Public Engagement Strategy for Public Acceptance and Social License to Operate for CARBON CAPTURE (UTILIZATION) AND STORAGE Project

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Dr. IR. FARAH MULYASARI, ST., MSc.
Department of Communication Science, Faculty of Communication and Diplomacy, Universitas Pertamina
Center of Sustainable Geoscience & Outreach, Universitas Pertamina
National Center of Excellence for CCS/CCUS & Center for CO_2 and Flared Gas Utilization, ITB

OUTLINE

- Rationales for CC(U)S Communication
- Significances of CC(U)S Outreach
- Challenges of CC(U)S Communication
- Public Engagement Strategy
- Best Practices

Rationales for CC(U)S Engagement & Communication

Importance Issues around the need of CC(U)S Public Engagement

Source: Universitas Pertamina and ITB, 2019

Rationales for CC(U)S Engagement

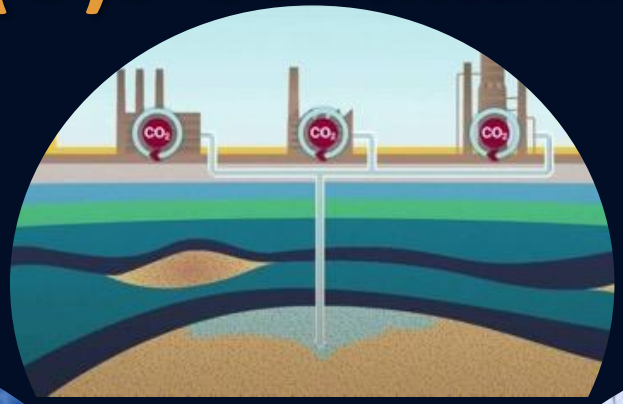
- Engage the stakeholders in Climate Change Mitigation as an effort in transition to a greener and more resilient society
- Engage the (local) stakeholders in managing perceived risk
- Public engagement is in accordance with/and part of Environmental Impact Assessment (EIA)

The Level of Public Engagement

	Inform	Consult
Public Participation Goal	Providing the public with balanced and objective information on CC(U)S to assist them in understanding the problem, alternatives, opportunities and/or solutions	Obtaining public feedback on analysis and/or decisions
Promise to the Public	CC(U)S team will keep public informed	CC(U)S team will keep the public informed, listen to and acknowledge concerns
Techniques/Tools	Fact Sheets, Web site, Open houses, Site visit, Education Fair/ Exhibition	Public Comment & Hearing, Focus Groups, Surveys, Public Meetings

Source: Mulyasari et al., 2015

Rationales for CC(U)S Communication



Demonstration
Integrity of CC(U)S
Value of CC(U)S
Proven – Safe & Understood Technology
Existing Expertise

Influence
Urgency of Deployment CC(U)S Technology in Large-scale Project for Climate Change Mitigation
Policies and Decision Making
Narrative of CC(U)S

Education
Increase Public Knowledge & Acceptance
Explain the Distinctions of the Stages of CC(U)S Processes
Eliminate the Myths around CC(U)S

Source of pic: real engineering, zeroemissionplatform, ccs-coe.fttm.itb.ac.id

Significances of CC(U)S Outreach

All CC(U)S projects globally are tied to each other
Global concerns tied to climate change
What happens in one project will affect another
Early projects have responsibilities to educate and inform

CC(U)S complex technologies
Understanding these are important
Misunderstanding builds distrust and fear

Local communities are very specific for each project with unique needs
People must feel their regionally specific concerns are being met
Communities must be involved as a project is being planned, not informed after decisions have been made

Source of pics: energycouncil.com, ccs-coe.fttm.itb.ac.id, Mulyasari et al., 2015

Challenges of CC(U)S Communication

General Challenges

- Low public awareness of CC(U)S, public perceptions of new technology → NIMBY ("Not In My Backyard") phenomenon
- Perception of risk (particularly in the "Storage" process)
- Associated with fossil fuels → creating polarized debate
- Misconception of cost barriers
- No (not yet) high-profile of CC(US) champion with political weight
- Overcome barriers between companies and bureaucracies to share information
- Proliferation of information sources that are neither reliable nor factual (rise of social media) → dealing with hoax about CC(U)S
- Lack of science-based media writing

Source of pics: thebulletin.org, foodinsight.org, reedesignfile.com

Challenges of CC(U)S Communication

The Language & Image: Impact of Good Storytelling

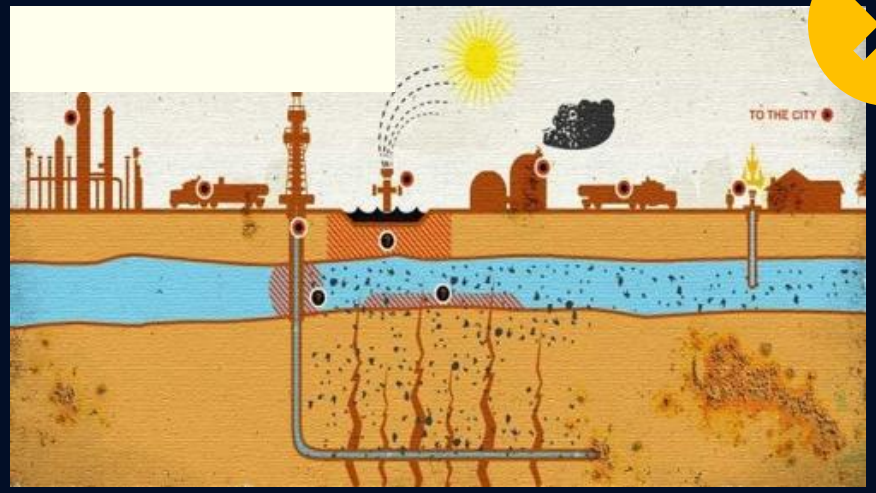
- The “Alarmed” and “Concerned” trust scientists and scientific organizations more than any other source of information
- The “Doubtful” and “Dismissive” are most likely to trust their own family and friends for information
- Proper project communication puts the science within a context of stories that relate to the audience
- Opponents of CC(U)S projects seem to understand this method better than project proponents
- Seeing is believing! → site visit

