

Key Considerations on JCM Methodology Development and Project Registration in Indonesia

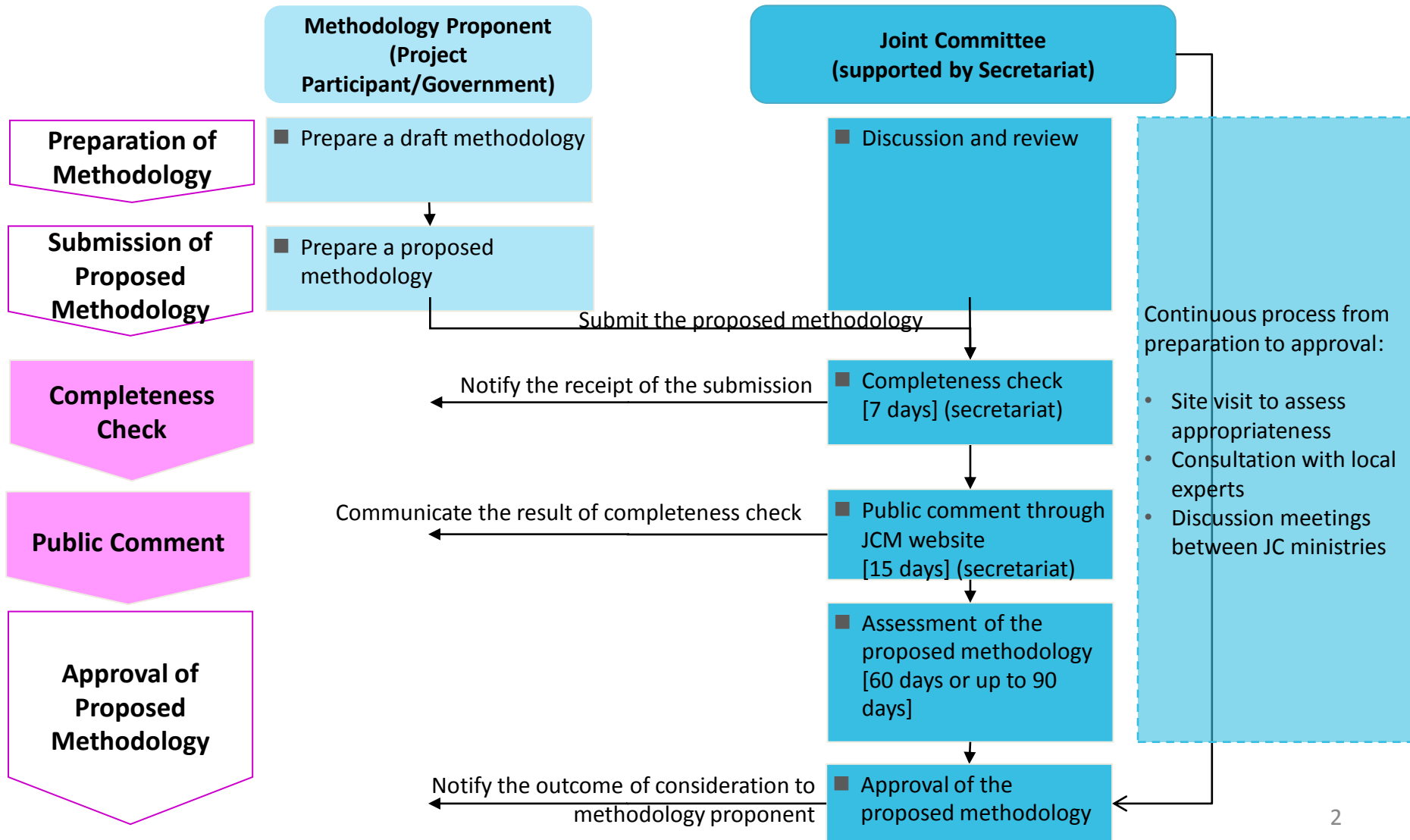
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Current process for methodology approval in Indonesia



