5	1	1	0	1
	b. Transport and deposition of target pollutants	1	3	1	2	1
	c. Emission control technologies and national policies in use and/or under-development	3	2	2	1	
	d. Experience and challenges of researches on modeling and emission inventory	1	4	1	2	
ii. Coordinate with relevant mechanisms and synthesize their results in accordance with NEACAP activities including:	a. Subregional emission inventory development and maintenance	3	2	2	0	1
	b. Air Pollution monitoring through existing programmes and frameworks	4	3	1	0	
	c. National and regional air pollution transport and deposition modeling and model comparison, including SRR	1	3	1	2	1
	d. Integrated assessment modeling (IAM)	2	3	1	2	

iii. Propose potential technical and policy measures to tackle air pollution through:	a. Science-based, policy-oriented consultations among national scientists, experts, policy- and decision-makers of the member States	2	2	4	0	
	b. Development of technical and policy scenarios for further consideration	1	2	3	2	
	c. Information exchange on emerging technologies and potential for technological cooperation on mitigating pollution	1	3	3	1	
	d. Sharing information and lessons learnt on relevant good environmental practices applied nationally	3	3	1	1	

Anonymous comments:

i. Exchange relevant information and data

- "Sharing technologies and best practices is more important in terms of improving air quality."
- "It is favorable to give priority on actual steps to improve air quality."
- "Emission inventory is a most important factor to get scientific understandings of regional air pollution and its causes. But current ones are fragmented so that this situation should be improved taking advantage of the group where CJK countries of which inventories and technological cooperation have been developed so far. NEACAP is newly developed mechanism so that we'd better to focus what we can rather start. Once we have accumulated enough experiences and member countries have acknowledged its performance with trust, then we can go further."
- "Exchange information and data is an essential part of the activity. However, in some cases lack of detailed emission data, modeling might be expected."
- "Prioritize core programs from more fundamental to application."
- "Approaches to data collection (developing national framework for data collection and sharing) is the key; the rest is secondary and can be used to improve the understanding of air pollution issues but cannot serve as basis."
- "It's much ready to exchange the experience in control technologies, policies and related researches."

ii. Coordinate with relevant mechanisms and synthesize their results in accordance with NEACAP activities

- "Given the large gap of air quality and capacity among different member states, it is realistic to start from the modeling and monitoring work."
- "Results of IAMs provide important suggestions for policy making. On the other hand, due to influences by COVID-19, status of air pollution during 2021-2025 might be unstable. Therefore, roles of continuous monitoring are expected to be important."
- "Group work on technical assistance on various systematic modeling methodologies should be synchronized to support policy actions to tackle air pollution."
- "Air pollution monitoring is an essential component to understand air quality correctly but it is expensive, too. The coordination with existing frameworks, therefore, is important."
- "Approaches to data collection (developing national framework for data collection and sharing) is the key; the rest is secondary and can be used to improve the understanding of air pollution issues, but cannot serve as basis."

iii. Propose potential technical and policy measures to tackle air pollution

- "Sharing information and lessons of good practice would be very valuable in near term."
- "It is considered to be important to put priority on actual steps for mitigation of air pollution."
- "These activities are highly expected."

- "Sharing common vision for the future regional air quality is very important. Develop common knowledge to solve air pollution problem would be a start."
- "Technical and policy measures are at most politically-sensitive, focusing on them will be important once NEACAP has solidified its place and status in NEA; pushing such measures forward too soon does not seem practical."

2. Taking into account the discussion at SPC-1, NEACAP core programmes are categorized as follows to facilitate the planning of activities in 2021-2025: (a) emission data and inventory, (b) policy scenarios and integrated assessment modeling, (c) transport and deposition modeling, (d) air pollution monitoring and (e) policy and technology cooperation. Please rank the focus areas using the numbers 1-4 in the order of priority.