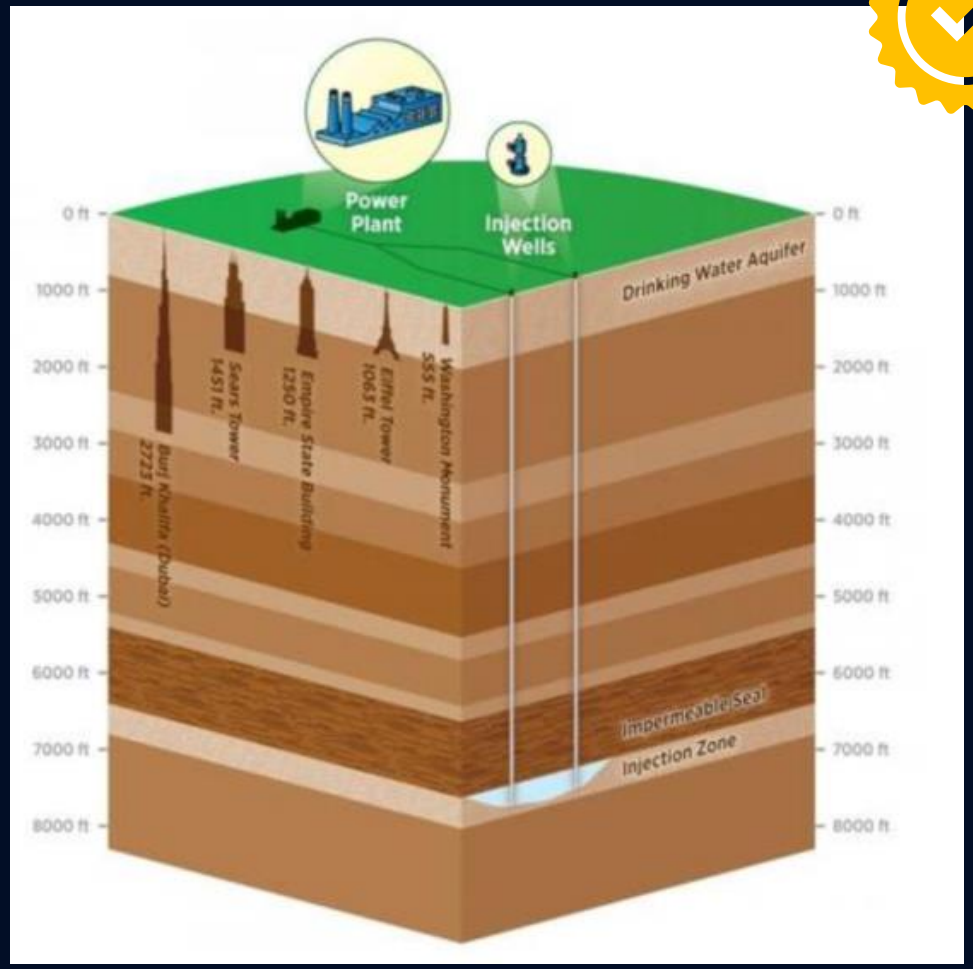
Source of pics: saskpower.com, Suzuki et al (2018)

Challenges of CC(U)S Communication

The Language & Image: Drawing to Scale

- One of the purposes of effective CC(U)S communications is to provide clear, scientific detail where needed. This means, for example, the storage images should be to scale.





Source of pics: netivist.org, epa.gov

Challenges of CC(U)S Communication

The Language & Image: The Power of Words

- Words can be a very powerful tool. They can help you connect with customers, assist in negotiation and, ultimately, they can help you build your business → choose wisely
- Sometimes great words and phrases could lose their meaning. They get so diluted by overuse that they end up meaning nothing at all → track how we use them in business

> Words can inspire. And words can destroy. Choose yours well.
>
> Robin Sharma

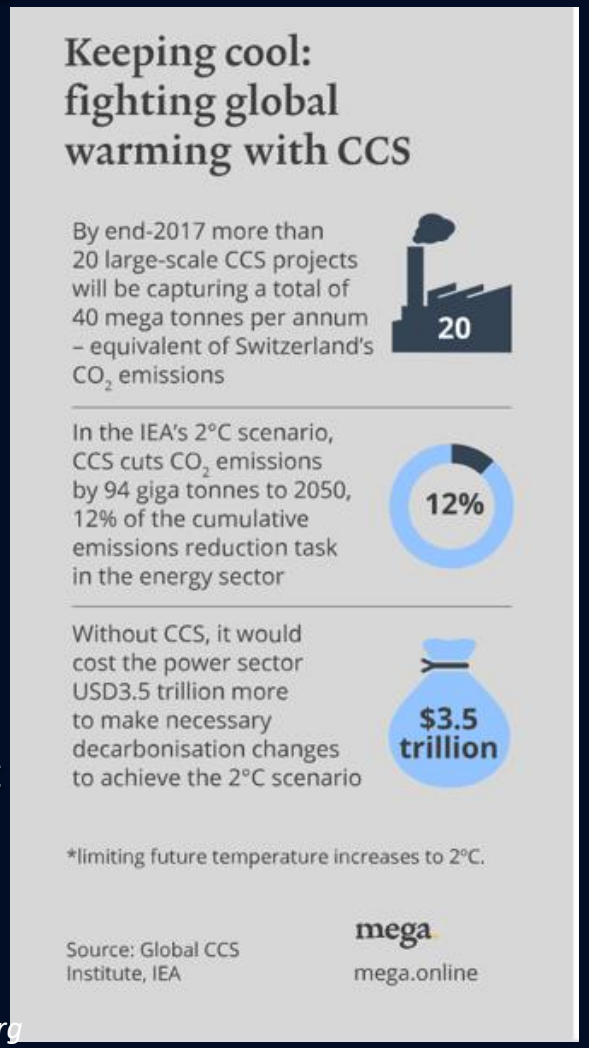
Source of pics: sba.gov, inspiredmarketinginc.com, mentimete