Key considerations on JCM methodology development in Indonesia

Aspect	Examples
Technical	<ul style="list-style-type: none"> ✓ Conservativeness of reference emission (case-by-case) ✓ Reference to available standards for default values and regulations [SNI (Indonesian National Standard), ISO, and JIS (Japanese standard)] ✓ Scientific principles and references
Reference data source	<ul style="list-style-type: none"> ✓ Consideration of Indonesian circumstances: <ul style="list-style-type: none"> • The level of technology widely used in Indonesia • Interviews with relevant resource persons • Collection of real data and field survey ✓ Source of available data (IPCC, national data, public data)
Compliance	<ul style="list-style-type: none"> ✓ Compliance to international and national regulations (e.g. control of refrigerants, hazardous materials) ✓ Compliance to JCM agreed rules, guidelines, and principles
Relevance	<ul style="list-style-type: none"> ✓ Applicability to real project situation ✓ Use of various energy sources at project locations ✓ Improvement from 'business as usual'
Ease of understanding	<ul style="list-style-type: none"> ✓ Use of simplified diagram ✓ Simplified language
Consistency	Terms and reference used consistent with other methodologies applied in Indonesia

Example 1

AM002 Energy Saving by High-Efficiency Centrifugal Chiller (1/2)

Applied to first JCM registered project: *Energy Saving for Air-Conditioning and Process Cooling by Introducing High-efficiency Centrifugal Chiller* (PT Primatexco-Ebara-Nippon Koei)

- Introducing high efficiency centrifugal chiller for factories etc., characterized by:
 - ✓ Uses non ozone-depleting refrigerant (e.g. HFC 245fa)
 - ✓ Coefficient Of Performance (COP) is more than 6.0, higher than the COP of chillers widely available in the Indonesian market based on survey (approximately 5.0)
- To serve the possibility of using non-(PLN)grid electricity (on-site fossil fired captive power plant), GHG emission factor from grid and/or captive power is used proportionately.
- The survey data for reference scenario and default value should be renewed every 3 years in order to keep up with the current condition.

Example 1

AM002 Energy Saving by High-Efficiency Centrifugal Chiller (2/2)

- Periodical check is planned more than four (4) times annually.
- Plan for not releasing refrigerant used for project chiller is prepared and refrigerant used for the existing chiller is not released to the air.
- Emission reductions: difference between the amount of project power consumption the amount of reference power consumption which is derived from the ratio of the project COP to the reference COP.

