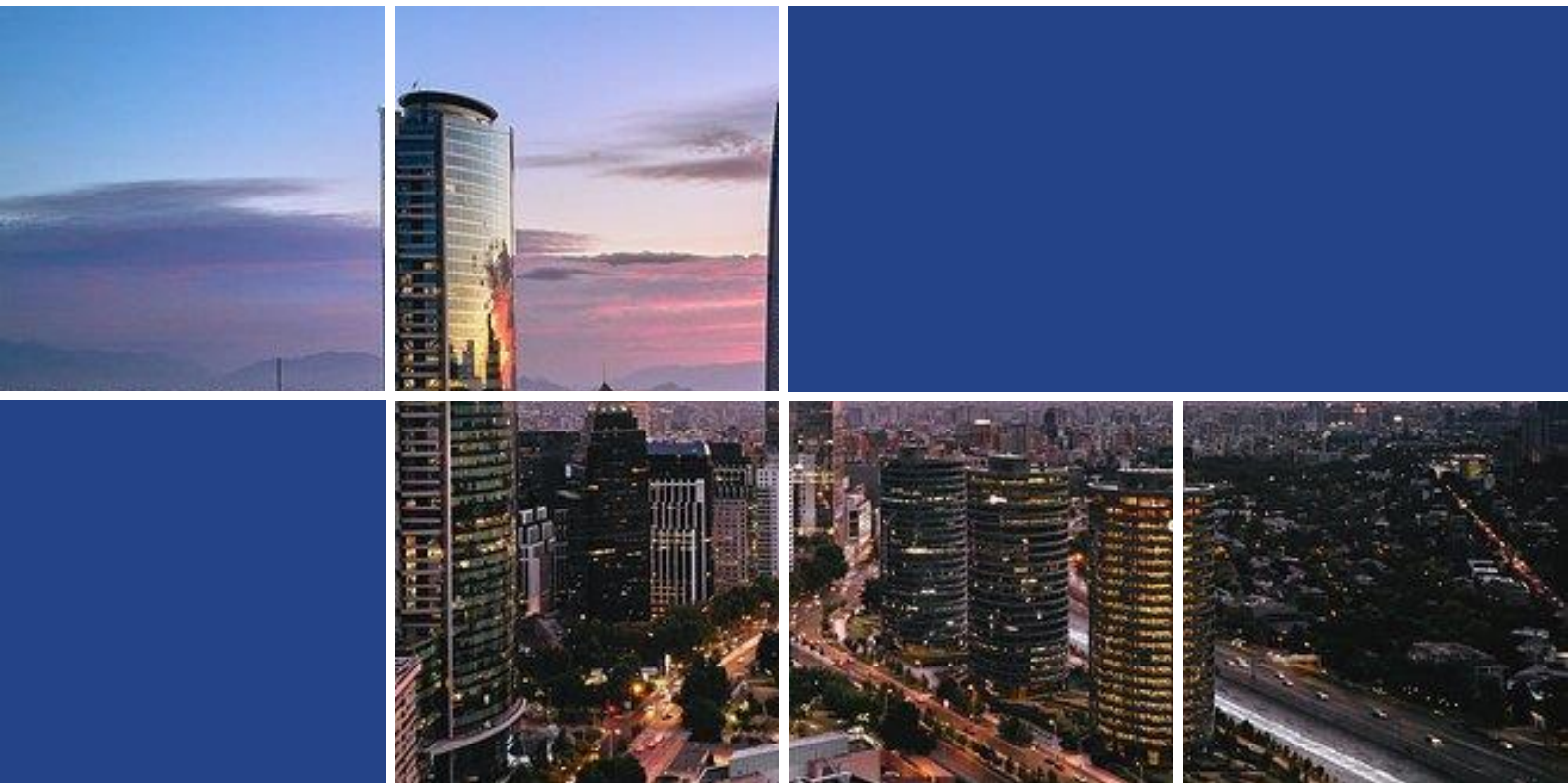


Technology Needs Assessment (TNA) and Technology Action Plan (TAP) for Chile's NDC implementation

Output 1: Development of implementation plans and related



communication documents

Prepared for:



Consultancy:

Technology Needs Assessment (TNA) and Technology Action Plan (TAP) for the implementation of Chile's NDC

Client:

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Acronyms

ASCC	Sustainability and Climate Change Agency
CNCCMDL	National Council for Climate Change and Clean Development Mechanism
MMA	Ministry of Environment
NDC	Nationally Determined Contribution
NDE	Designated National Entities
NFP	National Focal Point
UNIDO	United Nations Industrial Development Organization
TA	Technical assistance
TAP	Technology Action Plan
TNA	Technology Needs Assessment



Deliverable 1.1

Technology Needs Assessment (TNA) and Technology Action Plan (TAP) for Chile's NDC implementation

Detailed work plan

1. Detailed work plan

The work plan details all the activities that will be carried out in the technical assistance “Technology Needs Assessment (TNA) and Technology Action Plan (TAP)”, which will be implemented by the DEUMAN Consortium and Anthesis Lavola.

