State of SEIS implementation in 2018
Country Factsheet
THE KYRGYZS REPUBLIC

Kyrgyzstan has been working towards establishing SEIS while implementing SEIS principles and three pillars: Content, Infrastructure and Cooperation. Kyrgyzstan participates in the work of the United Nations Economic Commission for Europe (UNECE) Working Group on Environmental Monitoring and Assessment (WGEMA) and the UNECE Joint Task Force (JTF) on Environmental Statistics and Indicators, which support countries in Europe and Central Asia in establishing SEIS by 2021. The present document provides an overview of the state of SEIS implementation in Kyrgyzstan and offers recommendations on how to achieve the SEIS 2021 target.

KEY MESSAGES

Content
- Kyrgyzstan has been working on making UNECE environmental indicators available and accessible
- 36 out of 49 UNECE environmental indicators are available in 2018

Infrastructure
- The majority of data is still available in hard copy only
- Environmental information and indicators are available on the websites of the National Statistics Committee, the State Agency on Environmental Protection and Forestry and the Agency on Hydrometeorology

Cooperation
- Development of collaboration on information engagement between data producers
- Kyrgyzstan participates actively in the UNECE indicator-related processes and SEIS-related projects supported by the European Union (EU) and the European Environment Agency (EEA)
- The EU FLERMONECA project[1] on environmental monitoring in Central Asia was successfully implemented

THE SEVEN SEIS PRINCIPLES[2] AND STATE OF THEIR APPLICATION IN KYRGYZSTAN[3]

According to the SEIS principles, information should be:
Managed as close as possible to its source
Collected once and shared with others for many purposes
Readily available to easily fulfill reporting obligations
Easily accessible to all users
Accessible to enable comparisons at the appropriate geographical scale and citizen participation
Fully available to the general public at the national level in the relevant national language(s)
Supported through common free open software standards

● fully applied   ● partially applied   ● application is limited

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[1]The EU-funded project "Forest and Biodiversity Governance Including Environmental Monitoring" (Flermoneca project)
[2] More information on SEIS principles is available at: https://www.eionet.europa.eu/seis/principles
[3] The evaluation is based on experts' opinion; there are possible changes or clarifications after discussions with Kyrgyzstan's counterparts.

MANAGEMENT OF ENVIRONMENTAL INFORMATION – OVERVIEW

Organizations responsible for collecting, producing, managing and sharing environmental data and information

The State Agency on Environmental Protection and Forestry

The National Statistics Committee

The Ministry of Emergency Situation, Agency for Hydrometeorology

The State Committee of Industry, Energy and Subsoil Use

The Ministry of Agriculture, Processing Industry and Melioration

The Ministry of Healthcare

The State Agency for Architecture, Construction and Housing and Communal Services

The Biological and Soil Institute of the National Science Academy

Academia, NGOs

Accessibility and availability of environmental information, data and indicators

WHERE?: On the State Agency on Environmental Protection and Forestry, National Statistics Committee, and the Agency for Hydrometeorology websites, relevant Conventions websites
In SoER, the Statistical Yearbook (Environment), other publications on environmental statistics
In country implementation reports to MEAs (UNFCCC, UNCCD, UNCBD, BRS, Minamata etc.)
IN WHAT FORMATS?: Reports (e.g. SoER), visuals (tables, graphs, maps, diagrams)
IN WHICH LANGUAGES?: Kyrgyz, Russian and English

Environmental indicators in use

UNECE environmental indicators (36 indicators)
SDGs (there is a potential to use)
OECD Green Growth indicators (there is a potential to use)
Reports to MEAs

air • water | climate change | waste | biodiversity | land cover | soil | env. statistics | public relations | information dissemination

CONTENT AND INFRASTRUCTURE   FROM INDICATOR PRODUCTION TO USE

STATE OF PRODUCTION AND SHARING OF ENVIRONMENTAL INDICATORS

UNECE environmental indicators are regularly calculated on the basis of relevant recommendations. The quality of available online indicators is also assessed. A 2016 UNECE analysis assessed the following parameters of indicator quality: availability in the internet, updates, methodology used, provided analysis and indication of sources (the results are presented below in the table).

