SD Implementation in Indonesia Climate Mitigation Projects

CDM and JCM study cases

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JCM
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Climate Mitigation Projects implementation will contribute to SDGs goal achievement

Theoretically climate mitigation projects will contribute to the sustainable development, **how to measure it?**

CDM case: we measure SD implementation by 1 step

- **Clean development Mechanism (CDM) in Indonesia** has been implemented since **2008**.
- Number of Indonesian projects registered on UNFCCC : **156 projects.**
- The number of Indonesian projects that have issued carbon credits is 49 projects with a total of **34,345,675 tons of CO2 carbon credits** (2021 April status).
- There is **no new project since 2012**.

- Sustainable Development criteria implementation is **one of the most important process of CDM implementation in Indonesia.**
- Project participant **must declare their project plan** in front of CDM National Committee (Indonesia Designated National Authority/DNA) meeting.
- **The CDM National Committee may assess** the project participant implementation directly in the field.

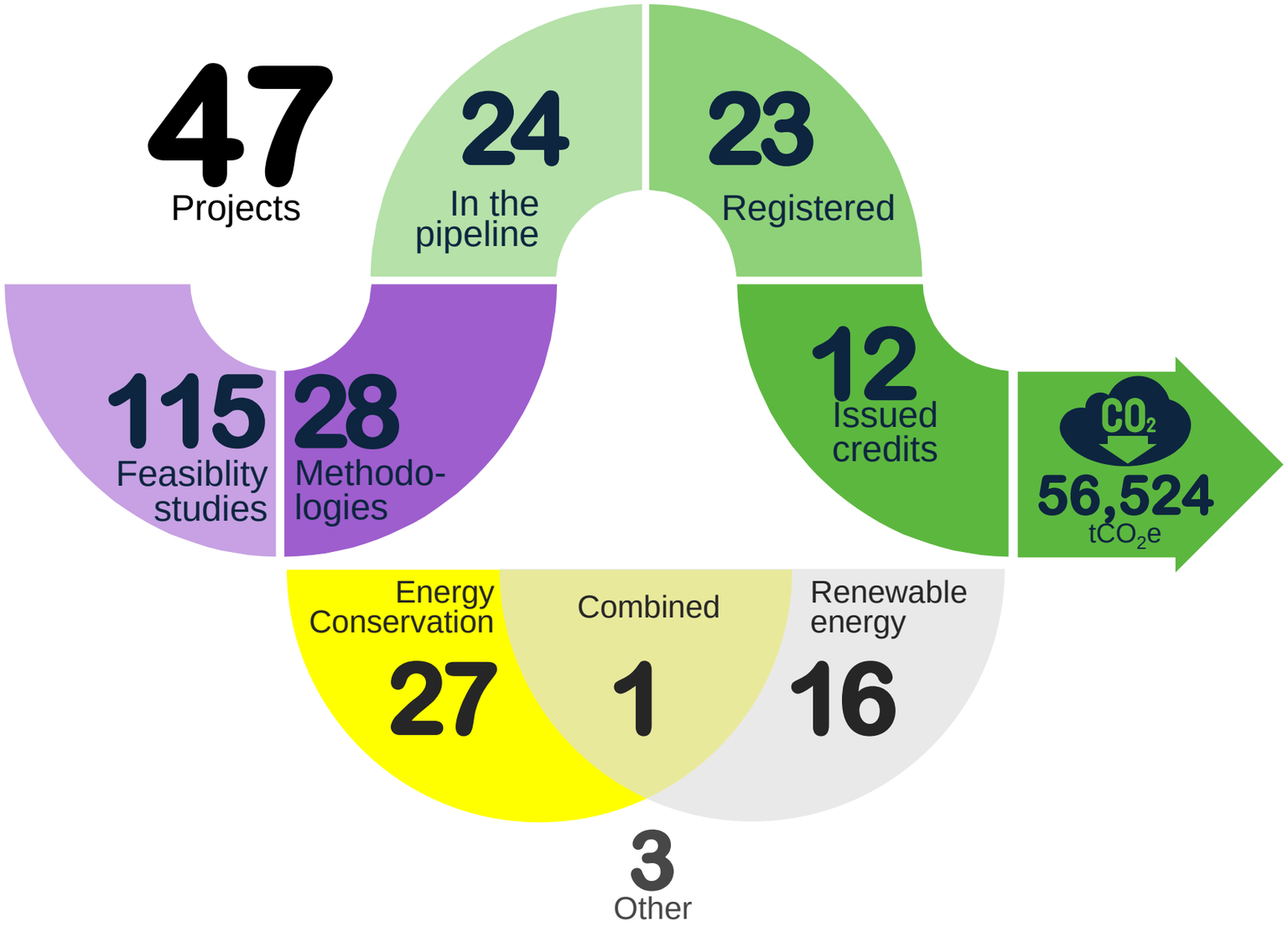
CDM SD criteria (1)