Focus Areas	Rank Priority (1= Highest; 4= Lowest)			
	1	2	3	4
Emission data and inventory	5	1	1	1
Policy scenarios and integrated assessment modeling	2	2	4	0
Transport and deposition modeling	1	3	2	2
Air pollution monitoring	2	3	3	0
Policy and technology cooperation	4	0	1	3

Emission Inventory

Convergence:

1. Majority (75%) SPC members agree with the overall idea on the NEACAP emission inventory. That is, to develop an inventory which includes not only the emission data of each pollutant, but also socio-economic parameters including indicators of economy, technology, energy, etc., in support of policy-oriented studies.
2. Majority (75%) SPC members state different level of support on the proposed goals and approaches as presented in the discussion paper on NEACAP Emission Inventory. That is, to (a) develop the emission inventory with activity-based data and information submitted by member Countries, (b) support Integrated Assessment Modeling, and (c) the Scientific Assessment Report and other frameworks such as EANET, LTP, GEMS, etc. Among the SPC members sharing the supported views, 37.5% SPC members fully agree whereas another 37.5% partially agree with caution on the availability of activity-based data.
3. Subsequently, majority (75%) of SPC members agree to establish the Working Group on Emission Inventory (WGEI) that coordinates the process and methodology of emission inventory.

3. Further to the initial discussion during the SPC-1, the discussion paper on emission inventory reviews the existing emission inventories in North-East Asia and presents the need for developing an inventory that includes not only the emission data of each pollutant, but also socio-economic parameters including indicators of economy, technology, energy, etc., in support of policy-oriented studies. Would you agree with this overall idea on the NEACAP emission inventory?

Agree	6	
Not agree	2	"It is not realistic to collect socio-economic parameters from all the member states with the same protocol because of a) huge gaps of capacity; b) very large differences of statistical systems)."

4. The discussion paper proposes the following goals and approaches: (a) Developing the emission inventory with activity-based data and information submitted by member Countries, (b) Supporting Integrated Assessment Modeling, and (c) Supporting the Scientific Assessment Report and other frameworks such as EANET, LTP, GEMS, etc. What is your view on the proposed goals and approaches?

Fully agree	3	
Partially agree	3	○ "It is not realistic to develop emission inventory with the activity-based data through the unique approach at this state, considering the huge difference of statistic system among different states. Maybe merging the existing academic emission inventories is more realistic. And it is enough to support IAM and other scientific assessment." ○ "It is expected to be difficult for each country to submit all socio-economic parameters used to develop national official emission inventories." ○ "Activity-based data are partially available; case-study for Russia can potentially include data on factual emissions in major cities in NEA part of Russia in a "base year" (e.g. 2017-2018)."
Not agree	2*	"I noted NEACAP has 4 years time period to achieve its goals. The discussion paper refer goals and approaches partially but the details of how to achieve the goals are still ambiguous, and I am not convinced well to think the proposed goals are achievable, while almost one year has been passed since first SPC. The goal(s) should be more succinct and concise to be achievable."

* including 1 respondent skipped this question as valued "not agree" in Question 3.

5. Further to the discussion of the SPC-1, would you agree to establish the Working Group on Emission Inventory (WGEI) that coordinates the process and methodology of emission inventory?

Agree	6	"I agree to establish the WGEI, which is in line with the first SPC meeting. But I noted that the discussion paper P29 stating that "During the upcoming SPC meeting, major NEACAP activity areas need to be discussed and approved with the selection of Working Groups and Technical Centers." However, in my understanding,

		selection of WGEI member and EITC are beyond SPC mandates, and the Secretariat has initiated the process of asking nomination of WG member to the member countries. As the inventory development requires member countries' governmental involvement, governments are the one to determine. If the Secretariat will be ready to suggest members of WGEI and supporting EITCs, please inform us as well as member countries in advance to secure enough lead time to making decision through normal communication channels for NEACAP."
Not agree	1	
No answer	1	

Policy Scenario and Integrated Assessment Modeling

Convergence:

1. Majority (75%) SPC members agree with the goals and approaches as proposed in the discussion paper on integrated assessment modeling. That is, to develop (a) future emission scenarios in North-East Asia, (b) overall approach to IAMs and comparative analyses and (c) science-based clean air solutions utilizing multiple IAMs and taking into account national social-economic circumstances and policies.
2. Most (87.5%) SPC members agree on the activities of: (a) facilitating institutions to participate in IAM on emission pathways and cost-effective control measures in North-East Asia, and (b) developing a report as a reference for technical and policy cooperation. 62.5% SPC members also agree to (c) compare IAM results including through annual gathering of modeling results.
3. Subsequently, most (87.5%) SPC members agree to establish the Working Group on Integrated Assessment Modeling (WGIAM) that coordinates the specific work on the identified activities.

