

Grand Mesa, Uncompangre & Gunnison (GMUG) National Forests

Spruce Beetle Epidemic and Aspen Decline Management Response (SBEADMR) Project

Questions and Answers November 2014¹

Q. Why is there urgency to complete analysis on a large-scale landscape to manage spruce-fir and aspen?

A. To date, the GMUG has experienced substantial mortality resulting from Engelmann spruce beetle infestation (est. 250,000 acres) and Sudden Aspen Decline (est. 230,000 acres). Mortality resulting from spruce beetle has significantly increased since 2012 and is expected to continue to increase in coming years. Aspen decline has stabilized since 2010 but stands already affected continue to decline. In the immediate term, dead and dying trees pose a significant risk to public safety and infrastructure from hazard trees and fuel loading, the latter of which renders active suppression of wildfire more dangerous to firefighters. Furthermore, they are only viable as a timber product for an estimated 5-10 year period of time. For the longer-term, the goal is to use silvicultural prescription and prescribed fire in healthier spruce-fir and aspen stands to increase stand vigor, promote regeneration and create multiple age classes of trees, leading to increased resilience.

Q. Is the Forest Service utilizing a collaborative process to plan and implement the project?

A. Typically collaborative processes include multiple interested persons representing diverse interests, and the process must be transparent and inclusive. The collaborative process employs a variety of formats. In some cases it begins with the formulation of the proposal before the federal agency begins formal public scoping on a project. In other cases, collaboration occurs as the project progresses through the NEPA process and is used to refine information considered, identify additional science, provide enhanced review of documentation and considerations and build better tools to use in the analysis based on a broader audience input and suggestions.

Due to the urgency related to the amount and scale of spruce beetle infestation and aspen decline on the GMUG, the Forest Service initially decided to utilize a traditional NEPA approach where public comment is sought through scoping. After conducting formal scoping and hosting public meetings between July 2013 and August 2014, the Forest Service identified high public interest in a collaborative working group for the SBEADMR EIS. The Public Lands Partnership is convening these stakeholders in an open, transparent process. The group intends to meet throughout the SBEADMR

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¹ Due to the preliminary nature of this project, information in this handout is subject to change and will be updated as needed.

planning process to share information and provide feedback on Forest Service products. For more information, contact Chris Miller at info@publiclandspartnership.org.

Q. What is the Public Lands Partnership?

A. The Public Lands Partnership (PLP) was formed in 1992 as an informal forum to address public land issues in west central Colorado. PLP members, who include citizens, local governments, land management agency personnel, businesses, loggers, ranchers and conservationists, continue to come together to accomplish their mission of: "influencing the management of public lands in ways that enhance and help maintain diverse, healthy and viable economies, environments and communities in west central Colorado."

The PLP is a forum for community-based collaboration and has shown that involvement of community interests, resources, knowledge and values has improved management decisions. In a region where much of the land is public and managed by federal agencies (on average 70% is public land), PLP works collaboratively with all who are interested, including a range of community interests, state and local environmental groups, the Western Area Power Association (WAPA), and the land management agencies, including the USFS, BLM, and CPW, among other partners. The PLP has been successful in bringing different interests—from ATV recreationists to environmentalists— to the table and involving them in civic dialogue.

Q. What is being done to ensure other affected parties are aware and extended the opportunity to collaborate in this process/analysis?

A. The Forest Service has and will continue to encourage affected parties to comment on the project. One mechanism is the use of a website where various products, questions and answers are posted for public review and comment. The comment link is:

http://www.fs.usda.gov/goto/SBEADMR comments

Comments/suggestions may also be sent hard copy form to:

Attn: SBEADMR Project c/o Lee Ann Loupe, 2250 Highway 50 Delta, CO 81416.

All documents, including scientific articles related to the project, are and will be posted on the website over the life of the project at the project link:

http://www.fs.usda.gov/goto/SBEADMR

To date, the Forest Service has held two workshops/public meetings, provided several presentations to interested groups and stakeholders, and hosted a science workshop and a field trip in late August 2014. Additionally, Forest Service representatives are available to meet with individuals and groups upon request to help facilitate a better understanding of the project. Please contact Clay Speas (970) 874-6677 or email cspeas@fs.fed.us with any questions and/or for additional information.