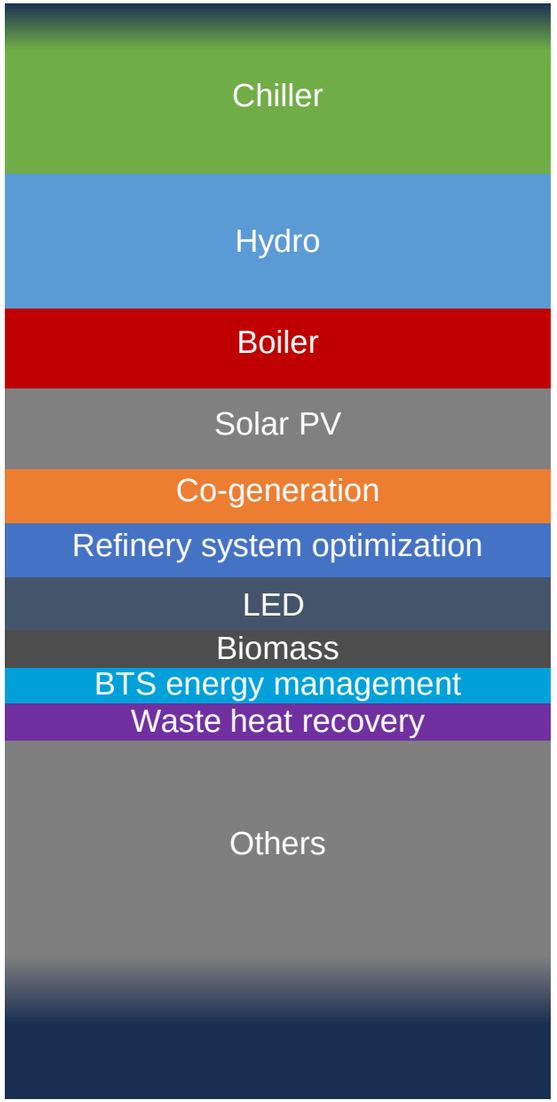
Sustainable Development		Assessment Criteria [Values]				
Criteria	**Indicator**	**1**	**2**	**3**	**4**	**5**
L. Environment Sustainability						
L. 1 Environmental sustainability by conserving or diversifying the use of natural resources	L.1.1. Local ecology function sustainability					
	L.1.2. Does not exceed the environmental quality threshold					
	L.1.3. No genetic contamination					
	L.1.4. Spatial conformity					
L.2 Safety and health of local community	L.2.1. Does not interfere with health					
	L.2.2. Work safety					
	L.2.3. Accident prevention efforts					
E. Economic Sustainability						
E.1. Local community welfare criteria	E.1.1. Welfare of the surrounding community					
	E.1.2. Anticipate the decline in people's income					

CDM SD criteria (2)

Sustainable Development		Assessment Criteria [Values]				
Criteria	**Indicator**	**1**	**2**	**3**	**4**	**5**
	E.1.3. Follow layoff rules					
	E.1.4. Do not reduce public services					
S. Social Sustainability						
S.1. Community participation	S.1.1. Public consultation process					
	S.1.2. Follow up of public consultation comments					
S.2. The project does not damage the integrity social community	S.2.1. Social conflict					
T. Technology Sustainability						
T.1. Technology transfer takes place	T.1.1. No dependency					
	T.1.2. Not experimental technology					
	T.1.3. Capacity building and utilization					

