

Hatfield-4106: Air quality monitoring on an airshed and site specific basis

Air quality monitoring on an airshed and site specific basis

Challenge

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| Challenge ID: | HCP-4106 | Originator: | Onshore: Hatfield |
| Title: | Air quality monitoring on an airshed and site specific basis. | | |
| Theme: | ON 4.1: Environmental monitoring - Baseline historic mapping of environment and ecosystems | | |
| Consortium Lead: | C-CORE | Interviewed Company: | C-CORE |
| Geography: | ON.REG.03 - Canada | | |
| Challenge Description | | | |
| What is not possible / not adequately addressed at present? | | | |
| Monitoring of GHG, particulate matter, and air quality within airsheds to determine regional airshed characteristics and site specific contributions/impacts on the regional airshed (CO ₂ , plumes, NO _x , SO _x). | | | |
| What effect does this challenge have on operations? | | | |
| Regulatory requirement as part of compliance monitoring. Baseline information is required for environmental impact assessment. Limited spatial extent of air quality information due to logistics constraints and deployment of monitoring stations. | | | |
| Thematic information requirements: | Air quality and emissions | | |
| What do you currently do to address this challenge? How is this challenge conventionally addressed? | | | |
| In-situ monitoring systems and airshed modelling. | | | |
| What kind of solutions do you envisage could address this challenge? | | | |
| Higher resolution hyperspectral sensors and atmospheric column models. Integration of in-situ and satellite derived information to provide improved monitoring (spatial coverage and accuracy). | | | |
| What is your view on the capability of technology to meet this need? Are you currently using EO tech? If not, why not? | | | |
| Current EO resolutions are in the order of 40km and validated models over areas such as the Canadian Oil Sands have not been developed. | | | |
| Challenge Classification | | | |
| Impact on Lifecycle (0=none, 4=high): | | Climate / Topography / Urgency: | |
| Pre-license: | 2 | Climate class: | Mild Mid-Latitude |
| Exploration: | 2 | Topographic class: | Not specific |
| Development: | 2 | Seasonal variations: | Any season |
| Production: | 4 | Impact area: | Environmental |
| Decommissioning: | 0 | Technology urgency: | 1 - Mid-Term (5-10 years) |
| Challenge Information Requirements | | | |
| Update frequency: | Daily | | |
| Data currently used: | In-situ monitoring and surveys. | | |
| Spatial resolution: | Basin | | |
| Thematic accuracy: | Not specific | | |

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|-----------------------|-------------------|
| Required formats: | Not Specific |
| Timeliness (Vintage): | Within six months |
| Geographic extents: | Regional |
| Existing standards: | None |

Relevant products

Content by label

There is no content with the specified labels