Q. How is current science being incorporated into the analysis?

A. A neutral third-party Enterprise Team made up of various specialists was hired to complete the analysis and write the Environmental Impact Statement (EIS). The Team is composed of Forest Service professionals with advanced degrees in areas of wildlife, fire ecology, botany, archeology,

landscape architecture, engineering, watershed science and land resource planning. Per Forest Service Policy, these specialists are preparing reports to address potential effects of each of the alternatives and methods/approaches that will be used to minimize or eliminate potential effects. Specialists are required to use best available science (peer reviewed publications, internal Forest Service reports and professional judgment) when completing their reports. Reports also document compliance with Forest Service Policy and applicable law and regulation. Completed reports include a bibliography of all referenced publications used in the analysis. All environmental documents are being reviewed by staff on the GMUG NF. Final reports become part of the official record for the project.

Q. What is the purpose and need for the project?

A. As identified in the Notice of Intent, the purpose of the project is to treat affected stands, improve the resiliency of stands at risk of these large-scale epidemics and reduce the safety threats of falling, dead trees and large-scale wildfires.

Given the substantial mortality of spruce-fir and aspen forests on the GMUG over the past decade, and current Forest Plan direction, the need for the project is to manage forest vegetation to bring current and foreseeable conditions closer to desired conditions on landscapes available for active management.

Q. The Forest Service uses terms like "recovery", "resiliency" and "human safety". What do these mean in context of the action alternatives?

A. Safety, recovery, and resiliency are the goals of the action alternatives. They are adapted from the Western Bark Beetle Strategy and expanded to include aspen.

Public safety – Help ensure that people and community infrastructure are both a) protected from the risk of falling trees and b) able to be more safely defended in the event of wildfire.

Recovery – 1) Salvage dead and dying trees for economic benefit to local communities and to increase cost-effectiveness of all treatments. 2) Re-establish desired forest conditions.

Resiliency -1) In threatened spruce-fir, prevent or mitigate future bark beetle outbreaks. 2) In aspen, promote healthy clones.

Q. What are the objectives of the SBEADMR project?

A. Public safety*

- 1. Remove hazard trees along roads, trails, power lines, campgrounds, within ski areas and other permitted areas both within and outside the wildland urban interface (WUI).
- 2. Treat hazardous fuels in the WUI.
 - *Note that treatments to meet public safety goals and objectives may simultaneously meet recovery or resiliency goals and objectives.

Recovery

- 3. Provide commercial forest products to local dependent industries at a level commensurate with Forest Plan direction and in harmony with other Plan goals.
- 4. Establish and maintain diverse forest cover via replanting where seed sources are lacking.

Resiliency

- 5. Increase the forest's ability to survive stress, including insect attack, drought or disease.
 - a. In healthier (live) spruce-fir stands, increase stand vigor, promote regeneration and create multiple-age classes of trees.
 - b. Minimize spread of bark beetle from diseased stands to neighboring healthy stands.
 - c. Promote aspen regeneration via active treatments in live stands, with emphasis on those affected by Sudden Aspen Decline.

"Opportunity areas" where treatment could occur over the life of the project have been identified for each of the three action alternatives and are driven by emphasis areas for management within a given alternative. In Alternative 3, for example, the emphasis is public safety, so areas on the GMUG having a cover type composed of spruce, aspen or spruce/aspen that pose a risk to infrastructure from dead or dying trees or pose a risk for greater fire severity in the wildland urban interface have been identified for potential treatment. Of the total *opportunity* acres being analyzed in the Environmental Impact Statement (EIS), the maximum analyzed for actual *treatment* include 60,000 acres of commercial treatments and 60,000 acres of fire or non-commercial treatments over the life of the project.

Q. What activities are common to each of the action alternatives?

A.

Total Acres Analyzed for Treatment

- The Forest Service intends to annually implement approximately 4,000-6,000 total acres of commercial harvest of aspen, spruce and aspen/spruce mix. Annual acres treated will largely be driven by personnel and budget constraints in the Forest Service. A total of 60,000 acres will be analyzed in the EIS for such treatment across all action alternatives.
- The Forest Service intends to annually implement approximately 3,000-6,000 total acres of a combination of prescribed burning and non-commercial mechanical treatments in aspen, spruce and aspen/spruce mix. Annual acres treated will largely be driven by personnel and budget constraints in the Forest Service. A total of 60,000 acres will be analyzed in the EIS for such treatment across all action alternatives.