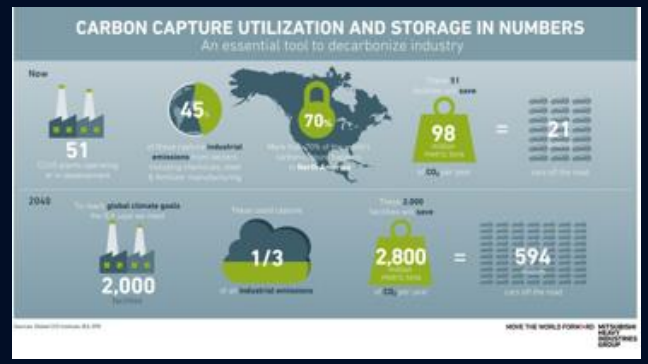
Challenges of CC(U)S Communication

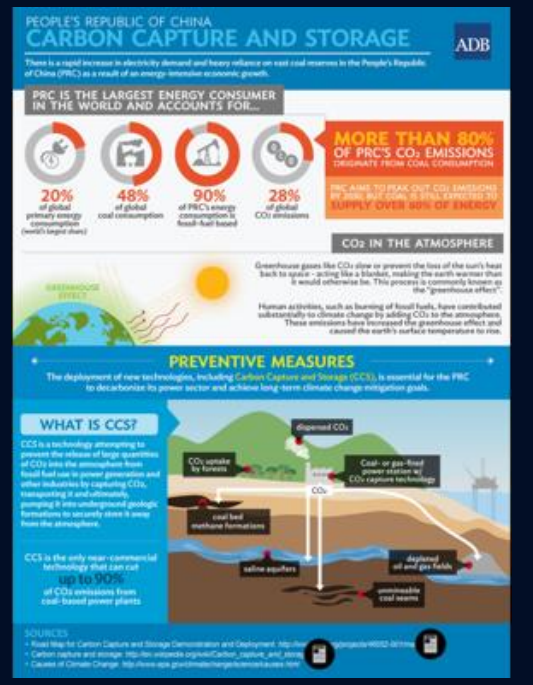
The Language & Image: Infographics

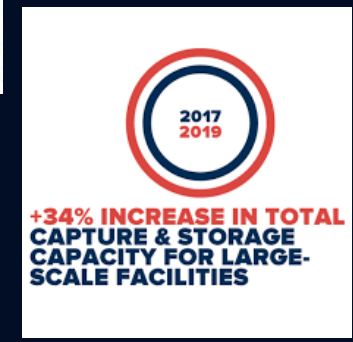
Provide effective tool for conveying (and convincing) information

- ✓ The human brain process visuals better than text → great way to tell visual stories with facts & data
- ✓ Infographics are easy to digest, linkable & shareable
- ✓ Infographics help establish you/the organization as an expert
- ✓ Less infographics are being promoted today → momentum for CC(U)S project developers in crafting ”solid” design









Source of pics: www.susadvisor.in, globalccsinstitute.com, adb.org

Challenges of CC(U)S Communication

When Communication ”fails”….

Case of Shell: Barendrecht, NL, 2010

- Limited local contact ahead of decision making
- Industrial fatigue in the area
- Failure to enable and identify spokespeople (project proponents seen as untrustworthy)
- Dueling experts
- Concerted ENGO opposition to technology

Source of pics: stichtingmilieunet.nl, fluxenergie.nl, eenews.net, thetyee.ca

Challenges of CC(U)S Communication

When the Project stops being about your project ….

- Involves sentiments of important stakeholders' group
- Might influence the credibility of other CC(U)S projects

Case of Accusations of Leak at Weyburn-Midale, 2011

Technology & Science

Sask. CO2 storage probed over alleged leak

The Canadian Press · Posted: Jan 17, 2011 10:36 AM ET | Last Updated: January 18, 2011

Cameron and Jane Kerr took this photo of what they say is gas bubbling from water on their property. ((Courtesy of Cameron and Jane Kerr))

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Reported Weyburn carbon capture project failure is bad news for the world

Scott Simpson
Jan 11, 2011 • Last Updated 9 years ago • 3 minute read

A Saskatchewan report that the world's first commercial carbon capture project is failing could be grave news for those involved in efforts to blunt humanity's contribution to climate change.
It's a story with global implications, potentially bad ones, for the energy sector.
A farm couple whose property sits over a Cenovus oilfield in Weyburn, Sask. which is supposed to be serving as the permanent storage site for more than 15 million tonnes of carbon dioxide – on Tuesday released a consultant's report which says the CO2 is leaking into their soil.
The Weyburn project, which has received millions of dollars in government funding and is owned by Cenovus Energy, has been trumpted for a decade as the international flagship for technology that would allow the continued use of fossil fuels including coal and natural gas without adverse environmental impacts.

Saskatchewan

CO2 leaks worry Sask. farmers

The Canadian Press · Posted: Jan 11, 2011 11:58 AM CT | Last Updated: January 12, 2011

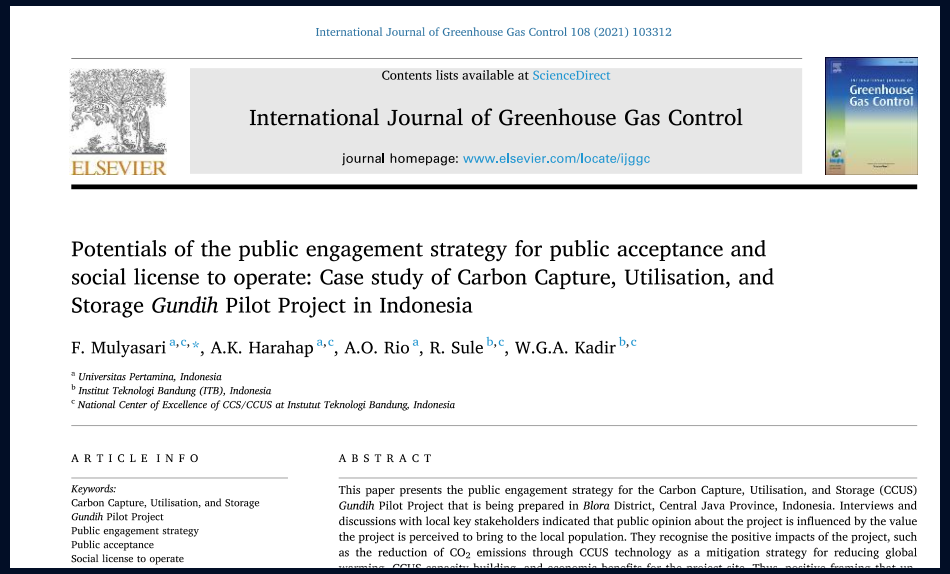
A Saskatchewan farm couple says greenhouse gases that were supposed to be stored permanently underground are leaking out, killing animals and sending groundwater foaming to the surface like shaken-up soda pop.