6. Further to the initial discussion during the SPC-1, the discussion paper on integrated assessment proposes the following goals and approaches: (a) Development of future emission scenarios in North-East Asia, (b) Development of an overall approach to IAMs and comparative analyses and (c) Development of science-based clean air solutions utilizing multiple IAMs and taking into account national social-economic circumstances and policies. What is your view on the proposed goals?

Fully agree	6	
Partially agree	1	
Not agree	1	"I noted NEACAP has 4 years time period to achieve its goals. The discussion paper refer goals and approaches partially but the details of how to achieve the goals are still ambiguous, and I am not convinced well to think the proposed goals are achievable, while almost one year has been passed since first SPC. The goal(s) should be more succinct and concise to be achievable."

7. The discussion paper identifies the following activities under IAM. What is your view on each proposed activity?

	Agree	Not Agree	No answer
(a) Facilitating institutions to participate in IAM on emission pathways and cost-effective control measures in North-East Asia	7	0	1
(b) Comparing IAM results including through annual gathering of modeling results:	5	2	1
(c) Developing a report as a reference for technical and policy cooperation	7	0	1
(d) Others (Please specify):			

8. Further to the discussion of the SPC-1, would you agree to establish the Working Group on Integrated Assessment Modeling (WGIAM) that coordinates the above-mentioned work?

Agree	7	
Not agree	1	"I noted NEACAP has 4 years time period to achieve its goals. The discussion paper refer goals and approaches partially but the details of how to achieve the goals are still ambiguous, and I am not convinced well to think the proposed goals are achievable, while almost one year has been passed since first SPC. The goal(s) should be more succinct and concise to be achievable. But I welcome the practical proposals from the other members and EITCs and the Secretariat to achieve some of these activities."

Transport and deposition modeling of air pollutants

Convergence:

1. Majority (75%) SPC members agree to work on (a) exchanging data and information and (b) coordinating with existing relevant mechanisms, including the Model Inter-comparison Study for Asia (MICS-Asia Phase III) and the Joint Research Project on Long-range Transboundary Air Pollutants in North-East Asia (LTP) that carry out modeling of transport and deposition of air pollutants in North-East Asia.
2. SPC members favor NEACAP to work on exchange of data and information through regular seminar of modelers and researchers.

9. NEACAP is expected to work on national and regional transport and deposition of target pollutants such as (a) exchanging data and information and (b) coordinating with relevant mechanisms. The existing relevant mechanisms include the Model Intercomparison Study for Asia (MICS-Asia Phase III) and the Joint Research Project on Long-range Transboundary Air Pollutants in North-East Asia (LTP) that carry out modeling of transport and deposition of air pollutants in North-East Asia. Would you agree to have collaborative work with the existing mechanisms as the main modality of NEASPEC's work?

Agree	6	"I strongly thank that the collaboratory work with existing mechanisms are inevitable. Without such work, I cannot agree the activities."
Not agree	2	"I don't agree to prioritize transport of pollution at this stage. Exchanging good control technology and practice is far more important."

10. Regarding the exchange of data and information, what modality of work would you support? (multiple selection)

Regular seminar of modelers and researchers	6	
Others (please specify)	2	"Exchange information on emission inventory and future emission scenario pathways."
Joint source-receptor relationship modeling	2	
Joint research on model comparison	2	
Synthesized report of modelings	1	
No answer	1	

Air pollution monitoring

Convergence:

1. Most (87.5%) SPC members agree that NEACAP works on air pollution monitoring through existing programmes and frameworks including national networks and multilateral initiatives, and to work on the compilation and analysis of national monitoring data.
2. All (100%) SPC members agree that NEACAP facilitates the joint utilization and assessment of satellite-based monitoring data, such as with the Geostationary Environment Monitoring Spectrometer (GEMS), and low Earth orbit (LEO) satellite instruments such as Moderate Resolution Imaging Spectroradiometer (MODIS) and Tropospheric Monitoring Instrument (TROPOMI).
3. SPC members favor to support such work through "organizing regular seminars", and rank "capacity building on data processing and application (for satellite-based data)" next.

11. NEACAP is expected to work on air pollution monitoring through existing programmes and frameworks including national networks and multilateral initiatives. Would you agree that NEACAP works on the compilation and analysis of national monitoring data?