Indicators	I	U	M	A	S
A. Air pollution and ozone depletion					
A1: Emissions of pollutants into the atmospheric air					
A2: Ambient air quality in urban areas					
A3: Consumption of ozone-depleting substances					
B. Climate change					
B1: Air temperature					
B2: Atmospheric precipitation					
B3: Greenhouse gas emissions					
C. Water					
C1: Renewable freshwater resources					
C2: Freshwater abstraction					
C3: Total water use					
C5: Water supply industry and population connected					
C10: BOD and concentration of ammonium in rivers					
C11: Nutrients in freshwater					
C14: Population connected to wastewater treatment					
C15: Wastewater treatment facilities					

C16: Polluted (non-treated) wastewater				
D. Biodiversity				
D1: Protected areas				
D3: Forests and other wooded land				
D4: Threatened and protected species				
E. Land and soil				
E1: Land uptake				
G. Energy				
G1: Final energy consumption				
G2: Total primary energy supply				
I. Waste				
I1: Waste generation				
I2: Management of hazardous waste				

less than 33%	33 to 67%	over 67% of the maximum possible number

Rating criteria:

I – *Availability of data sets on the internet*; **U** – *Time of update*; **M** - *Conformity with methodological standards*; **A** – *Analysis provided*; **S** – *Indication of the source of an indicator.*

QUALITY OF SEVEN DATA FLOWS BASED ON KYRGYZSTAN'S SELF-ASSESSMENT (2018)

Kyrgyzstan has conducted a self-assessment of 7 data flows underpinning 3 UNECE indicators that were selected for the SEIS mid-term review. The mid-term review was based on the SEIS Assessment Framework and a questionnaire with 25 questions on quality, aligned with quality criteria used by the UNECE Statistical Division and EEA, and corresponding to the three SEIS pillars:

Relevance   Accuracy   Timeliness and punctuality   Accessibility   Clarity   Comparability   Institutional and organizational arrangements

Extract: Data Flow - SO_2[a]

User feedback is collected passively and used for many purposes. Information is rarely improved for users' convenience

Use the data produced by themselves. Data validation is not in place. Revision of data is conducted occasionally (due to methodological changes and/or new data). There is no data from other sources for comparison

Annual dissemination. Latest release: 2018. Deviation: less than 4 days to 8 weeks. Timeliness: less than 1 year

Reports/SoER, visuals. Data is available at: http://meteo.kg/environment_air.php

Procedures are not applied to data quality management. Information on data sources, geographic coverages, contacts, information are available in Russian.

Internationally agreed procedures are not applied. Time series from 1990 up-to-date

Law on the Protection of the Environment, Law on the Protection of Atmospheric Air, the Law on the Meteorological Service, etc.; Technical regulation on information exchange

[a]**Theme:** A. Air pollution and ozone depletion / **Indicator:** A2. Ambient air quality in urban areas / **Data flow:** Annual average concentration of sulphur dioxide

Atmospheric air: Data on SO_2, NO_2, is available online for several cities (Bishkek, Osh, Kara Balta, Tokmok, Cholpon-Ata), on the website of the Agency on Hydrometeorology of Kyrgyzstan. There is an indication of the last update time – 21.07 2018. The scheme of concentrations is also available. All information is published in Russian.
Areas to improve: There is no data available for PM_{10} concentration and ground-level ozone. Metadata and additional information are not provided. Data quality is not validated and there are no procedures in place for quality control. No reference is made to measuring methods and their conformity with the international standards.

Water: The data characterizes the annual averages of BOD_5 and the concentration of NH_4 in the 23 sampling points along the Chu River. Information is presented in the form of an interactive map showing variation in BOD_5 and NH_4 concentrations in the river. Information is published on the website of the Agency of Hydrometeorology, only in Russian. The data of the last update of content is indicated – 21.07.2018.
Areas to improve: Data quality is not validated and there are no procedures for quality control. Metadata and additional information are not provided. No reference is made to measuring methods and their conformity with international standards.