Cameron and Jane Kerr, who own land above the Weyburn oilfield in eastern Saskatchewan, have released a consultant's report that claims to link high concentrations of carbon dioxide in their soil to gas injected underground every day.

"We've lost a home, we've got a back yard full of sand and gravel that we don't think we can sell," Cameron Kerr told CBC News Tuesday.

Source of pics: vancouversun.com, cba.ca

Overcoming the Challenges …..



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Potentials of the public engagement strategy for public acceptance and social license to operate: Case study of Carbon Capture, Utilisation, and Storage *Gundih* Pilot Project in Indonesia

F. Mulyasari [a,c,*], A.K. Harahap [a,c], A.O. Rio [a], R. Sule [b,c], W.G.A. Kadir [b,c]

[a] *Universitas Pertamina, Indonesia*
[b] *Institut Teknologi Bandung (ITB), Indonesia*
[c] *National Center of Excellence of CCS/CCUS at Institut Teknologi Bandung, Indonesia*

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ABSTRACT

This paper presents the public engagement strategy for the Carbon Capture, Utilisation, and Storage (CCUS) *Gundih* Pilot Project that is being prepared in *Blora* District, Central Java Province, Indonesia. Interviews and discussions with local key stakeholders indicated that public opinion about the project is influenced by the value the project is perceived to bring to the local population. They recognise the positive impacts of the project, such as the reduction of CO_2 emissions through CCUS technology as a mitigation strategy for reducing global

Case Study:

Developing Public Engagement & Communication Strategy for CC(U)S Gundih Project, Indonesia

Source: Mulyasari et al. 2021

Public Engagement Strategy for CC(U)S Gundih Project

Source: Mulyasari et al., 2021

Stakeholder Mapping in CC(U)S Gundih Project

Social Site Characterization

Economic Condition
Empowerment
CBOs Policy Making Process
Underlying Views
Environment
Trust and Beliefs
Media Landscape
Local Knowledge
Natural hazards' risks

Stakeholder Analysis

Key Stakeholders' Group:
Local Government
Community Representatives
Local Media
State-owned Company

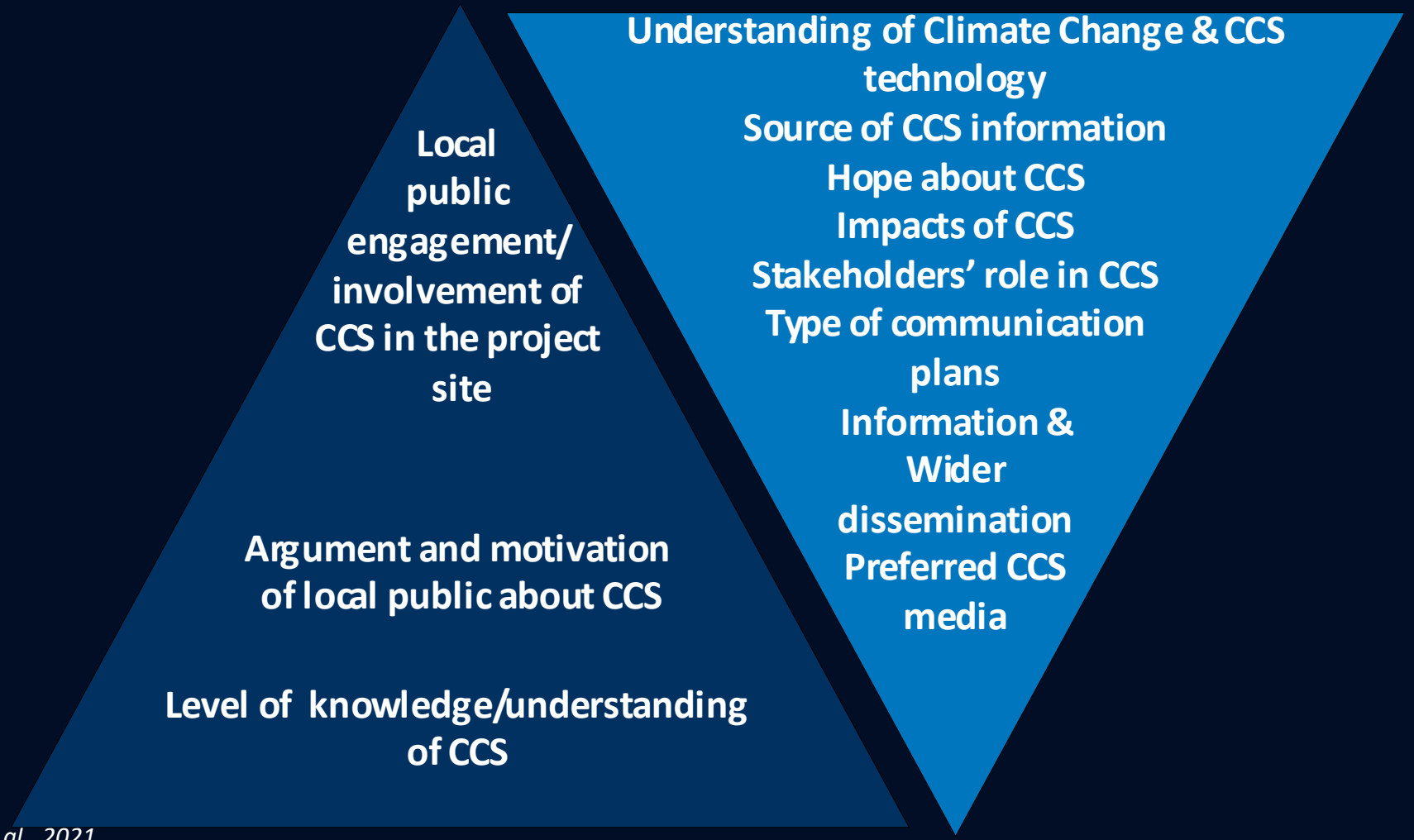
Depending on their:
interest, influence, concerns, behaviour & attitude, level of support

