

Problem-Needs-Solution Analysis Assignment

Using your current MDE or a project you've completed in the past, write a title for your problem (1) and then fill-in the table to conduct a problem-needs-solution analysis (2). Upon completion, save this file and upload it Canvas for feedback and a grade.

1. **Title of your problem:** Inconsistent State and Industry Management of Greenhouse Gas Emissions Leads to Economic and Environmental Challenges, Highlighting the Need for Integrated Solutions

2. **Fill out the following table to suit your project. View the example below for guidance.**

KPI's	Needs
Greenhouse gas emissions per state Economic growth (GDP) per state	Must reduce greenhouse gas emissions to meet government targets Must promote economic growth while reducing emissions
Problems	Solutions
The management of emissions varies by state, making it challenging to achieve overall emission reduction targets. Enterprises, particularly in the coal-based fuel and underground coal mining industries, face high cost risks when dealing with strict emission policies. Greenhouse gas emissions cause significant economic losses to society, but public environmental awareness and participation are low.	State-level Management: Use the Equivalent Emission Density (EED) metric to measure and compare the emission levels of each state, and provide policy recommendations based on economic growth and emission data. For example, implementing an Emissions Trading System (ETS) to control overall greenhouse gas emissions while stimulating market activity. Enterprise-level Management: Improve technology in the coal-based fuel and underground coal mining industries, such as using CCL technology to increase yield and AI technology to detect and handle mine gases, thereby reducing cost risks for high-emission industries. Society-level Management: Increase the estimated social cost of carbon emissions to encourage public participation in emission reduction efforts. For instance, raise public environmental awareness through education and advocacy to promote individual and community environmental actions.

Example

(model your work above to this example);

Title of the problem: "Fragmented global supply chains may cause shipments of fish to be delayed, spoiled or even mislabelled, resulting in financial losses and lower consumer confidence"

Note that the title defines the problem and the effect and then explains why this is a problem.

Problem, Needs, Solution Diagram

Note that the KPI's are brief, the needs match the KPI's. Problems are in narrative form. Solutions are in narrative form, address the KPI's and needs.

Seafood Supply Chain Case Analysis



KPIs	Needs
<ul style="list-style-type: none">• Shipping time from fishery to end customer• Accuracy of fish species identification	<ul style="list-style-type: none">• Must reduce shipping time from fishery to end customer• Must increase accuracy of fish species identification
Problems	Solutions
Shipping times from fishery to end customer are high, as fragmented supply chains cause shipments to be delayed. Such gaps in supervision might also cause species of fish to be mixed up or mislabeled. All of this leads to financial losses, as well as to a weakening of supply chain trustworthiness and consumer confidence.	A blockchain-based integrated supply chain where fish get tagged and scanned as they are caught, cut, frozen, and shipped; combined with DNA testing to confirm species of fish. Fisheries and distributors can monitor this process in detail, enabling them to ship quickly and accurately. Customers may monitor this process as well, for transparency and accountability.

Sources: [\[1\]](#) [\[2\]](#) [\[3\]](#)