Biodiversity: Data is available concerning the total territory of protected areas and the areas of different national categories (biosphere reserves, national parks, hunting areas) between 2012 and 2017. The information source is indicated – National Statistics Committee of Kyrgyzstan. There is contact information. Information is posted on the website in Russian, Kyrgyz and English. *Areas to improve:* The date of last update of content is not indicated. Data is not presented in visual form. There is reference to measuring methods, however, it is not indicated whether the national categories of protected areas comply with IUCN categories.
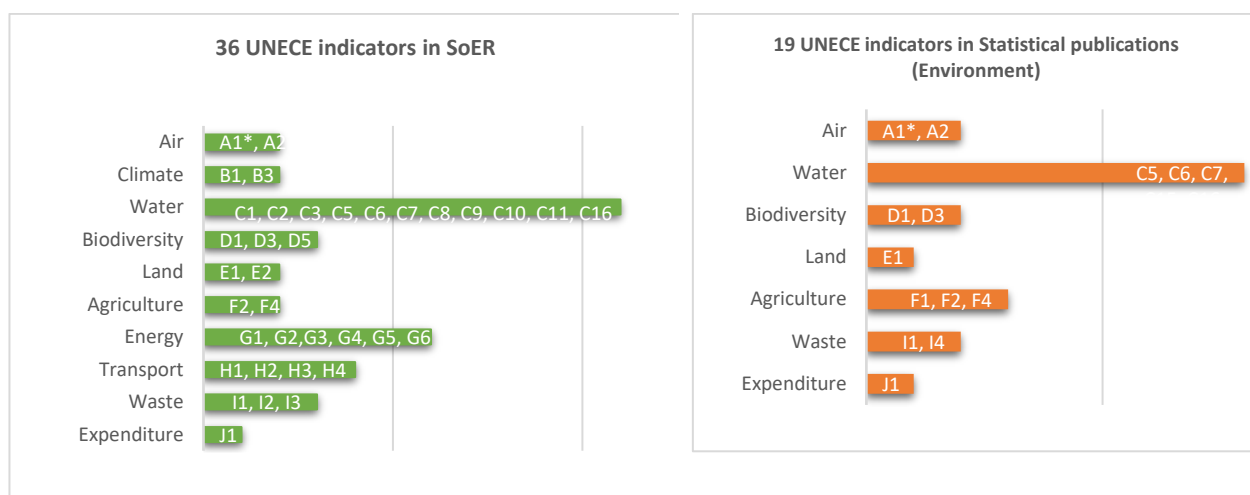
Summary of selected data flows quality

Concerning 7 data flows underpinning 3 UNECE indicators, Kyrgyzstan has reported on a long-time series of continuous monitoring, since 1990, however not all series are available online. There is reference to the information source and the last update time. Information is partly available in Kyrgyz, with the exception of data on biodiversity which is also available in Russian and English. Some published data is illustrated (map-scheme). There is reference to measuring methods and their conformity with the international standards. There is no indication of whether national categories of protected areas comply with the IUCN categories.

USE OF ENVIRONMENTAL INDICATORS

Use of environmental indicators in environmental assessments, state of the environment reports and other thematic environmental reports or statistical bulletins

With support of the UNDP office of Kyrgyzstan, the State Agency on Environmental Protection and Forestry prepared an indicator-based SoER for 2006-2011. UNECE environmental indicators are progressively used in visual materials (time-series graphics, tables) in some national documents, such as the 2006-2011 SoER[4], the 2011-2015 Statistical Yearbook "Environment in the Kyrgyz Republic"[5] and other publications.

36 UNECE indicators in SoER		19 UNECE indicators in Statistical publications (Environment)
Air	A1*, A2	Air	A1*, A2
Climate	B1, B3	Water	C5, C6, C7,
Water	C1, C2, C3, C5, C6, C7, C8, C9, C10, C11, C16	Biodiversity	D1, D3
Biodiversity	D1, D3, D5	Land	E1
Land	E1, E2	Agriculture	F1, F2, F4
Agriculture	F2, F4	Waste	I1, I4
Energy	G1, G2, G3, G4, G5, G6	Expenditure	J1
Transport	H1, H2, H3, H4		
Waste	I1, I2, I3		
Expenditure	J1		

* Abbreviations as used in the Guidelines for the Application of Environmental Indicators are accessible at https://www.unece.org/env/indicators.html.