Arising Issues/Questions from Local Stakeholders

- Fate of CO_2 following injection
  - ✓ Where will it go?
  - ✓ Can it escape?
  - ✓ How will it be monitored?
  - ✓ If it migrates, can it be contained?
- Will it cause or be affected by earthquakes?
- Regulation: Who is responsible for what?
- Effect on economy and reputation of the area
- Noise and land disturbance
- Job security

Source: Mulyasari et al., 2021

Shaping the Opinion Factors of CC(U)S Gundih Project



Source: Mulyasari et al., 2021

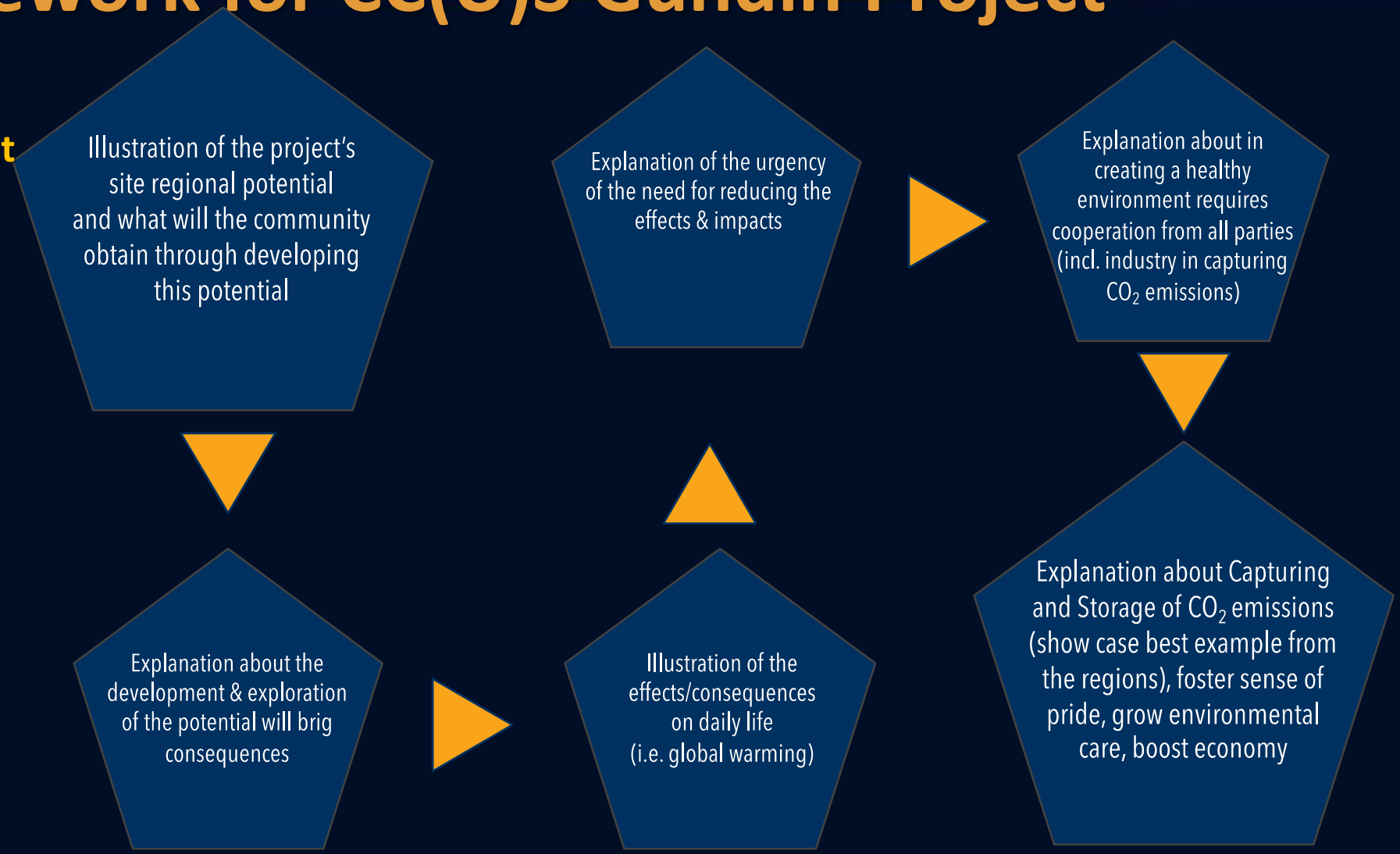
Mapping the CC(U)S Argument for Gundih Project

Positive Impact of CC(U)S	Negative Impact of CC(U)S
CC(U)S is good for the environment (reducing the global warming) and thereby air becomes clean because of the reduction of CO_2 emission.	Impact of CO_2 transportation activity: The CO_2 of CC(U)S Project will be transported through pipelines, crossing over great amount of rice field land use. Risks are alluring and the most prominent risk is the leakage from these pipelines that may seep into the soil and harm the rice fields, although at the later stage, the lands will be owned by the PERTAMINA. Therefore, it is suggested to monitor regularly based on the risk assessment done by CC(U)S project developer.
CC(U)S will trigger local job opportunities, increased local economic growth and improve the economy sector in the area.	CO_2 leakage at storage site and its collateral damage(s) to agriculture and population
CC(U)S contributes to accumulation of additional high-tech knowledge for local education.	