Example 2

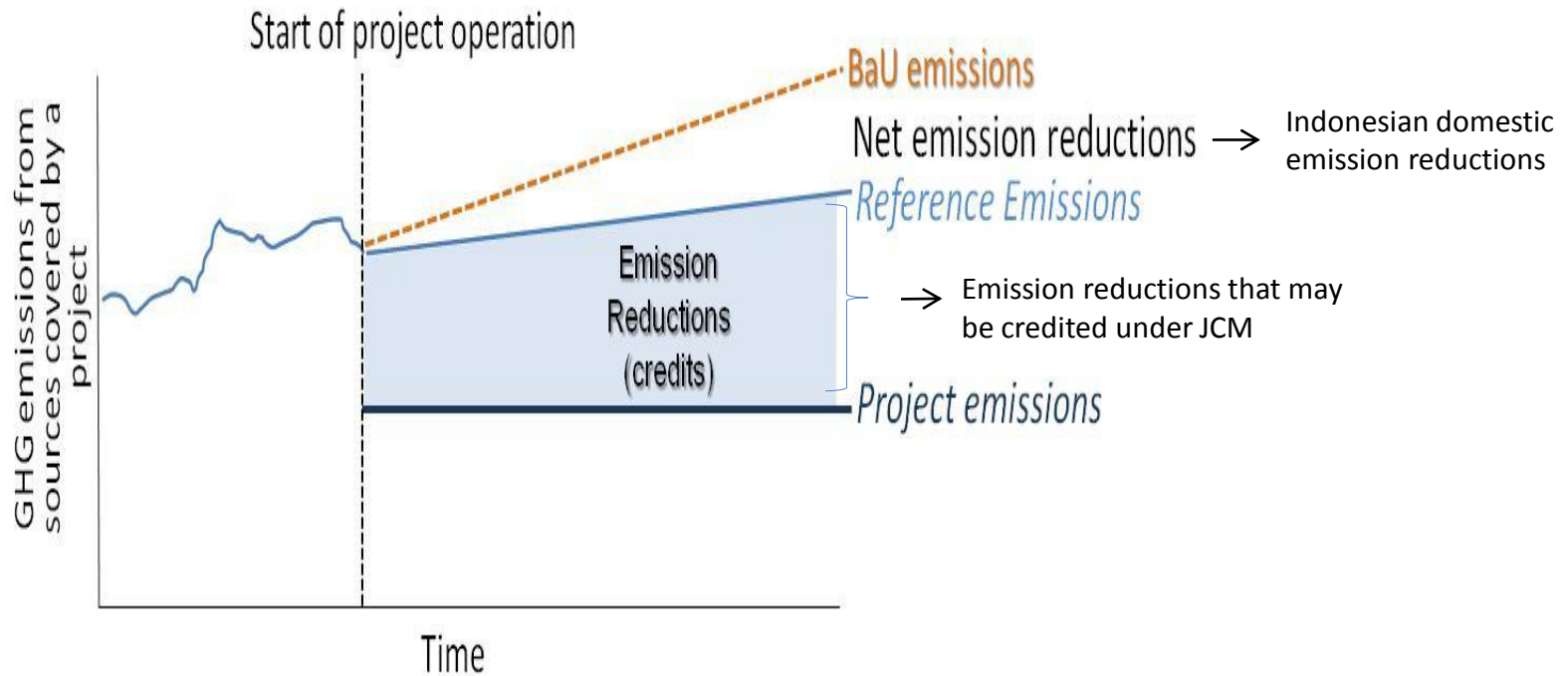
AM005 Installation of LED Lighting for Grocery Store

Will be applied to JCM Model Project: *Energy Saving at Convenience Stores* (PT Midi Utama Indonesia, Lawson Japan)

- Straight type LED lighting with higher luminous efficiency than the LED commercially available in the Indonesian market.
- LED lighting is newly installed or installed to replace existing fluorescent lighting for grocery store whose selling area is less than 400 (four hundred) m².
- In the case of replacing existing fluorescent lighting, mercury contained in existing fluorescent lighting is not released to the environment.
- Minimum value of lighting illuminance equal or above 300 lux, based on SNI 03-6197-2000 Konservasi energi pada sistem pencahayaan. Measurement method is adopted from SNI 16-7062-2004: Pengukuran intensitas penerangan di tempat kerja.