Composition of Treatments for Recovery & Resiliency Goals

• The exact ratio of commercial mechanical treatments to address salvage versus resilency goals will be driven by on-the-ground conditions as projects are implemented. While the impact from SAD has stabilized over recent years, tree mortality resulting from spruce beetle is increasing. For the purposes of analysis and given the current location and progress of the spruce bark beetle epidemic, the GMUG assumes that 80% of commercial mechanical treatment in the Gunnison Basin will be to address recovery goals (generally salvage harvest) and 20% to address resiliency goals (generally uneven-aged and sanitation harvest). On the Grand Mesa and Uncompander Plateau treatments, it will be closer to an even split between commercial mechanical treatments to address recovery versus resiliency goals.

Adaptive Management Strategy

In order to be more responsive to the rapidly changing conditions of spruce and aspen stands across the landscape, this project uses an adaptive implementation approach to determine which actions will be applied to the landscape and precisely where. The analysis defines opportunity areas that are available for treatment and establishes guidelines for selection of priority treatment areas. Due to the scale of the epidemic and the magnitude of affected and potentially affected

acres across all terrain of the forest, the Forest Service cannot treat all affected acres. Likewise, the Forest Service cannot—and does not presume to—stop the current infestation or rate of decline in spruce stands. Yet, treatments in aspen stands where mortality from Sudden Aspen Decline (SAD) is less than 50% have been successfully regenerated. Potential treatment areas are prioritized with human safety objectives as the first priority, followed by recovery objectives and – where feasible — resiliency objectives.

Various tools are being developed as part of the Environmental Impact Statement (EIS) for use by Forest Service professionals during project design and implementation. These tools will define the range of alternative treatment prescriptions, prescribe design features for implementation, and document that the commitments in the ROD and other legal and policy requirements of the Forest Service are followed. Tools include:

- Guidelines for selection of priority treatment areas these guidelines may include public safety objectives, presence of an existing transportation system that could be utilized to complete treatments, areas where multiple resource benefits could be accomplished, etc.
- Silvicultural prescription matrix treatment prescriptions that are tied to spruce-fir and aspen stand conditions and associated objectives.
- Project Design Features practices to be applied to a project to minimize or avoid undesirable impacts to vegetation, soils, water, wildlife and cultural resources.
- Project Design Checklist tracking tool to document that all required surveys, compliance checks, and design features for an individual project have been completed. For example, the presence of a Northern goshawk nest in a possible treatment area will trigger avoidance/protective measures as specified in the design features of the EIS.

Monitoring and project reviews will result in an annual findings report for review by Forest Service managers and the public. The findings report will be the mechanism whereby Forest Service managers may modify future on-the-ground actions to further minimize environmental impacts or achieve desired outcomes. The findings report is also the mechanism where new or updated science may be incorporated into project design. Public participation in pre-implementation field visits and post-implementation reviews will be encouraged (See figure 1).

Figure 1. Iterative Project & Monitoring Cycle

Protection of People and Community Infrastructure

All action alternatives would work toward ensuring that people, communities, and infrastructure are:

- Protected from the hazards of falling bark beetle-killed trees by mitigating such hazard trees.
- Subject to reduced risk from elevated wildfire severity after beetle infestations.

Location of Commercial Harvest

• Commercial harvest would only occur in lands identified as tentatively suitable for timber harvest, per the current Forest Plan.

Composition of Treatments for Recovery & Resiliency Goals

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Roads and Road Construction

The existing road network would be used to the maximum extent feasible to access the proposed treatments and to remove forest products. Additional access would be supplemented with temporary and/or designed (specified) road construction as needed to accomplish project objectives.

Temporary roads are used for short-term project access where minimal resource concerns exist. Where access is needed and adjacent resource concerns exist (e.g. at perennial and intermittent stream crossings, where high potential for soil erosion exists, on steeper side slopes, etc.), designed or specified ("spec") roads may be constructed.

The management of project roads will be addressed through the use of design features. Most roads constructed under any action alternative will be decommissioned upon completion of the project (including all post-sale activities, which may take up to 10 years). However, some designed roads may remain if certain conditions are met; these would be administratively closed to the public (Level 1 maintenance). Per Forest Service policy, the need for maintaining roads to Forest Service road infrastructure standards (road surfacing, drainage, etc.) will also be addressed in the Draft EIS.

