

## Application of the Oeko-Institut/WWF-US/ EDF methodology for assessing the quality of carbon credits

This document presents results from the application of version 3.0 of a methodology, developed by Oeko-Institut, World Wildlife Fund (WWF-US) and Environmental Defense Fund (EDF), for assessing the quality of carbon credits. The methodology is applied by Oeko-Institut with support by Carbon Limits, Greenhouse Gas Management Institute (GHGMI), INFRAS, Stockholm Environment Institute, and individual carbon market experts. This document evaluates one specific criterion or sub-criterion with respect to a specific carbon crediting program, project type, quantification methodology and/or host country, as specified in the below table. Please note that the CCQI website [Site terms and Privacy Policy](#) apply with respect to any use of the information provided in this document. Further information on the project and the methodology can be found here: [www.carboncreditquality.org](http://www.carboncreditquality.org)

Criterion:	<a href="#">6.2 Sustainable development impacts of the project type or project</a>
Project type:	<a href="#">Solar photovoltaic power</a>
Date of final assessment:	<a href="#">31 January 2023</a>
Score:	<a href="#">LDCs/SIDS: 3.68</a> <a href="#">Other countries: 2.68</a>

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## Assessment

### Relevant scoring methodology provisions

The methodology assesses the extent to which a specific project or project type contributes to or hinders the achievement of each of the 17 Sustainable Development Goals (SDGs), with the exception of Goal 13 on climate action which is the primary goal of the climate mitigation projects. To assess the impacts of a project type or individual project on each SDG, the methodology draws on a seven-point ordinal scale for each SDG (see further details in the methodology). The following table illustrates the scale from -3 to +3 points to assess the impact or influence of a project type or individual project on each individual SDG goal:

Impact of the project on the SDG goal	Points
Indivisible: The successful implementation of the project automatically delivers progress on this SDG goal.	+3
Reinforcing: The successful implementation of the project directly makes it easier to make progress on this SDG goal.	+2
Enabling: The successful implementation of the project indirectly creates conditions that enable progress on this SDG goal.	+1
Consistent: There is no significant link between the project and this SDG goal.	±0
Constraining: The successful implementation of the project constrains the options for how to deliver on this SDG goal.	-1
Counteracting: The successful implementation of the project makes it more difficult to make progress on this SDG goal.	-2
Cancelling: The successful implementation of the project automatically leads to a negative impact on this SDG goal.	-3

As an additional step of the evaluation, it is assessed whether the project is implemented in Least Developed Countries or Small Island Developing States, which are recognized to face special circumstances that require additional support. Projects implemented in these countries receive an upgrade of one score point (e.g. from 3 to 4) in the overall evaluation of criterion 6.2. Note that the overall score cannot exceed 5.

### Information sources considered

- 1 Wissner et al. 2022 – Sustainable development impacts of selected project types in the voluntary carbon market. Online available at: [https://allianz-entwicklung-klima.de/wp-content/uploads/2022/05/Oeko-Institut\\_2022\\_Sustainable-development-impacts-of-selected-projects-types-VCM.pdf](https://allianz-entwicklung-klima.de/wp-content/uploads/2022/05/Oeko-Institut_2022_Sustainable-development-impacts-of-selected-projects-types-VCM.pdf)
- 2 SDG Climate Action Nexus Tool ([SCAN-tool](#))
- 3 MNRE 2013 – Developmental Impacts and Sustainable Governance Aspects of Renewable Energy Projects. Online available at: [https://odishainnovationcell.nic.in/Content/SIC/Articles/RE\\_Development\\_Impacts\\_in\\_India.pdf](https://odishainnovationcell.nic.in/Content/SIC/Articles/RE_Development_Impacts_in_India.pdf)
- 4 Mayfield 2022 - Phasing out coal power plants based on cumulative air pollution impact and equity objectives in net zero energy system transitions. Online available at: <https://iopscience.iop.org/article/10.1088/2634-4505/ac70f6/meta>

- 5 Fan et al 2020 - The winter choke: Coal-Fired heating, air pollution, and mortality in China.  
Online available at:  
<https://www.sciencedirect.com/science/article/abs/pii/S0167629619311257>
- 6 Review of descriptions of different individual carbon credit projects

### **Assessment**

The criterion is here assessed at the level of the project type, noting that the actual impacts may differ substantially between individual projects. The assessment thus aims to provide a picture of the typical impacts of the relevant project type. The project type is characterized as follows:

“Installation of a new solar photovoltaic power plant. The electricity is fed into a national or regional electricity grid. The project type reduces emissions by displacing more greenhouse gas intensive electricity generation.”

The assessment results are summarized in the below table.

SDG	Points	Justification
Goal 1: No Poverty	-1	It is unclear if local people in poverty would benefit from the jobs created through the project type (see SDG 8). The project type could reduce land and resource access for dependent communities as installations may require land areas.
Goal 2: Zero Hunger	0	No interaction because it is assumed that a well-designed project would exclude any competition for land resource access (for food production) with communities before implementation.
Goal 3: Good Health and Well-being	2	Reduced air and water pollution compared to baseline of fossil fuel power generation (especially coal) reduces risk for related illnesses (target 3.9).
Goal 4: Quality Education	0	No interaction.
Goal 5: Gender Equality	0	No interaction.
Goal 6: Clean Water and Sanitation	1	Fossil fuel power generation plants require freshwater for cooling and pollute adjacent water bodies through their waste water (temperature change, harmful particles from combustion or alike). While solar PV reduces these impacts, the cleaning of the PV modules requires water which can be of importance in low rainfall regions (targets 6.3 and 6.4). Only tank-to-wake (impacts from production of PV panels excluded) considered in this analysis.
Goal 7: Affordable and Clean Energy	3	Setting up grid-connected solar PV installations increases the share of renewable energy (target 7.2). Installations can also increase energy security in countries which (formerly) depend on fossil energy imports.
Goal 8: Decent Work and Economic Growth	1	The project type enables the decoupling of economic growth and energy production from environmental degradation (target 8.4) and it creates jobs – but jobs might also be lost in the fossil industry if a fossil power plant is replaced (target 8.5).
Goal 9: Industry, Innovation and Infrastructure	2	Deployment of grid-connected solar PV supports the development of sustainable, reliable and resilient infrastructure (target 9.1), sustainable industrialisation (target 9.2) as well as the adoption of clean technologies (target 9.4).
Goal 10: Reduced Inequality	0	No interaction.
Goal 11: Sustainable Cities and Communities	0	No interaction if the solar plant is situated outside of human settlements or on roofs.
Goal 12: Responsible Consumption and Production	1	Sound management of chemicals and wastes generated at the end of life stage of solar PV modules is assumed. Impacts from the production of PV panels are excluded in the analysis.
Goal 14: Life Below Water	0	No interaction.
Goal 15: Life on Land	0	No interaction was identified as it is assumed that the solar PV plant is established on waste- or agricultural land and not on ecologically-sensitive areas.
Goal 16: Peace and Justice Strong Institutions	0	No interaction.
Goal 17: Partnerships to achieve the Goal	0	No interaction.

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**Total points achieved: 9**

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The project type receives 9 points in the SDG impact evaluation. Furthermore, none of the goals is assessed with a score of -3. Using the scoring approach in the methodology, this results in a score of 2.68. If the underlying project is implemented in a Least Developed Country or Small Island Developing State, the score is upgrade by one point, resulting in an overall score of 3.68.