Concept of emissions under the JCM in Indonesia

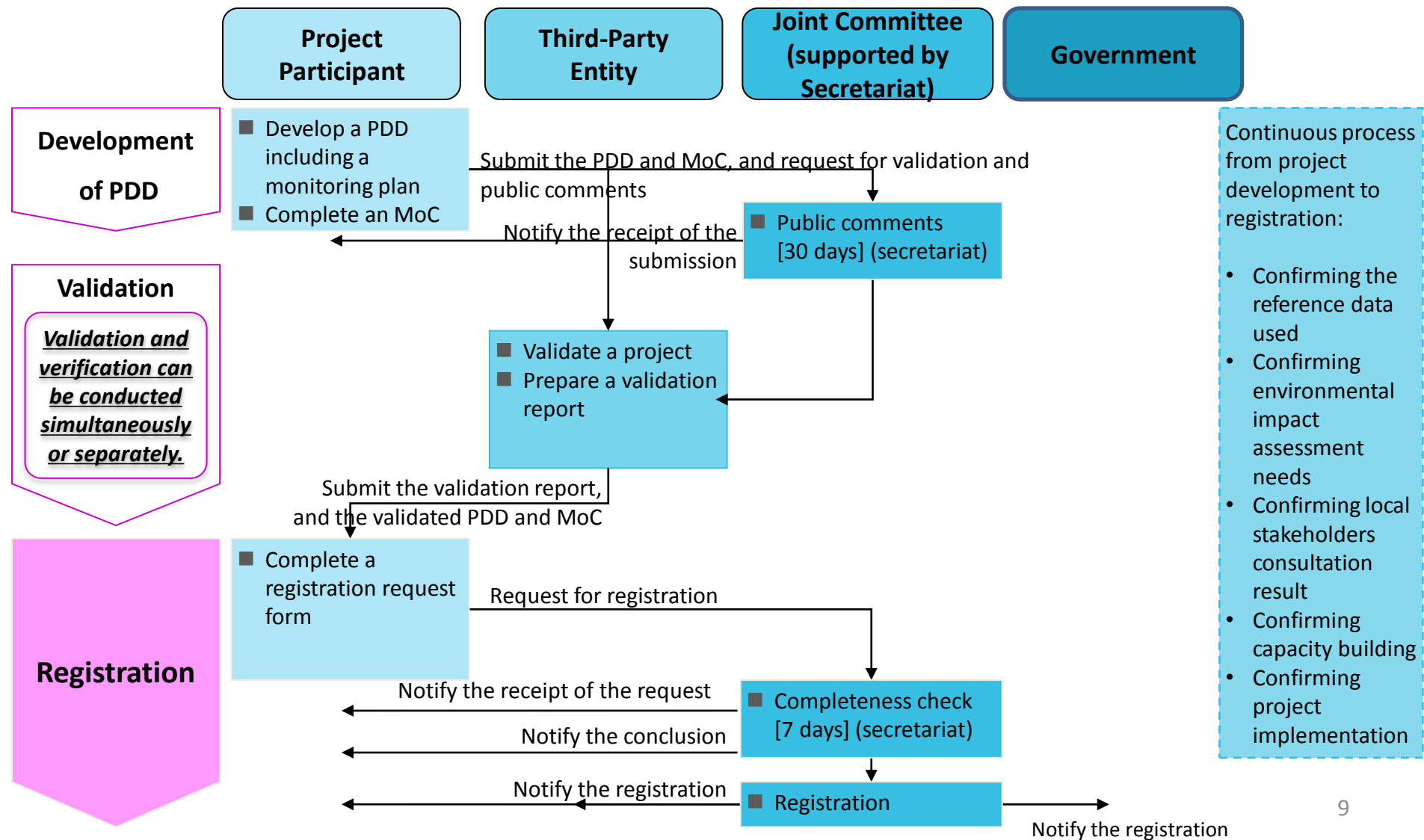


Emission reductions = reference emissions – project emissions

Example of BAU-Reference-Project Scenario

Methodology	BAU	Reference	Project
Chiller (AM002)	Old type chiller	Centrifugal chiller available in the Indonesian market with COP equal to or less than 5.0 (survey)	High-efficiency centrifugal chiller with COP more than 6.0
LED lighting (AM005)	Fluorescent lighting	Commercially available LED lighting in the Indonesian market based on survey, luminous efficiency approximately 110 lm/W (survey)	Energy efficient, straight type LED lighting with luminous efficiency of more than 120 lm/W