SD have been implemented in Indonesia JCM projects





JCM scheme MRV system

Project Participant / Each Government Joint Committee	Submission of Proposed Methodology
Joint Committee	Approval of Proposed Methodology
Project Participant	Development of PDD*
Third Party Entities	Validation
Joint Committee	Registration
Project Participant	Monitoring
Third Party Entities	Verification
Joint Committee decides the amount Each Government issues the credit	Issuance of credits

Can be conducted by the same TPE
Can be conducted simultaneously

SD criteria implementation measurement is one of the most important processes

Measurement

Reporting

Verification

Sustainable Development Measurement

*PDD: Project Design Document

JCM Indonesia infrastructures development

Since JCM establishment in 2013, it has developed several guidelines, procedure, rules, registry system and methodologies

Guideline:

1. Project Design Document
2. Proposed Methodology
3. Third Party Entity
4. Validation and Verification
5. **Sustainable Development Implementation Plan and Report (Indonesia's specific JCM guidelines)**

Rules: 1. Rules of Implementation
2. Rules of Procedure for JC

Procedure: Project Cycle Procedure

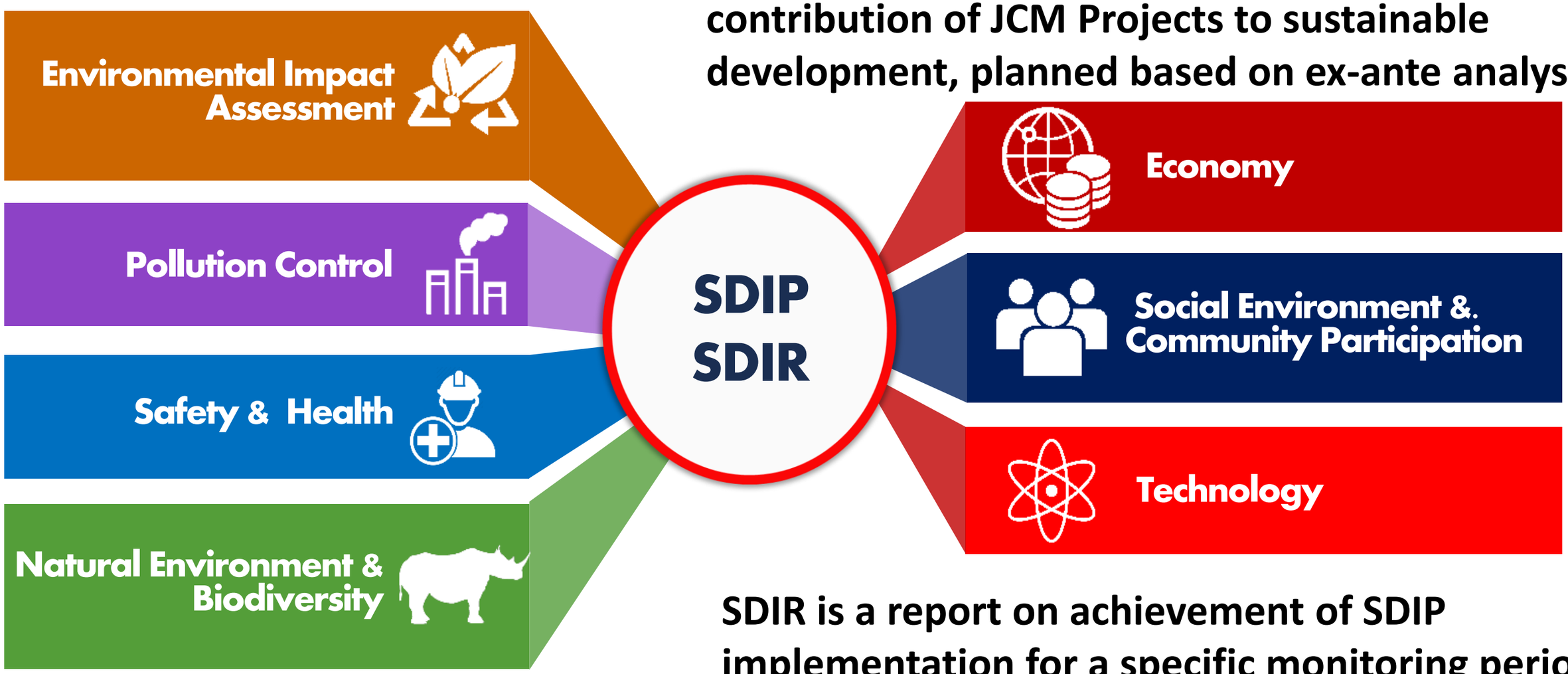
Methodologies:
22 methodologies of energy efficiencies and renewable energy have been developed