Source: Mulyasari et al., 2018

Message Framework for CC(U)S Gundih Project

The Plan for Messaging Framework for CC(U)S Project

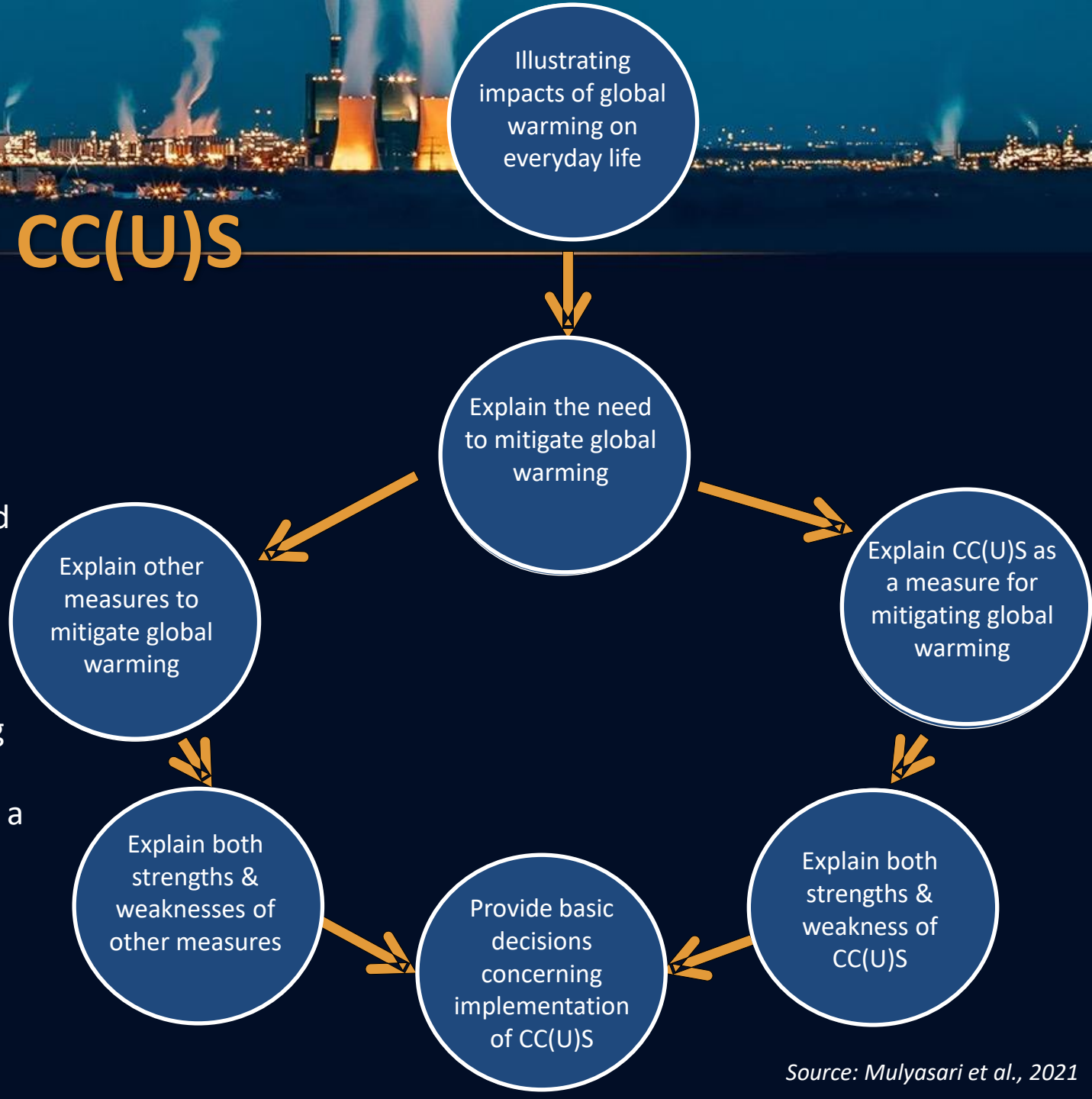


Source: Mulyasari et al., 2021

Message Framework for CC(U)S

Storytelling Method

- Visual messages tend to be easier for the brain to understand and process.
- Visual messages can at the later stage be advanced more easily as needed. For example, it can be played in front of the community, government or other parties involved when needed → the message conveyed tends to be received uniformly by various parties.
- Visual messages can be used as material for ongoing coaching. For example, a village that has been involved in the Climate Village Program can become a village friend who will spearhead the environmental awareness program in other villages, which are located very close to the industrial area.



Source: Mulyasari et al., 2021

Message Framework for CC(U)S Gundih

Message Criteria

3D CC(U)S mobile model simulation

Source: Mulyasari et al., 2021

Ultimate Goal
CC(U)S Gundih Pilot Project in Blora District is a pilot project as a learning study in combating Greenhouse Gas as impact of Climate Change

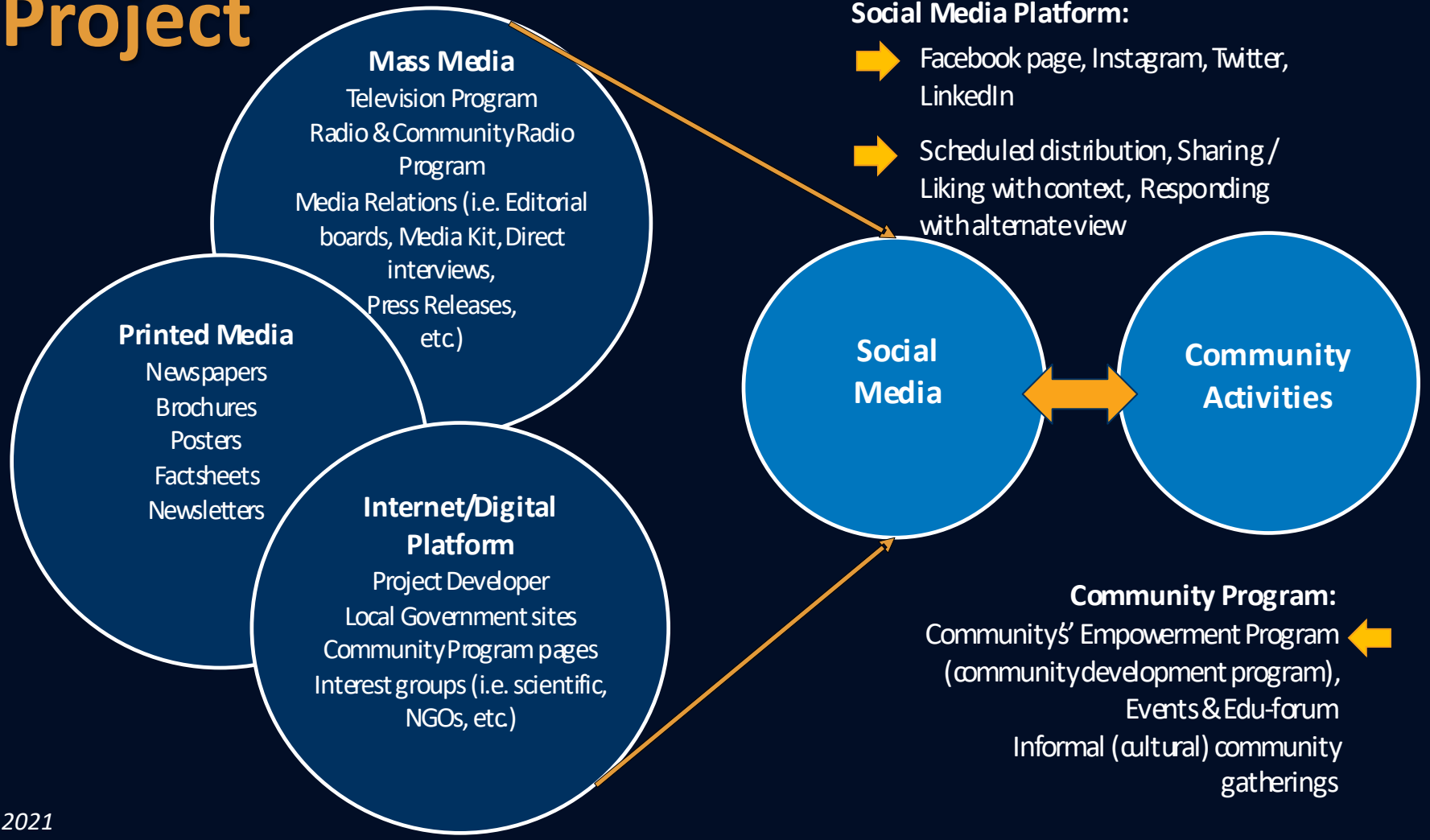
Umbrella Message
Including a new clean & save energy technology to reduce the CO2 emissions in Indonesia and Blora District