Agree	7
Not agree	0
No answer	1

12. In terms of subregional-level monitoring, NEACAP could consider jointly utilizing satellite-based monitoring data through the Geostationary Environment Monitoring Spectrometer (GEMS), and low Earth orbit (LEO) satellite instruments such as Moderate Resolution Imaging Spectroradiometer (MODIS) and Tropospheric Monitoring Instrument (TROPOMI). In particular, GEMS which was launched in February 2020 by the Republic of Korea is expected to provide hourly monitoring data of O_3, NO_2, SO_2, HCHO, CHOCHO and aerosols from most parts of Asia. Would you agree that NEACAP facilitates the joint utilization and assessment of satellite-based monitoring data?

Agree	8	○ "Training (awareness-raising activity) would be useful to carry-out to better understand the GEMS inputs and how they are interpreted." ○ "Basically agree to use suggested data. But I believe MOE and NIES in Japan also develop such data set so that comparative study should be necessary."
Not agree	0	

13. What modality of work would you support for the compilation and analysis of national monitoring data *and/or* the joint utilization and assessment of satellite-based monitoring data? (multiple selection)

Regular seminar	8	"at least 1 seminar"
Capacity building on data processing and application (for satellite-based data)	6	
Assessment report such as "State of the Air in North-East Asia"	5	
Joint research	2	

Policy and technology cooperation

Convergence:

1. SPC members favor organizing "policy dialogue, possibly in collaboration with the Tripartite Policy Dialogue on Air Pollution (TPDAP)", to facilitate the exchange of information on emissions control technologies and national policies, and propose mitigation measures via science-based, policy-oriented consultations, policy scenarios and information exchange.
2. SPC members suggest that the policy and technology cooperation could focus on "overall national policy" and "rules and regulations" in key sectors such as "transport" (industry and residential ranked next).

14. NEACAP is expected to facilitate the exchange of information on emissions control technologies and national policies, and propose mitigation measures through a science-based, policy-oriented consultations, policy scenarios and information exchange. What modality of work would you support? (multiple selection)

Policy dialogue, possibly in collaboration with the Tripartite Policy Dialogue on Air Pollution (TPDAP)	5	
Policy analysis	4	
Voluntary collaboration on the Best Available Techniques	4	
Technology forum on emerging technologies and deployment	3	
Others (please specify)	1	"Participating existing forum to share technological information which are open to many stakeholders and NEACAP may organize a session there to discuss specific matters."

15. Concerning policy and technological cooperation, what areas/sectors would you propose as the focus sectors? (multiple selection)

Areas		**Sectors**	
Overall national policy	5	Industry	4
Rules and regulations	5	Transport	5
Emission control technologies	3	Residential	4
Management innovation	2	Energy	2
Public Participation	2	Agriculture	2
Economic instruments	2	Others	0
Others	1 (Research and development)		

B. Technical centers[6]

Convergence:

1. SPC members identify "emission inventory", "air pollution monitoring", and "policy and technology cooperation" as main thematic areas for NEACAP technical center.
2. More SPC members favor designating one technical center for one thematic area, than designating two or multiple technical centers working on one thematic area based on the interest/capacity of nominated technical centers.

16. According to the Terms of Reference of NEACAP, Technical Centers, as designated research institutions in member States, are expected to support the technical work of NEACAP. Which focus areas would you propose to have technical center to implement the identified activities in the section A? (multiple selection)

Emission inventory	4
Air pollution monitoring	4
Policy and technology cooperation	4
Integrated assessment modeling	3
Transport and Deposition modeling	2

17. What would be the preferred modality of designating technical centers?

One technical center for one thematic area (e.g. one technical center for emission inventory)	5
Two or multiple technical centers for one thematic area based in the interest/capacity of nominated technical centers	3
No answer	1

[6] This part of the survey result includes the response from the National Institute of Environmental Research (NIER), as the Technical Center designated by ROK.

C. Stakeholder engagement

18. Partnership and coordination with relevant mechanisms and leading experts are key to the implementation of NEACAP work. For this, who do you think would be the most important potential partners/experts for NEACAP?