ISO 14065 based

Registry System:
We have developed the first climate change mitigation registry system in Indonesia, and it is expected to connect with the National Registry

Indonesia JCM contribution to SD

SDIP is a set of criteria utilized to assess the contribution of JCM Projects to sustainable development, planned based on ex-ante analysis



SDIR is a report on achievement of SDIP implementation for a specific monitoring period, based on ex-post evaluation

The urgency of SDIP and SDIR implementation

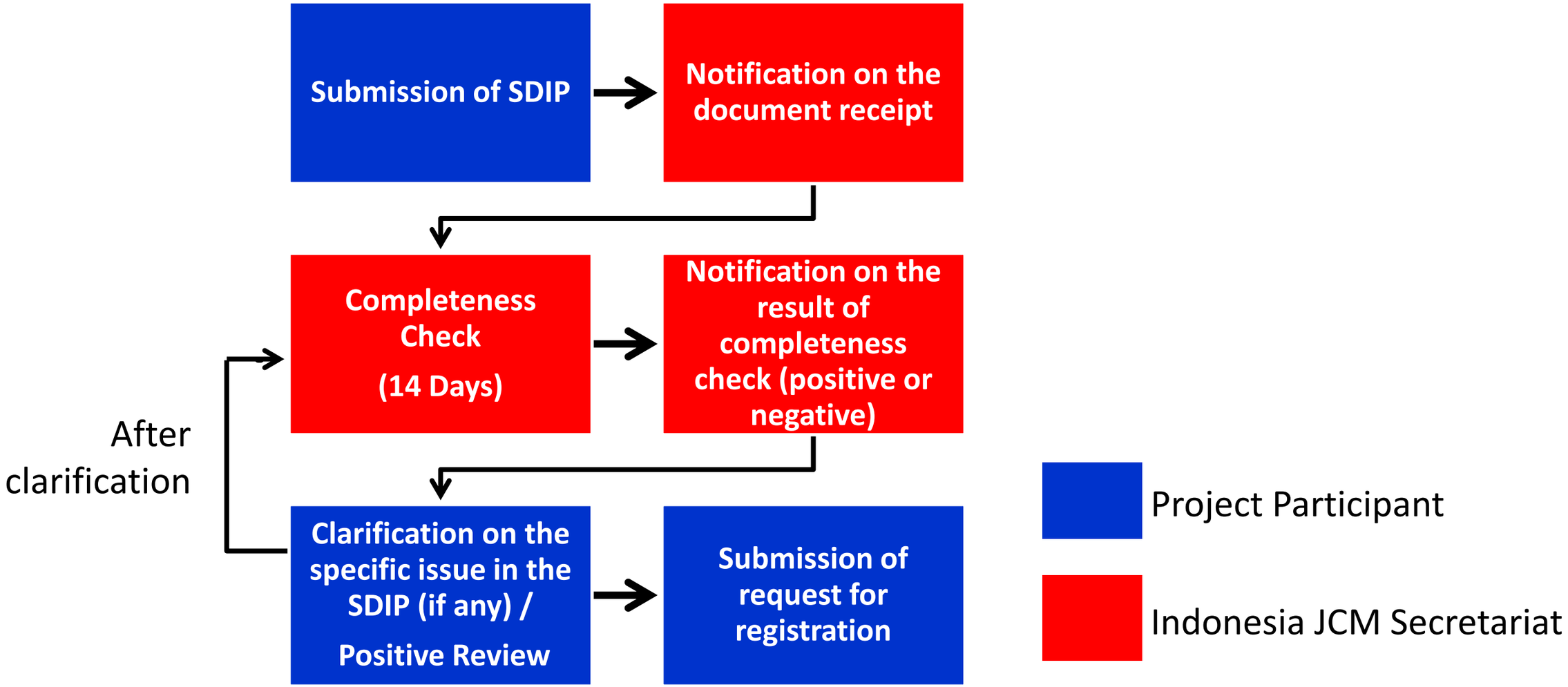
To fulfil the JCM implementation objectives:

1. **Facilitate diffusion of leading low carbon technologies, products, systems, services, and infrastructure;**
2. **Implementation of mitigation actions;**
3. **Contributing to sustainable development in developing countries.**

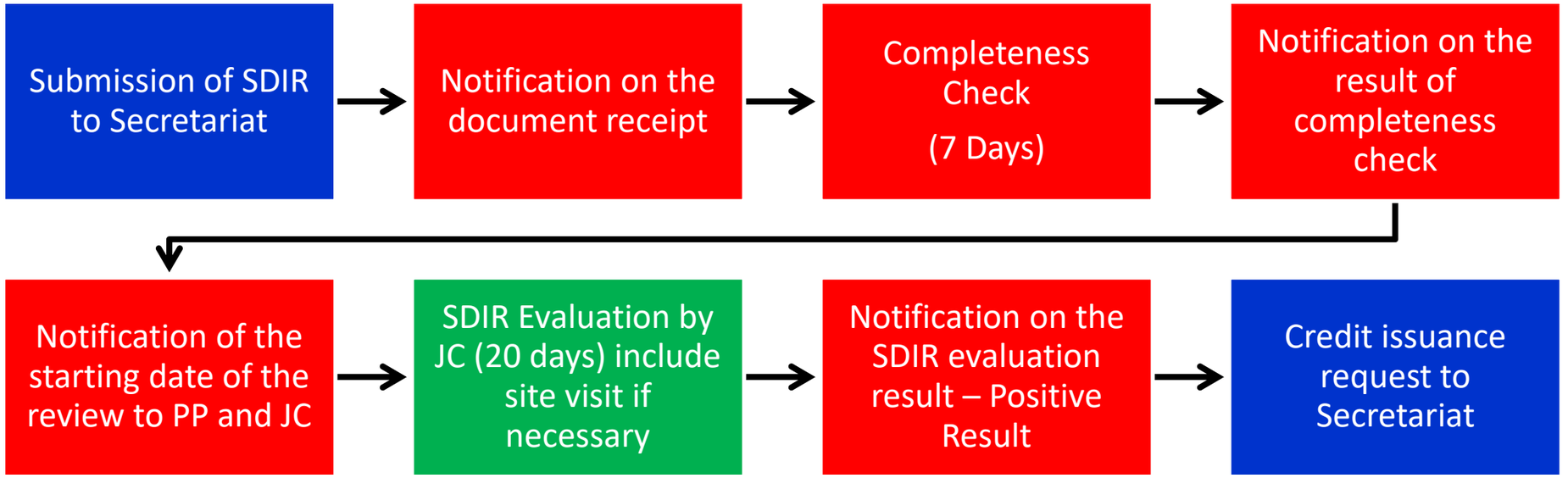
SDIP/SDIR implementation is expected to ensure these objectives are achieved, through:

- **Technology transfer**
- **Capacity building**
- **Increase welfare due to the introduction of new technology**
- **And eventually reduction of emission.**