Use of environmental indicators for reporting on international obligations under MEAs

One of the SEIS principles stipulates that environmental information and indicators should be readily available to easily fulfill reporting obligations, including under the MEAs. The UNECE environmental indicators are used for country implementation reports reports under UNFCCC[6], UNCBD[7], UNCCD[8] in different formats and to certain extents. The indicators are also used, to a smaller extent, for three BRS Conventions[9] and the Minamata Convention.[10]

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[4]State-of-the-environment report (2006-2011, in Russian and English).
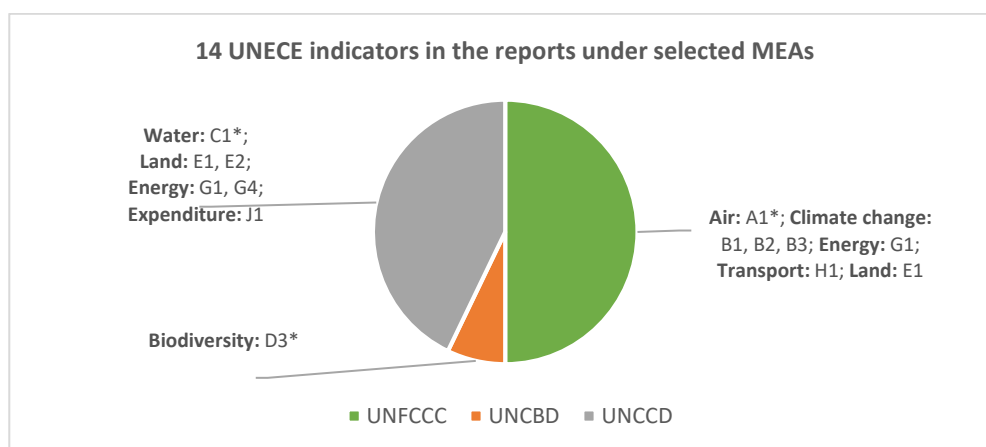[5] 2011-2015 Statistical Yearbook "Environment in the Kyrgyz Republic" (in English)
[6]Second National Communication of the Kyrgyz Republic under the United Nations Framework Convention on Climate Change (2013, in English).
[7]Fifth National Report of the Kyrgyzstan Republic to the Convention on Biological Diversity (in English).
[8]Third National Report on implementation of the United NationsConvention to Combat Desertification in the Kyrgyz Republic (2006, in Russian and English). Indicators are mainly linked to Aichi biodiversity targets.
[9]Kyrgyzstan submitted an Electronic Reporting System of the Basel convention (2014), online reporting 2014 under the Stockholm conventions.
[10] International projects under the Minamata convention in Kyrgyzstan.

14 UNECE indicators in the reports under selected MEAs

Water: C1*;
Land: E1, E2;
Energy: G1, G4;
Expenditure: J1

Biodiversity: D3*

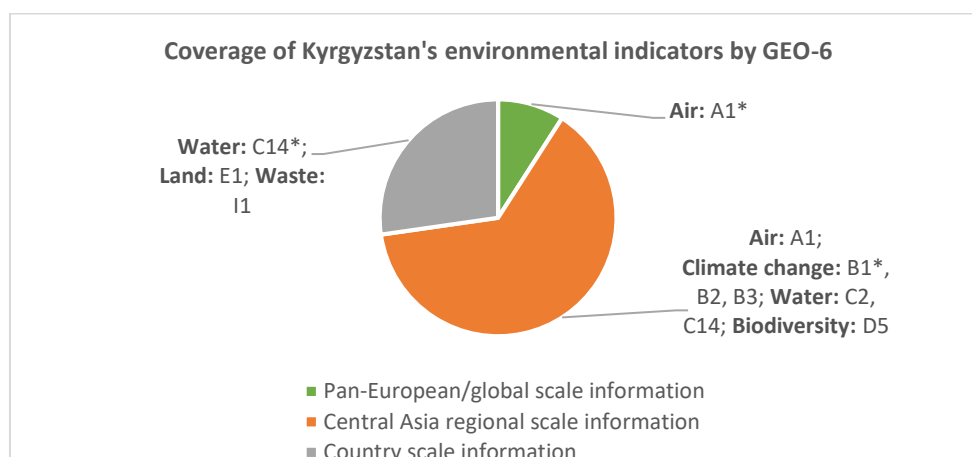Air: A1*; Climate change:
B1, B2, B3; Energy: G1;
Transport: H1; Land: E1

■ UNFCCC   ■ UNCBD   ■ UNCCD

* Abbreviations as used in the Guidelines for the Application of Environmental Indicators are accessible at https://www.unece.org/env/indicators.html.