A Gantt Chart is also presented to identify these activities with deliverables and products, where the milestones and responsibilities are presented, as well as the detailed budget and a risk analysis.

1.1. Organization

1.1.1. General information

As general key information of the consultancy, Table 1 below presents the deadlines and the key personnel involved in this Technical Assistance (TA).

Table1. Overview box

"Technology Needs Assessment (TNA) and Technology Action Plan (TAP) for the Implementation of the NDC of Chile"		
Implementer	Engineering Services Deuman Limited & Anthesis Lavola	
Client	CTCN – UNIDO	
Deadlines	contract signing	06 – Dec – 21
	Product 1.1: Detailed work plan.	06 – Jan – 22
	Output 1.2: Monitoring and Evaluation Plan.	06 – Jan – 22
	Product 1.3 (initial version): Description of the impacts of the CTCN.	06 – Jan – 22
	Product 1.3 (final version): Description of the impacts of the CTCN.	28 – Apr – 23
	Output 1.4: Closure report and data collection.	28 – Apr – 23
	Output 2.1: Stakeholder Mapping Report.	28 – Feb – 22
	Product 2.2: Documents related to the TNA Committee and TNA-TAP alignment report and validation of sectors.	13 – Apr – 22
	Output 2.3 and 2.4: Stakeholder group and working group documents; TNA Committee Work Plan and Committee Meeting Report.	31 – May – 22
	Output 3.1: Validation of challenges, meeting report.	30 – June – 22
Output 3.2: Evaluation, prioritization and validation of	31 – Aug – 22	



Output 1: Development of implementation plans and related communication documents

Technology Needs Assessment (TNA) and Technology Action Plan (TAP) for the implementation of Chile's NDC

	key technologies for TNA compliance.			
	Product 3.3: Report and executive summary of each TAP.	05 – Dec – 22		
	Output 3.4: Workshop report, project idea concept notes, and training materials and tools.	31 – Jan – 23		
	Output 4.1: Training and support materials and dissemination strategies.	29 – Mar – 23		
	Output 4.2: Workshop report.	28 – Apr - 23		
DEUMAN and Anthesis Key Personnel	Team leader	Corinna Peters	CP	EQUIPMENT
	Second International Expert	Jaime Parada	JP	
	Local expert in the water resources sector	Juan Carlos Dominguez	JCD	
	Local expert in the forestry and agricultural sector	Rodrigo Valenzuela	RV	
	Local expert in the energy and transport sector	Rodrigo Valenzuela	RV	
	Local expert in the waste management sector	Pablo Badenier	PB	
	gender specialist	Virginia Guzman	VG	
DEUMAN Additional experts	Project management support	Christian Abanto	CA	
	Stakeholder management support	Kathiana Aznaran	KA	
	Deputy Coordinator	Itala Ferrer	IF	
Technical Counterpart	CTCN – UNIDO	Ramiro Salinas	RS	
		Diana Ramos	DR	
National Focal Point (NFP)	ASCC	Ambrosio Yobanolo	AY	
		Ismael Diaz	ID	
	MMA	Maritza Jadrijevic	MJ	
		Alfonso Galarce	AG	
	Ministry of Science, Technology, Knowledge and Innovation	Leonardo Muñoz	LM	
		Xavier de la Vega	XV	

It is important to mention that there is a small change regarding the additional experts that were in the proposal, Itala Ferrer (IF) would be replacing Camila Muñoz – Najar (CMN). Furthermore, in addition to being a stakeholder manager, she would be the deputy coordinator of the project, considering that fluid communication between the consulting team and the technical counterpart is important during this TA.

1.1.2. Roles and functions

In this section, a table is presented that describes the main role of each member of the consulting project team.