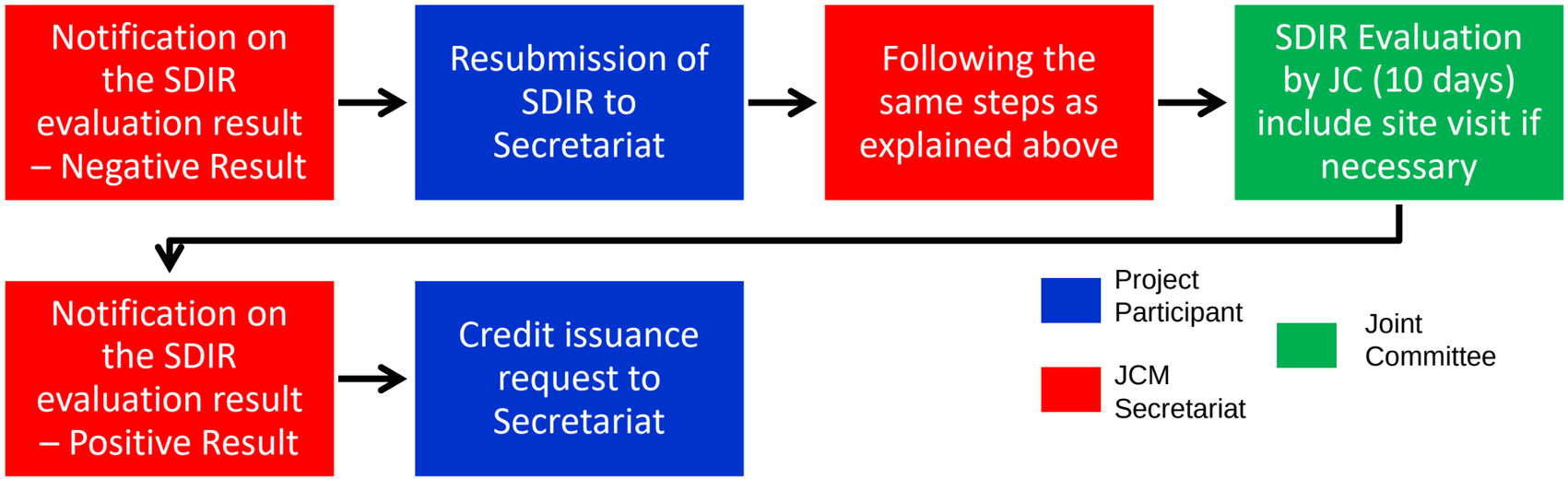
SDIP process



SDIR process



Extra procedures for negative SDIR result...



SDIP form (1)

No.	Items	Questions	Yes/No	If answer is Yes, please describe the action plans.	
1	EIA	Does the proposed project require official/legal process of EIA?			
2	Pollution Control (No need to answer if EIA is required)	Does the proposed project emit air pollutants?			
3		Does the proposed project discharge water pollutants or substances which influence BOD, COD or ph, etc.?			
4		Does the proposed project generate waste?			
5		Does the proposed project increase noise and/or vibration from the current level?			
6		Does the proposed project cause ground subsidence?			
7		Does the proposed project cause odor?			
8	Safety and health	Does the proposed project create dangerous condition for local communities as well as individuals involved in the project, during either its construction or its operation?			
10	Natural Environment and biodiversity	Is the proposed project site located in protected areas designated by national laws or international treaties and conventions?			
11		Does the proposed project change land use of the community and protected habitats for endangered species designated by national laws or international treaties and conventions?			
12		Does the proposed project bring foreign species?			
13		Does the proposed project include			

SDIP form (2)

		construction activities considered to affect natural environment and biodiversity (e.g., noise, vibrations, turbid water, dust, exhaust gases, and wastes)?			
14		Does the proposed project use natural water resources?			
15	Economy	Does the proposed project have little or no contribution to building local workforce capacity?			
16		Does the proposed project have little contribution to local community's welfare?			
17	Social Environment and Community Participation	Does the proposed project cause any resettlement or other types of conflict?			
18		Does the proposed project involve little activities to respond to, and follow up, comments and complaints that have been received from local communities, particularly from the public consultation?			
19		Do the project participants violate any laws and/or ordinances associated with the working conditions of local communities which the project participants should observe in the project?			
20	Technology	Does the proposed project involve little activities to build capacity of human resources through technology transfer and technical assistance?			
21		Does the proposed project describe little information of technology specification that consists of manual book and ways to overcome the problems that may occur when being operated on the site, at least in English and in Bahasa Indonesia as applicable?			