Core programme:focus areas	Organizations/experts
Emission inventory	1. Tazuko Morikawa (JARI/Japan) 2. Satoru Chatani (NIES/Japan) 3. Dr. Kurokawa, (SPC member)/ ACAP 5. Experts from various regional emission inventories such as REAS, CREATE, MICS-Asia and etc. 6. National centers/institutions 7. Jun-ichi Kurokawa (APCAP) 8. Qiang ZHANG (Tsinghua University) 9. Jung Hun Woo (Konkuk University)
Integrated assessment modeling	1. Shuxiao WANG (Tsinghua University) 2. IIASA (GAINS Group) 3. IIASA (Markus Amann) and IGES in collaboration with APCAP which compiled “Asia Solution Report” 4. APCAP 5. EANET 6. Jung Hun Woo (Konkuk University) 7. Soontae Kim (Ajou University)
Transport and deposition modeling	1. LTP 2. MICS-Asia is also a considerable modeling community, but major interests of participants are basically in natural sciences 3. IIASA 4. Experts from CLRTAP 5. Rokjin Park (Seoul National University) 6. Chulhan Song (GIST) 7. Cheol-hee Kim (Pusan National University)

Air pollution monitoring	1. EANET and its Network center (ACAP) 2. National centers/institutions, ex. in case of Mongolia, National Committee for Reducing Environmental Pollution (NCREP) or the National Agency for Meteorology and Environmental Monitoring (NAMEM), Mongolia. 3. Jhoon Kim (Yonsei Univ) 4. Sanwoo Kim (Seoul National Univ) 5. Joon-Young Ahn (NIER)
Policy and technology cooperation	1. CRAES 2. APCAP 3. BAQ 4. Jaehyun Lim (NIER) 5. Jang-Min Chu (KEI)

2. Other suggestions

SPC member highlight the importance to avoid duplication and to indicate budgetary and human resources available for planning NEACAP activities.

Anonymous comments:

- "It is desirable to share data and information with other frameworks which is also helpful to avoid duplications of activities."
- "Above my suggestions on prioritization are based on limited understanding of preparedness of these suggested activities. Prioritization needs careful considerations between necessities and resources required, including human, resources, budgets and time. The discussion paper is giving us very limited information on such resources, so I stand on very conservative assumptions. I strongly hope that such information should be presented and shared before or even in the coming SPC meeting, otherwise we would be in very difficult situation to make advice."
- "Due to COVID-19 pandemic, the whole process and planning need to be extended, additional long-term funding should be secured at the NEASPEC/UNESCAP SRO ENEA level to make sure the momentum is supported at least to some extend within next 3-5 years; face-to-face collaborations are likely to remain an important tool to build trust and move forward within the voluntary process (unless a NEACAP multi-stakeholder process, e.g. an inventory project, can be developed and funded to support active participation and commitment from member state institutions and experts)."

Annex:

NEACAP Objectives, core programmes and modalities (based on the TOR)