National Forest System-designed/specified roads are categorized by operational maintenance level, which describe the standard to which the road is managed.

Road Maintenance Level	Description
1	Closed except for intermittent service use
2	High-clearance vehicles, discourage passenger cars
3	Low-speed, single-lane with turnouts, low priority for comfort
4	Moderate degree of user comfort; double- or single-lane, aggregate
5	High degree of user comfort; double-lane, paved

Q. Where would treatments to protect people and infrastructure occur?

- A. Treatments to protect people, communities, and infrastructure could occur:
 - Along 3,300 miles of roads (within a 300 foot opportunity area on either side of the road). Only trees that pose a hazard to the road will be removed.
 - In a buffer around campgrounds and other administrative facilities (approximately 160 facilities).
 - Within ski areas boundaries (an estimated 12,000 acres within Telluride, Crested Butte and Powderhorn ski areas).
 - Within Western Area Power Administration (WAPA) and Tri-State power transmission lines rights-of-way and border zones.
 - Communication, water, pipeline, and other utility corridors.
 - Other developed and dispersed recreation sites.
 - Other inventoried infrastructure that could be at risk from falling trees.
 - Treatments to reduce safety risks associated with suppressing wildfires in and around the wildland-urban interface (WUI), generally within one mile of any communities, administrative sites, developed (recreation) sites and within ski area boundaries.

Q. What are the different draft alternatives?

A. Alternative 1 - No Action

Under the No Action Alternative, no treatments would take place within the project area. This alternative represents no attempt to actively respond to the action-oriented issues or the purpose and need identified in the Notice of Intent. There would be no effort to modify existing conditions, unless authorized by other decisions.

Alternative 2 - Proposed Action

Alternative 2 utilizes the adaptive implementation strategy to design, implement and monitor vegetation management activities on a landscape-scale based on the conditions at the time of treatment. Treatments include those to meet the recovery goal (salvage logging with re-planting when necessary) and treatments to meet the resiliency goal (in spruce, group selection and single tree removal and in aspen, coppice cuts and prescribed fire to stimulate aspen regeneration). Non-mechanical (prescribed fire) methods could also be used to meet safety and resiliency goals.

• The total Alternative 2 opportunity area is ~587,000 acres where commercial, non-commercial mechanical, and prescribed fire treatments could be implemented. About 116,200 acres of aspen, 93,900 acres of spruce, and 86,100 acres of aspen/spruce mix within this total are tentatively suited for timber production.

Spruce-fir Recovery and Resiliency

Mechanical treatments would occur on lands only within the twenty-four focus Lynx Analysis
Units (LAUs). These encompass approximately 80% of spruce-fir tentatively suitable for
timber production across the Forest. Treatments would be completed consistent with the
Southern Rockies Lynx Amendment (SRLA).

- The spruce-fir recovery goal would be met through removal of dead and dying trees, followed by tree planting where adequate natural seed sources are lacking.
- Treatments to meet the resiliency goal could include sanitation and salvage treatments to remove pockets of dead and dying trees to reduce the threat of beetle infestation to surrounding healthy stands.
- Treatments to meet the resiliency goal would also include removal of single trees or group selections of live and dead/dying trees where bark beetle impacts are light or in areas yet unaffected by beetles with the goal of promoting multiple age classes.

Aspen Recovery and Resiliency

- Prescribed fire treatments would occur in aspen or any conifer vegetation type with an aspen component with the goal of reducing the amount of fuels and stimulating additional aspen on the landscape.
- Mechanical treatment could occur in conjunction with prescribed fire if reducing fuel loading prior to the use of fire was needed.

Alternative 3 - Public Health and Safety Focus

Alternative 3 utilizes the adaptive implementation strategy to design, implement and monitor vegetation management activities; however, it shifts the focus of treatments almost entirely to protecting the safety of people and community infrastructure. This alternative was developed to address public comments that proposed that treatments focus on public health and safety purposes, rather than using active management on the larger landscape to address the natural processes of bark beetle infestation and SAD.