SDIP implementation

Until now, Indonesia JCM Secretariat has received 26 SDIP documents

No.	Items	Questions	Yes/No	If answer is Yes, please describe the action plans.
1	EIA	Does the proposed project require official/legal process of EIA?	No	
2	Pollution Control (No need to answer if EIA is required)	Does the proposed project emit air pollutants?	Yes	The proposed project will include the operation of a genset, which will emit air pollution. However, the proposed project will replace existing old genset with new genset which complies environmental standards and emits less air pollutants than old genset, therefore will not produce any negative impact.
3		Does the proposed project discharge water pollutants or substances which influence BOD, COD or ph, etc.?	No	
4		Does the proposed project generate waste?	Yes	The proposed project will generate waste during construction phase of which will be disposed accordingly, and leave no waste at project site.
5		Does the proposed project increase noise and/or vibration from the current level?	No	
6		Does the proposed project cause ground subsidence?	No	
7		Does the proposed project cause odor?	No	
8	Safety and health	Does the proposed project create dangerous condition for local communities as well as individuals involved in the project, during either its construction or its operation?	Yes	The proposed project will involve installation of a solar panel and electrical engineering work. The construction operator will mitigate any dangerous condition for individuals involved in the construction according to its safety manual.
9	Natural Environment and biodiversity	Is the proposed project site located in protected areas designated by national laws or international treaties and conventions?	No	
10		Does the proposed project change land use of the community and protected habitats for endangered species designated by national laws or international treaties and conventions?	No	
11		Does the proposed project bring foreign species?	No	
12		Does the proposed project include construction activities considered to affect natural environment and biodiversity (e.g., noise, vibrations, turbid water, dust, exhaust gases,	No	

SDIR form

No.	Items		Not identified	Identified		If "Identified" is checked in the box, please describe the corrective actions
1	EIA	Project is included in the EIA reporting to the Government of Indonesia	☐		☐	
2	Pollution Control	Occurence of pollution in ambient air quality	☐		☐	
3		Occurence of pollution in water quality	☐		☐	
4		Occurence of waste generation	☐		☐	
5		Occurence of noise and/or vibration	☐		☐	
6		Occurence of ground subsidence	☐		☐	
7		Occurence of ambient odor	☐		☐	
8	Safety and health	Occurrence of accident or occupational accident	☐		☐	
10	Natural Environment and biodiversity	Change of protected area condition	☐		☐	
11		Change of land use change and eoosystem condition	☐		☐	
12		Introduction of foreign species	☐		☐	
13		Environmental impact during construction	☐		☐	
14		Use of natural water	☐		☐	
15	Economy	Improvement of local workforce capacity	☐		☐	
16		Increase in local community welfare	☐		☐	
17	Social Environment and Community Participation	Occurrence of resettlement or conflict	☐		☐	
18		Satisfactory follow up of comments and complaints	☐		☐	
19		Underprovision of regulatory working condition	☐		☐	
20	Technology	Human and institutional capacity by technology transfer	☐		☐	
21		Provision of technology specification and manual book at least in English and in Bahasa Indonesia as applicable	☐		☐	

SDIR implementation

Until now, Indonesia JCM Secretariat has received 12 SDIR documents.

No.	Items		Not identified	Identified	If "Identified" is checked in the box, please describe the corrective actions
1	EIA	Project is included in the EIA reporting to the Government of Indonesia	☑	☐	
2	Pollution Control	Occurence of pollution in ambient air quality	☑	☐	
3		Occurence of pollution in water quality	☑	☐	
4		Occurence of waste generation	☑	☐	
5		Occurence of noise and/or vibration	☑	☐	
6		Occurence of ground subsidence	☑	☐	
7		Occurence of ambient odor	☑	☐	
8	Safety and health	Occurrence of accident or occupational accident	☑	☐	
9	Natural Environment and biodiversity	Change of protected area condition	☑	☐	
10		Change of land use change and eoosystem condition	☑	☐	
11		Introduction of foreign species	☑	☐	
12		Environmental impact during construction	☑	☐	
13		Use of surface water, ground water and/or deep ground water	☐	☑	Necessary water use permission had been obtained, i.e., (i) Groundwater utilization license (SIPA) (No. 503/794/A/2010, issued by Dept. of Energy and Mineral Resources, The provincial government of Central Java) and (ii) water service agreement (No.697/104/2014, Agreement with Batan District Water Service) for river water and industrial water usage, and the factory has operated accordingly.
14	Economy	Decrease in local workforce capacity	☑	☐	
15		Declination of local community welfare	☑	☐	
16	Social Environment and Community Participation	Occurrence of resettlement or conflict	☑	☐	
17		Failure to follow up comments and complaints successfully	☑	☐	

Lesson learn from SD implementation

1. It makes Indonesia mitigation projects more transparent and accountable, these experiences are very valuable for Indonesia climate change mitigation programs.
2. The implementation of SDIP and SDIR can be used as a benchmark and linkages to the Paris regimes.
3. The utilization of SDIP and SDIR ensures that JCM projects contribute positive impacts nationally.

Thank you!!!!!

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