Use of environmental indicators for reporting on the Sustainable Development Goals (SDGs) and Green Growth
In 2014, The Green Economy indicators[11] of Kyrgyzstan were developed in pursuance of paragraphs 6 and 7 of the Plan of Measures for the Implementation of the Concept for the Transition to Green Economy for 2013-2020, and in accordance with the Indicators of Green Growth of the OECD. Kyrgyzstan has the potential to use some of the UNECE environmental indicators to monitor SDGs.

The potential use of UNECE indicators for SDGs monitoring in Kyrgyzstan

 Water: C5*, C6, C14

 Energy: G2, G3, G4

 Water: C3
Waste: I1, I2

 Biodiversity: D1, D3

Linking of 16 UNECE indicators to the OECD Green Growth indicators in Kyrgyzstan

1. CO₂ productivity **	**Climate change:** B3*
2. Energy productivity	**Energy:** G1
3. Material productivity (non-energy)	**Water:** C16
	Agriculture: F4
4. Water productivity	**Water:** C2
7. Freshwater resources	**Water:** C1
8. Forest resources	**Biodiversity:** D3
11. Land resources	**Land:** E1
	Agriculture: F2
12. Soil resources	**Land:** E2
13. Wildlife resources	**Biodiversity:** D1, D4
14. Environmentally induced health problems and related costs	**Air:** A1, A2
16. Access to sewage treatment and drinking water	**Water:** C6, C14

* Abbreviations as used in the Guidelines for the Application of Environmental Indicators are accessible at https://www.unece.org/env/indicators.html.
**Consult the list of OECD Green Growth indicators to see the full name of indicator(s).

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[11]The Green Economy indicators of Kyrgyzstan in accordance with the OECD Green Growth indicators (in Russian).

Use of indicators in the Pan-European volume of GEO-6[12]

The 6th Global Environmental Outlook (GEO-6), produced in 2016 by UNEP and UNECE, covers the use of environmental indicators by Kyrgyzstan in the regional context.

Coverage of Kyrgyzstan's environmental indicators by GEO-6

Air: A1*

Water: C14*;
Land: E1; **Waste:** I1

Air: A1;
Climate change: B1*, B2, B3; **Water:** C2, C14; **Biodiversity:** D5

- ■ Pan-European/global scale information
- ■ Central Asia regional scale information
- ■ Country scale information

* Abbreviations as used in the Guidelines for the Application of Environmental Indicators are accessible at https://www.unece.org/env/indicators.html.

COOPERATION NATIONAL AND INTERNATIONAL SUPPORT FOR THE DEVELOPMENT OF SEIS

Kyrgyzstan is nurturing cooperation among national producers of data, based on different laws, technical regulations and practices, i.e. technical regulation on information exchange between the National Statistics Committee and data producers.

Kyrgyzstan maintains good cooperation with neighboring countries in the field of environmental information, within the framework of activities of the Interstate Commission on Sustainable Development (ICSD) for Central Asia. The SIC ICSD branch operates in Kyrgyzstan, based at the Kyrgyz-Russian Slavic University.

Kyrgyzstan participates in the work of various Commonwealth of Independent States (CIS) bodies, including the CIS Statistical Committee and the CIS Interstate Council for Hydrometeorology, and in the corresponding exchange of data and information.

Kyrgyzstan is a member of the Eurasian Economic Union, including the Customs Union and the Eurasian Economic Commission (although environmental information exchange is not a priority). Kyrgyzstan engages in cooperation and exchange of statistical and sectoral information within the framework of the Organization for Economic Cooperation (ECO) of Central Asia and the Middle East.

The EU-funded project "Forest and Biodiversity Governance Including Environmental Monitoring" (FLERMONECA project) was successfully implemented in five Central Asia countries, including in Kyrgyzstan. The project was implemented from 2013 to 2015 and was aimed at enhancing regional cooperation and partnerships with Europe in the fields of forest and biodiversity governance, including environmental monitoring through supporting the sustainable use and management of natural resources in Central Asia.