Messaging Criteria

- The types of institutions that are behind the communication of CC(U)S
- The language in which CC(U)S will be communicated
- How CC(U)S will be communicated & used media
- To what extent CC(U)S is portrayed from a supportive, neutral / critical perspective

- The extent to which CC(U)S communication efforts are evidence-based
- The ways CC(U)S communication is fragmented / linked across institutions & sites
- How CC(U)S is taught in education settings
- Further efforts might be needed on how CC(U)S communication could be developed

Landscaping Local Media for CC(U)S Communication Gundih Project



Source: Mulyasari et al., 2021

Communication Actions Plan for CC(U)S Gundih Project

Communication through Stages of CC(U)S activities

Objectives & main stages of CCUS activities for the Project with focus on stakeholder outreach (engagement & communication)		
Project Stage	**Objectives**	**Activities**
Project preparation		
Submission and review of the injection plan		
Injection and monitoring process		
Closure & dissemination of results and CCS activities		

CC(U)S Communication with External Stakeholder Groups

Outgoing Actions (Activating)							
Project Stage	Engagement objective	Stakeholder group	Channel	Engagement Activity	Resource Requirement	When	What does success look like

CC(U)S Communication with Internal Stakeholders

Incoming Actions (Monitoring)				
Project Stage	Channel	What are we looking for?	How de look for it?	Response Strategy

Source: Mulyasari et al., 2021

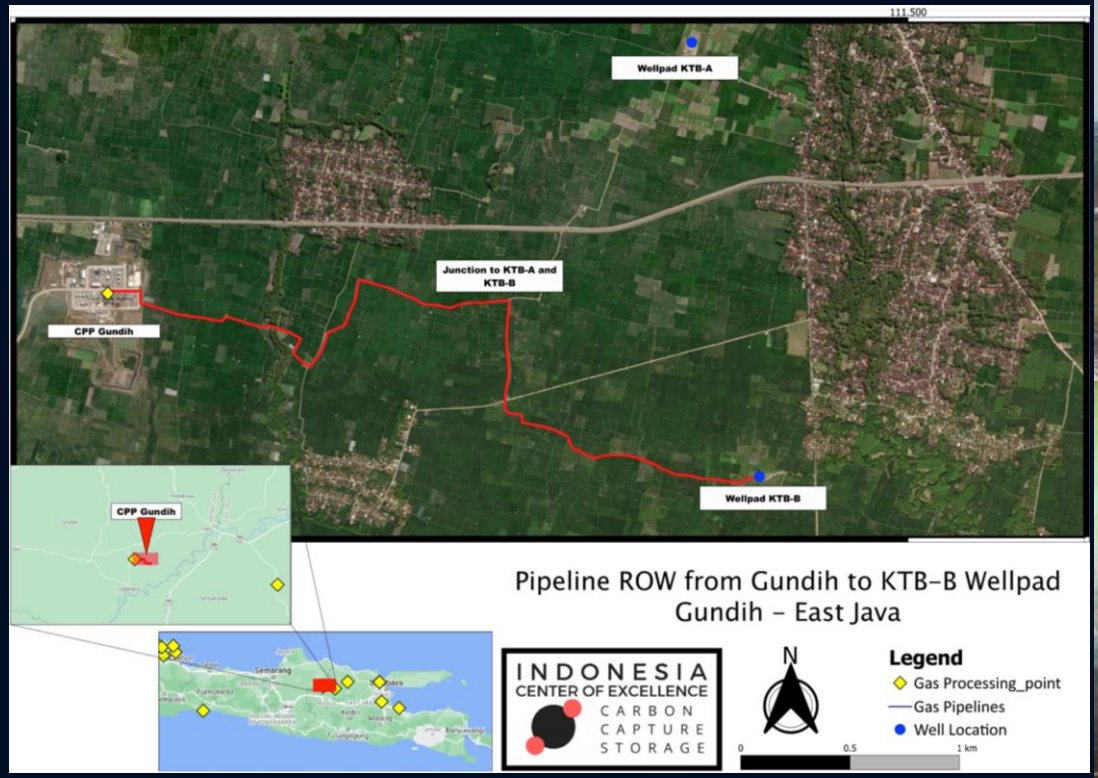
Baseline Survey of CC(U)S for Local Stakeholders Gundih Project

- Identify critical issues and impacts on the community
- Model of engagement and communication that will be the most effective for CC(U)S Project

- Quantitative survey (survey questionnaire)
- The results of baseline survey to people in the project site, especially people who live around the project site (the CO_2 capture and storage location):
- The majority of respondents, that is 83% of the respondents, believes that we are experiencing Climate Change and 68.7% respondents answered that it is 'Very important' & urgent to take action now to decrease the level of CO2 in the atmosphere. Thus, from the data mentioned, it is known the lack of knowledge about Climate Change does not affect the opinions of the locals' opinion that Climate Change is important and it's critical to decrease the level of CO2 in the atmosphere → 86% agree to implement CCUS in their area.
- Other non-related CC(U)S topic are assessed quantitatively → provide the project better social data to be explored on how a community lives, works and relates to one another; such as cultural impacts, values and beliefs.