Figure 1. Five Objectives of NEACAP

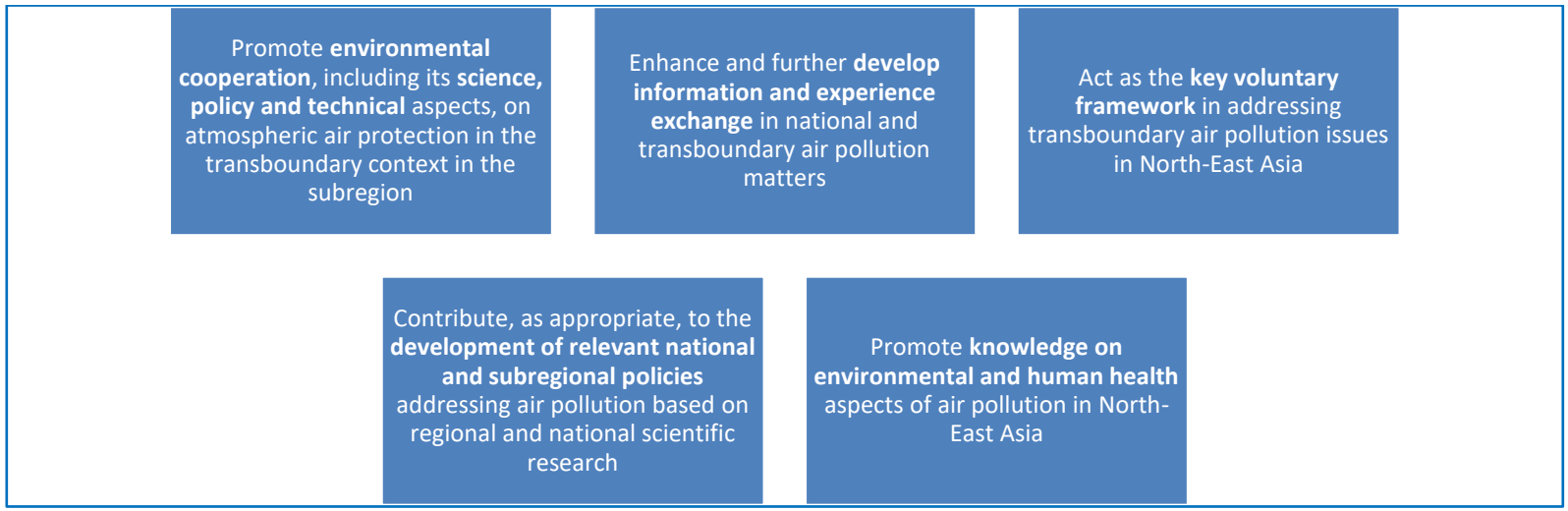


Figure 2. Core Programmes of NEACAP

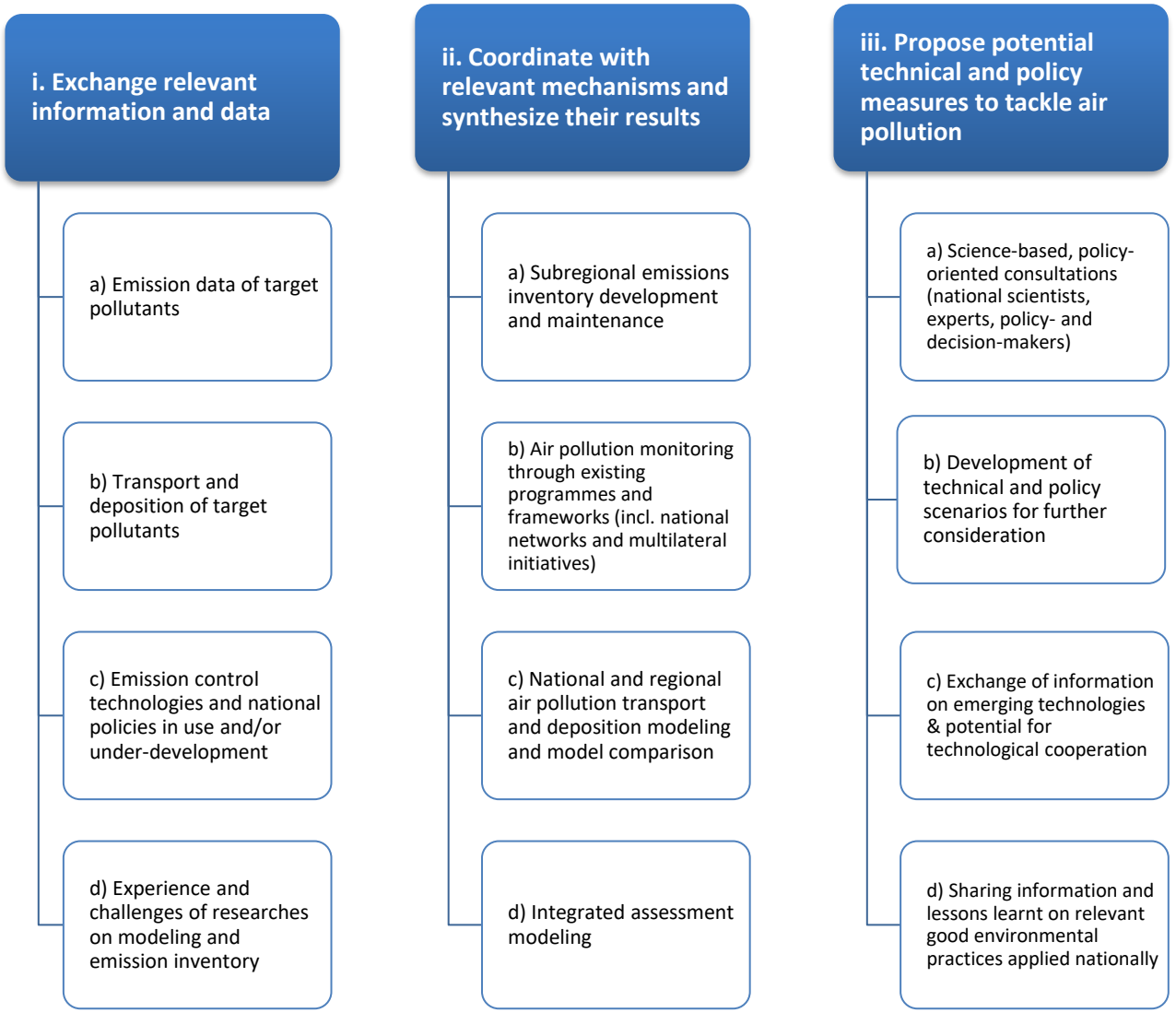
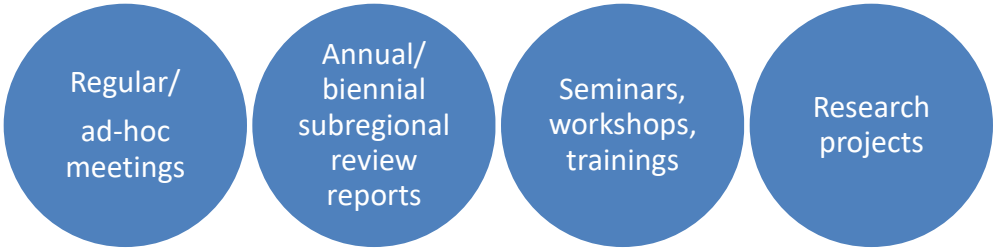