Table 2. Project team roles and functions

	Name	Acronym	Function
DEUMAN and Anthesis Key Personnel	Corinna Peters	CP	Head of Study whose functions are to direct, supervise and enforce the Terms of Reference of the project.
	Jaime Parada	JP	International expert whose functions are to provide expert knowledge of methodologies for the development of TNA and TAP considering the vision of the four sectors.
	Juan Carlos Dominguez	JCD	Local water expert in charge of transferring knowledge and leading focus groups focused on Water Resources.
	Rodrigo Valenzuela	VR	Local expert in Energy and Transportation in charge of transferring knowledge and leading focus groups focused on Electric Generation and Transportation. Likewise, he is the local expert in the agricultural and forestry sector, in charge of leading and guiding the focus groups focused on this topic.
	Pablo Badenier	PB	Local waste expert in charge of transferring knowledge and leading focus groups focused on Waste Management
	Virginia Guzman	VG	International gender expert whose functions are to provide specialized knowledge in the area.
DEUMAN Additional experts	Christian Abanto	AC	Support to Project Management, in order to help in the preparation of the workshop, logistics issues, among others.
	Kathiana Aznarán	KA	Support for the Management of Actors in charge of logistics and relationship with the key actors, considering the technical counterpart and the actors that will be involved in this TA. Likewise, he will be the Technical Supervisor of the project.
	Itala Ferrer	IF	Coordinator who fulfills the function of organizing all the meetings and monitoring the fulfillment of activities, commitments, etc. Responsible for the preparation of general templates and communication between the client, the interest group and the consulting team.

1.1.3. Logistical aspects

Communication– For communication, as mentioned above in the table of roles and functions, as well as during the Kick Off of the Consultancy, the people who will be focal points of communication will be Corinna Peters, as head of the study, and Itala Ferrer, as deputy coordinator .

Regular meetings– During the Kick Off meeting, regular progress meetings were suggested to discuss or validate specific topics. The dates of the proposal will be detailed in section 1.3, however, as a general summary, regular meetings would be held every three weeks, on Wednesdays, from 10 to 11 am (local time).

Deliverables– The deliverables will be sent to the CTCN focal point, as well as to the national focal points (Details Table 1). The national focal points will consolidate their comments and submit them as a review document. The established review time was set at 10 business days.

1.2. Workplan

1.2.1. RASCI Matrix

The acronym RASCI stands for "Responsible, Approving, Supporting, Consulting and Informed" and is a system of charts that illustrates the goal of given tasks and the action required for each team member. This method helps reduce confusion about expectations and, in turn, increases project efficiency and improves results. In this way, decisions are made faster, responsibility is clear, and the workload is evenly distributed.

- **Responsible:** person who completes the task.
- **Approver:** person who makes decisions and carries out actions on the task(s).
- **Supporter:** person who supports actions and decision making.
- **Consulted:** person to whom it will be communicated through the decision-making process and specific tasks.
- **Informed:** person who will be updated on decisions and actions during the project.

Table2 shows each letter of the method and its assigned color and Table3 shows the RASCI matrix of the work plan.

Table2. RASCI indicator

R	Responsible
A	Approver
S	Supporter
C	consulted
I	Informed

Product 1

Technology Needs Assessment (TNA) and Technology Action Plan (TAP) for the implementation of Chile's NDC

Table3. RASCI Matrix

No.	Activities	Leading Expert	International Expert	Water Resources Expert	Expert in Energy and Transport	Agricultural forestry expert	Waste Management Expert	Gender Expert	additional expert	additional expert	additional expert
	Professionals	Corinna Peters	Jaime Parada	Juan C. Dominguez	Rodrigo Valenzuela		paul badenier	Virginia Guzman	Christian Abanto	Kathiana Aznarán	Itala Ferrer
Output 1: Development of implementation planning and related communication documents											
1.1	Detailed work plan	A	C	I	I	I	I	I	I	S	R
1.2	Monitoring and evaluation plan	A	C	I	I	I	I	I	I	S	R
1.3	Description of CTCN impacts	A	C	I	I	I	I	I	I	S	R
1.4	Closing report and data collection	A	C	I	I	I	I	I	I	S	R
Product 2: Establishment of a TNA Committee											
2.1	Stakeholder Analysis	A	R	C	C	C	C	C	I	S	R
2.2	Support the establishment of a TNA Committee	A	R	C	C	C	C	C	I	S	R
2.3	Formation of sectoral working groups and capacity building	A	R	C	C	C	C	C	I	S	R
Wsp1	Workshop: Training on TNA processes for all national actors	I	A	S	S	S	S	C	R	S	R
2.4	Development and approval of the TNA committee work plan for monitoring and supervision	A	R	C	C	C	C	C	I	I	S
Output 3: Prioritization of relevant technologies and measures to increase access to finance											
3.1	Validation of prioritized challenges	A	C	R	R	R	R	C	I	S	S
3.2	Evaluation, prioritization and validation of key technologies for TNA compliance in Chile	A	C	R	R	R	R	C	I	S	S
3.3	Development of a Technological Action Plan by sector and/or subsector	A	C	R	R	R	R	R	I	S	S
3.4	National consultation workshop to ensure national ownership and deployment of technology	I	A	S	S	S	S	S	R	S	R
Wsp2	Workshops: TAP discussion and validation elaborated in activity 3.2	I	A	I	S	S	S	S	R	S	R
Output 4: Support for the application of the Technological Action Plan with communications, orientation and training											
4.1	Development of training materials and dissemination strategy	A	C	C	C	C	C	S	S	S	R
4.2	Conducting TNA training workshops	I	A	S	S	S	S	S	R	S	R
Wp3	Workshop: TNA Training	I	A	S	S	S	S	S	R	S	R