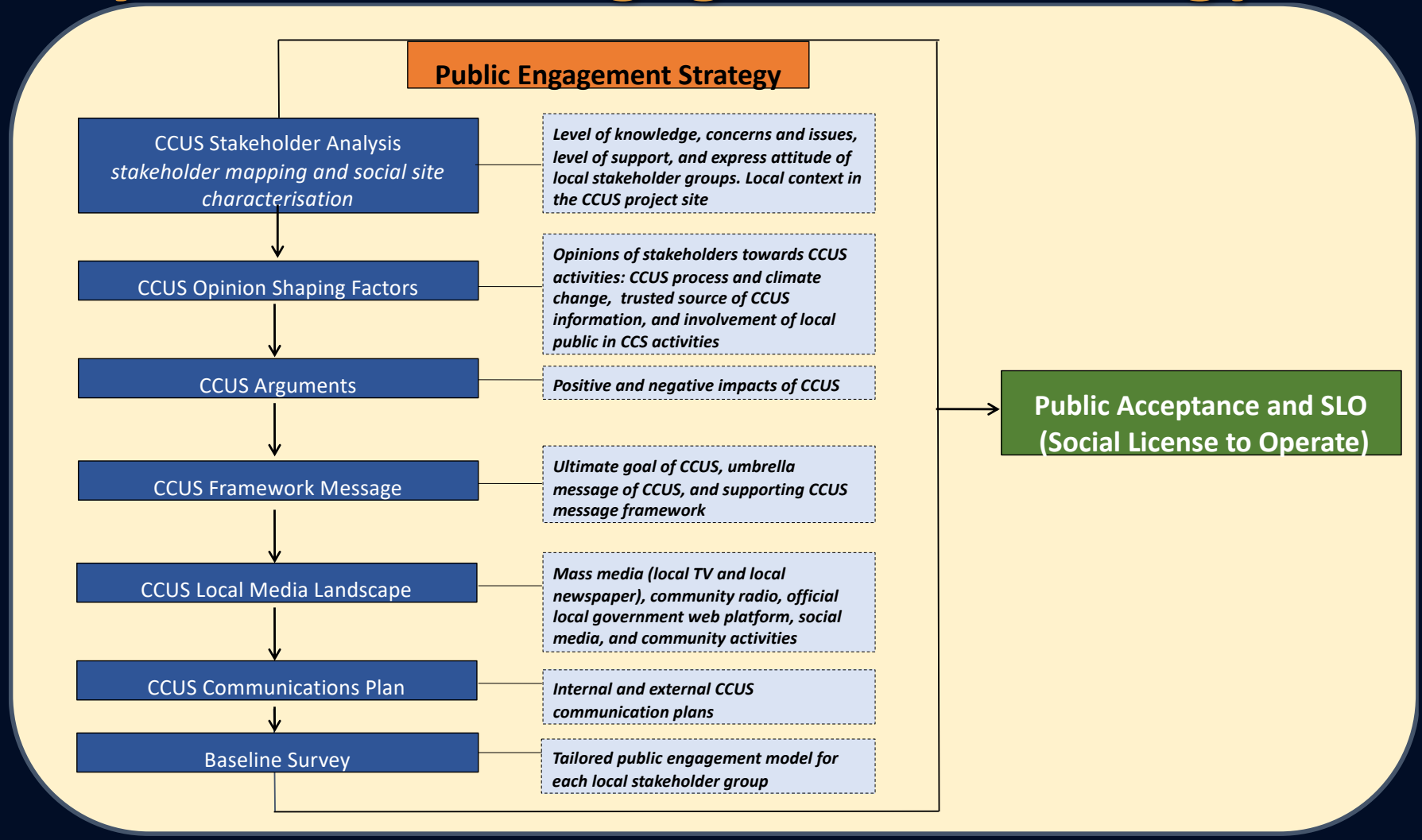
Source: Prasetya & Mulyasari, 2022

Baseline Survey of CC(U)S for Local Stakeholders Gundih Project



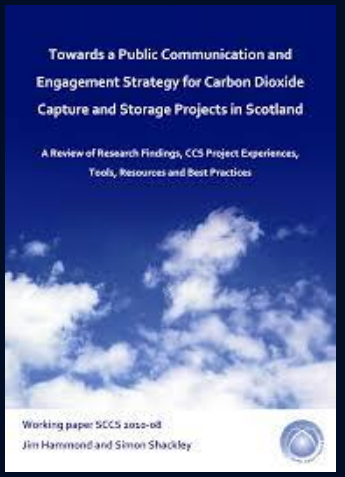
Source: Mulyasari et al., 2021

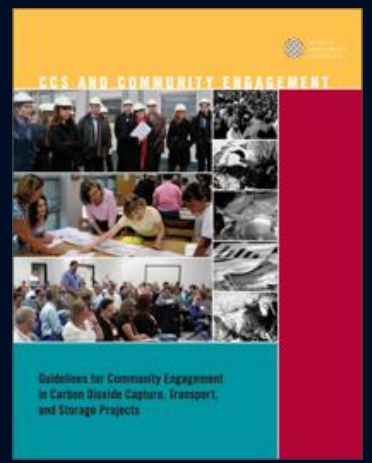
Pathway for Public Engagement Strategy for CC(U)S



Source: Mulyasari et al. 2021

Best Practices & Lessons Learned around the World for CC(U)S Communication & Outreach





ieaghg

ptrc
Petroleum Technology Research Centre

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ADB

GLOBAL CCS INSTITUTE

CSIRO

WORLD RESOURCES INSTITUTE

Institut Teknologi Bandung 1920
Center for CO_2 & Flared Gas Utilization

NETL NATIONAL ENERGY TECHNOLOGY LABORATORY

INDONESIA CENTER OF EXCELLENCE CARBON CAPTURE STORAGE

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- Royal Norwegian Embassy in Jakarta
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Thank you for your attention
Questions are welcome!

farah.mulyasari@gmail.com
farah.mulyasari@universitaspertamina.ac.id
@faysule

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