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[12]United Nations Environment Programme. Global Environment Outlook GEO-6. Assessment for the pan-European region. 2016.

Capacity of the monitoring system should be improved. The majority of data is still only available in paper format. Data quality control and data validation should be in place. The cooperation among data holders should be improved. The efforts to make data available online and accessible to users should be continued.

✓ Continue advancing the production and sharing of environmental data and indicators, including introducing data in electronic formats vs. paper formats;
✓ Extend the list of produced and collected data;
✓ Make all produced data and indicators accessible and available online;
✓ Maintain cooperation and interaction among environmental information producers in the country to achieve full SEIS implementation.

Kyrgyzstan works on the accessibility of UNECE environmental indicators which are being published on the websites of national environmental authorities, statistical agencies and open data portals in compliance with the UNECE requirements.

There is a room for improvements to achieve the 2021 target on UNECE indicators' availability, as well as on SEIS implementation.

✓ Continue further advancing the production and sharing of environmental indicators in compliance with recommendations of the UNECE WGEMA and the JTF on Environmental Statistics and Indicators;
✓ Continue methodological work on existing and new environmental indicators in order for all UNECE environmental indicators to be produced, available and accessible by 2021;
✓ Improve the quality and content of indicators according to the international standards.

UNDP-Kyrgyzstan supports the country on assessing its capacities to monitor and report on OECD Green Growth Indicators. Kyrgyzstan has the potential of using UNECE environment indicators to monitor the progress under SDGs.

✓ Assess in detail and/or promote the use of UNECE environmental indicators to monitor the SDGs and Green Growth progress;
✓ Increase the use of indicators for different purposes and monitoring capacities in the progress towards the achievement of the SDGs and Green Economy.

With international support, Kyrgyzstan produced an indicator-based report for the period of 2006-2011. The Statistical Yearbook (environment) and thematic reports provide sufficient environmental information and data. Some reports should be complemented with analysis, assessments and concrete recommendations; they should include relevant material, case studies and visual representations. Reports are mainly produced with international support.

✓ Improve the quality of nationally produced reports and the overall capacity of national institutions to produce data and indicators;
✓ Improve the analytical and recommendation sections of the SoER/thematic reports by using indicators (shift from providing environmental information to environmental assessment with linkages between economic processes and use of natural resources, visual explanations)
✓ Based on the lessons learned, continue the preparation of indicator-based reports in a reader-friendly manner.

One of the SEIS principles relates to the full availability of information to the general public at the national level, in the relevant national language(s). Kyrgyzstan would benefit from having unified portal with all environmental indicators in the national language as well asRussian and English.

✓ Make sure all produced environmental information is gathered in one place and/or made available at different places to a broader public and in different languages

The use of environmental indicators for different purposes, including reporting under the MEAs, should be promoted and strengthened. The produced reports are not always available on the website of the Agency. Some reports to the MEAs can be found on the various websites of the Conventions . Awareness of the assessment is not high.

✓ Increase the usage of environmental indicators when preparing reports under the MEAs;
✓ Improve the quality of the reports under the MEAs (analytical and visual parts);
✓ Make sure all produced reports are available on nationally managed websites and are well presented to a broader public;
✓ Improve the communication with users of environmental data and indicators, including for collection of the users' feedback.

About the activity:

Countries of Eastern Europe, the Caucasus and Central Asia have long traditions in the fields of environmental information, assessment and reporting. At the Seventh Environment for Europe Ministerial Conference (Astana, 2011) the participating ministers decided to establish a regular process of environmental assessment and to develop SEIS across the region to keep the pan-European environment under review. The UNECE Working Group on Environmental Monitoring and Assessment and the Joint Task Force on Environmental Statistics and Indicators created a platform for the countries to gradually consolidate a shared vision on how to select, calculate, present and use environmental indicators to reflect trends and patterns in the overall state of the environment. The European Environment Agency is supporting SEIS development in the EU Neighbourhood region.

This activity, funded by the Russian Federation, aims to support the activities under the Environmental Monitoring and Assessment (EMA) Programme. It also aims at strengthening national capacities in Central Asia, the Caucasus and Eastern Europe in environmental monitoring and assessment, and at enhancing the understanding by ECE member States of environmental data sharing and the SEIS reporting application.