- Mechanical treatments would generally be limited to lands in the wildland-urban interface (WUI), typically within one mile of any communities, administrative sites, developed (recreation) sites and within ski area boundaries, but hazard tree removal would be a limited buffer zone around identified infrastructure, whether within or outside of the WUI.
- Mechanical treatments to treat infested dead or dying spruce-fir would occur as described in Alternative 2, but would only be used to protect infrastructure in the WUI. Similarly, aspen treatments would be the same as in Alternative 2, but would only be used to protect infrastructure in the WUI.
- Specifically, the area of analysis for hazard tree treatments includes:
 - o 3,300 miles of roads (within a 300 foot opportunity area on either side of the road). Only trees that pose a hazard to the road will be removed.
 - o Campgrounds and other administrative facilities (approximately 160 facilities).
 - Within ski areas boundaries (an estimated 12,000 acres within Telluride, Crested Butte and Powderhorn ski areas).
 - Within Western Area Power Administration (WAPA) and Tri-State power transmission lines rights-of-way and border zones.
 - o Communication, water, pipeline, and other utility corridors.
 - Other developed and dispersed recreation sites.
 - Other inventoried infrastructure that could be at risk from falling trees.

• The total Alternative 3 opportunity area covers ~300,000 acres. About 70,600 acres of aspen, 38,200 acres of spruce, and 34,900 acres of aspen/spruce mix within this total are classified as tentatively suited for timber production.

Alternative 4 - Spruce-Fir Salvage Only

Alternative 4 utilizes the adaptive implementation strategy to design, implement and monitor vegetation management activities but excludes green-stand treatments in spruce-fir to meet the resiliency goal. This alternative addresses comments that stated that green-stand resiliency treatments in spruce-fir are ineffective. In this alternative, spruce-fir stands that have been affected by spruce bark beetle would be treated for recovery purposes and to increase resilience of neighboring green stands (via sanitation harvest). No green-stand treatments would occur to create multi-storied stand conditions in spruce-fir. Aspen treatments would be the same as described in Alternative 2.

- The total Alternative 4 opportunity area covers ~677,000 acres. About 116,200 acres of aspen, 118,700 acres of spruce, and 91,700 acres of aspen/spruce mix within this total are classified as tentatively suited for timber production.
- The opportunity area for mechanical treatments in spruce-fir includes all LAUs and additional lynx habitat outside of the LAUs.

Summary of Alternatives**

	ALTERNATIVES							
Opportunity Area Type	1 – No Action	2 - Proposed	3 – Public Safety	4 – Spruce-Fir Salvage harvest only				
	Public Safety Opportunity Areas							
Aspen, Spruce, and Aspen/spruce mix within WUI (FS 2009), Roads and Power Line Corridor Buffers	NA	~ 296,400 acres	~ 296,400 acres	~ 296,400 acres				
	Vegetation	Treatment Opport	unity Areas	<u> </u>				
Slopes <40%, not suited for timber production (noncommercial mechanical treatment, fire may be used)	NA	~225,000 acres	~123,000 acres	~284,000 acres				
Tentatively suitable for timber production per Forest Plan (commercial	NA	~296,000 acres	~144,000 acres	~327,000 acres				

mechanical harvest				
may occur) Slopes >40%, not suited for timber production (fire or noncommercial mechanical treatments may be used)	NA	~66,000 acres	~34,000 acres	~66,000 acres
Slopes <40%, not suited for timber production (noncommercial mechanical treatment, fire may be used)	NA	~587,000	~301,000	~677,000 acres

Roads*

*Maximum estimates for analysis purposes. Treatments will focus on areas having an existing transportation system, thus minimizing new road construction.

Specified Road Construction	NA	60	10	60
Temporary Road	NA	260	70	260
Construction				
Road	NA	260	260	260
reconstruction (existing system roads to be reconstructed to meet standards for logging truck activity)				
Road maintenance	NA	440 miles	640 miles	440 miles

^{**}Due to geoprocessing, the total acres are approximate and expected to be accurate within +/-5%.

Q. How much of the GMUG National Forests could be directly affected by the project?

A. The GMUG includes approximately 3 million acres of Forest Service lands. Across all action alternatives, a maximum of 120,000 acres will be analyzed in the EIS for a) commercial mechanical treatment (60,000 acres) and b) prescribed fire or non-commercial treatment (60,000 acres). These acres represent approximately 4% (2% commercial mechanical and 2% fire or non-commercial) of the total Forest Service land base of the GMUG, and exclude Wilderness, Colorado Roadless, and Special Designated Areas.