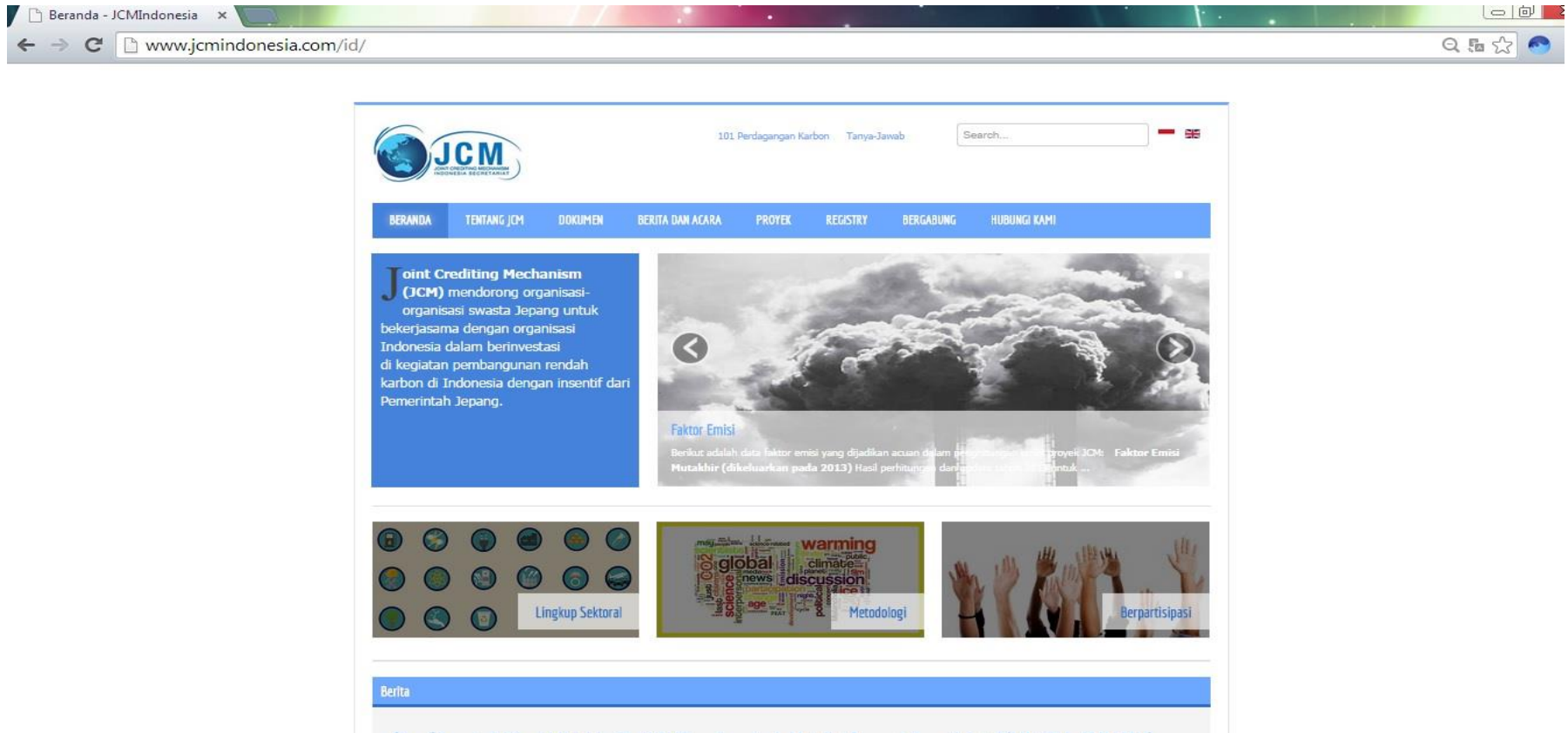
Current process for project registration in Indonesia



Key Considerations on JCM Project Registration in Indonesia

- ✓ Positive conclusion of overall validation opinion by Third-Party Entity (TPE).
- ✓ TPE team who conducted validation include Indonesian personnel (JCM Guidelines for Designation of a TPE).
- ✓ Project meets all requirement determined by the relevant methodology.
- ✓ Project meets the national requirement for conducting environmental impact assessment.
- ✓ Positive opinion from local stakeholder consultation conducted with appropriate representatives.
- ✓ Required capacity building are conducted.
- ✓ Project implementation is confirmed (by site visit, project meeting).
- ✓ Consistency and accuracy of data, information, and evidence.
- ✓ Understanding of JCM and its responsibilities by all parties involved in the project.

All information available at www.jcmindonesia.com



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