Figure 3. Modalities of NEACAP Activities



Further to the adoption of the NEACAP Terms of Reference at NEASPEC SOM-22 in 2018, member States nominated national experts and research institutes, respectively, as members of the Science and Policy Committee and Technical Centers of NEACAP. To date, there are 9 SPC members and 3 technical centers of NEACAP.

During the Roundtable and SPC-1 held on 4-5 July 2019 in Seoul, the SPC elaborated on the following areas of work to be undertaken under NEACAP:

- Common information basis: **Emission Inventory**
- Consensual knowledge through interdisciplinary studies and open platform: **Scientific Assessment Report**
- Policy goals and measures: **Integrated Assessment Modeling**
- Policy experiences and technology information: **Policy Dialogue**

Figure 4. Conclusion of the 1st Meeting of NEACAP Science and Policy Committee

Area of work	Outcome of SPC-1	Proposed activities
NEACAP Emission Inventory	• Agreed to establish the Working Group on Emission Inventory (WGEI) • Recommended to involve experts of relevant emission inventories in NEA and invite resource persons from outside the region	Develop draft framework and relevant methodology

Scientific assessment report	• Recommended an incremental approach to compile scientific assessment reports, with the first one taking stock of existing national reports and studies • Recommended to engage experts to develop the draft and involve SPC members and other stakeholders in the process of the 1st report	Promote consensual knowledge among diverse stakeholders
Integrated Assessment Modeling (IAM)	• Agreed NEACAP to initiative the work on IAM with a multi-model approach to enhance the credibility of outcomes • Agreed to establish the Working Group on IAM (WGIAM)	Prepare detail workplan on IAM
Policy dialogues	• Recommended to further explore the approaches and modalities of policy dialogue under NEACAP • Recommended NEACAP to utilize the outcomes of the scientific assessment report and IAM	Relevant platforms/ opportunities including: Tripartite Policy Dialogue on Air Pollution (TPDAP), Clean Air Asia (CAA), Asia Pacific Clean Air Partnership (APCAP) and Better Air Quality (BAQ)
Institutional arrangement	• Requested the Secretariat to develop draft Terms of Reference for SPC, Working Groups and Technical Centers respectively to define the roles and responsibilities • Recommended the Secretariat to circulate the TORs for review and endorsement and circulate the nomination form of WG members with the endorsed TOR • Requested the Secretariat to organize meetings of two WGs by Q1 2020 for the planning of each programme well in advance of next SPC meeting	Solidify the institutional arrangement of SPC, WGs, and TCs
Workplan	• Requested the Secretariat to present a detailed draft workplan 2020-2022 including budget plan to the next SPC meeting based on the frameworks developed in each programme area	Develop three-year workplan

Based on the decision of the SOM-23, the conclusions of 1st SPC meeting are expected to serve as reference, not an agreed plan, for further discussions of the 2nd SPC meeting on identifying priority areas and developing a draft workplan.