Q. Why is the Forest focusing on tentatively suitable timber lands as a driver for timber production?

A. According to the National Forest Management Act (NFMA) Regulations, timber production and commercial harvest generally may only take place on lands classifed as suitable lands (36 CFR 219.14). Pages B-7 to B-10 of the GMUG NF Forest Plan describe the process used to identify lands not suitable for timber production. Factors used to identify areas not suitable for timber production include low productivity sites, steep slopes (>40%), sites where irreversible damage could occur, and visually sensitive areas. During project reconnaissance and layout, Forest Service personnel make a final determination based upon these factors and other considerations for resource protection. While these lands are identified as potentially suitable for timber production, activities are to be conducted to meet other appropriate Forest Plan direction and the agency is required to use best available science when planning and implementing management activities. NFMA regulations also provide direction regarding resource protection and re-establishment of trees within 5 years of harvest.

Q. A large amount of Canada lynx habitat is proposed for treatment. How will impacts to lynx be addressed?

A. In 2010, Region 2 of the Forest Service completed the *Southern Rockies Lynx Amendment* (SRLA) addressing the effects of various management activities on Canada lynx and its habitat. This document amended all Forest Plans in Colorado. The SRLA established management direction and impact limits for management activities, including timber management. All applicable management direction from the SRLA is being incorporated into action alternatives being analyzed in the EIS and will be required at the time of project layout and implementation. Canada lynx as well as all other threatened, endangered and sensitive species and Management Indicator Species are being addressed by the wildlife biologist on the analysis team. The Fish and Wildlife Service has been collaborating on the development of the project proposal and mechanism for annual reporting. All aspects of the project will conform to requirements of the SRLA.

Q. How will other wildlife species concerns be analyzed and addressed in the EIS?

A. Per Forest Service policy, the wildlife biologist and botanist on the team are each preparing a specialist's report addressing potential impacts of the various management alternatives to wildlife, fish and plant resources and associated management considerations. At a minimum, species to be addressed include Management Indicator Species (common trout, cutthroat, brewer's sparrow, Northern Goshawk, red-napped sapsucker, American martin, and Rocky Mountain elk), Forest Service sensitive species (33 mammals, birds, reptiles, amphibians, and fish) and over 50 sensitive plants. The analysis is also addressing one threatened bird species (Gunnison sage-grouse), a threatened mammal (Canada lynx), and a threatened fish (greenback cutthroat trout). Any impact to threatened or endangered species or proposed critical habitat will require consultation with Fish and Wildlife Service. All action alternatives are being designed to meet Forest Plan direction.

Prior to project implementation, all required surveys for these species will be completed and the data will be used to design the project to minimize impacts and, in some cases, to enhance habitats for

various wildlife species. Design features will be applied to a specific project area to minimize impacts to wildlife or plants and meet Forest Plan standards and guidelines.

Q. How is Climate Change being addressed in this EIS?

A. On 16 January 2009, the Washington Office of the USDA Forest Service released guidance to Forest Service units regarding the incorporation of climate change science into project-level NEPA documents (Climate Change Considerations in Project Level NEPA Analysis, USDA 2009), which included the following:

- 1. Climate change analysis includes the effects of agency action on global climate change and the effects of climate change on a proposed project.
- 2. The Agency may propose projects to increase the adaptive capacity of ecosystems it manages, mitigate climate change effects on those ecosystems, or to sequester carbon.
- 3. It is not currently feasible to quantify the indirect effects of individual or multiple projects on global climate change; therefore, determining significant effects of those projects or project alternatives on global climate change cannot be made at any scale.
- 4. Some project proposals may present choices based on quantifiable differences in carbon storage and GHG emissions between alternatives.

The potential impact of future fire management and prescribed burning to Green House Gases (GHGs) is being addressed in the EIS. In order to estimate emissions from prescribed burning, two models will be used. Both the Piled Fuels Biomass and Emissions Calculator and FOFEM (First Order Fire Effects Model) estimate National Ambient Air Quality Standards (NAAQS) criteria pollutants and GHG emissions.