1.3. Main activities

The main activities of the Work Plan include internal coordination meetings, product presentations, workshops, bilateral meetings/interviews, progress meetings, among others. The description of each of them is detailed in the following table.

Table 5. Description of main activities

Distribution	Description
Progress Meeting (PMx)	Periodic meetings with the Designated National Entity, being able to invite other relevant actors in order to discuss important issues, show the degree of progress, validate some aspects and receive feedback.
Product Presentation (PPx)	Presentation to the CTCN and the National Designated Entity (NDC) of the content of each product or deliverable according to the Term of Reference with the results and findings of the process.
Workshops (Wspx)	Established meeting with special and dynamic activities, from training and presentation of results with different stakeholders at the national level.
Bilateral Meetings (BMx)	Interviews with actors for consultation on the development of the Technological Action Plan (TAP), definition of the NCD Committee, among other aspects requested to carry out technical assistance.
Working Group Meeting (WGx)	Meeting of working groups related to the TNA committee, for decision making, validation of results, as well as meetings of the working groups by sector.

The following table presents the calendar of activities showing the suggested dates to develop each one of them.

Table 6. Save dates of main activities

Activities	Code	Target	Modality	Start date	Finish date
Progress Meeting (PM)	PM1	Preliminary validation of actors	Virtual	26/01/2022	26/01/2022
	PM2	Presentation of results and preparation for virtual workshop	Virtual	16/03/2022	16/03/2022
	PM3	Presentation of criteria	Virtual	27/07/2022	27/07/2022
	PM4	Presentation of policy briefs	Virtual	15/03/2023	15/03/2023
Bilateral meetings (BM)	BM1	Meetings and interviews will be held to characterize them by type of actor	Virtual	07/02/2022	18/02/2022
	BM2	Barrier analysis and enabling framework	Virtual	28/09/2022	12/10/2022
Product Presentation (PP)	PP1	Presentation Product 1	Virtual	12/01/2022	12/01/2022
	PP2	Presentation Product 2.1	Virtual	03/03/2022	03/03/2022
	PP3	Presentation Product 2.2	Virtual	20/04/2022	20/04/2022

Activities	Code	Target	Modality	Start date	Finish date
	PP4	Presentation Product 2.3 and 2.4	Virtual	22/06/2022	22/06/2022
	PP5	Presentation Product 3.1	Virtual	06/07/2022	06/07/2022
	PP6	Presentation Product 3.2	Virtual	07/09/2022	07/09/2022
	PP7	Presentation Product 3.3	Virtual	14/12/2022	14/12/2022
	PP8	Presentation Product 3.4	Virtual	15/02/2023	15/02/2023
	PP9	Presentation Product 4.1	Virtual	05/04/2023	05/04/2023
Meeting of the Working Group (WG)	WG1	Validation of the key actors (two sessions)	Virtual	04/03/2022	04/03/2022
	WG2	Recognition and reading of TNA committee roles	Virtual	30/03/2022	30/03/2022
	WG3	Workgroup validation by sector	Virtual	04/05/2022	04/05/2022
	WG4	Validation of the work plan of the TNA committee	Virtual	03/06/2022	03/06/2022
	WG5	Identification of separate challenges in 2 sessions (2 sectors per day)	Virtual	16/06/2022	17/06/2022
	WG6	Validation of multi-criteria analysis and separation into 4 groups per sector	Virtual	10/08/2022	10/08/2022

This consultancy has a high consultation component; therefore, planning workshops are an important activity for this technical assistance. The workshops will be planned with the national technical counterpart, detailing all the technical and logistical aspects, and this will be done before each workshop with the necessary anticipation, however, in Table 7 the objectives and tentative dates for each workshop or working group meeting are presented in a preliminary way.

Likewise, it is important to highlight that the workshops (which were previously considered virtual in the proposal) have been changed to face-to-face due to the restriction measures derived from the pandemic, which may increase due to the new variants of coronavirus (ómicron); only the most important workshops will be considered as face-to-face in order to guarantee the health of all attendees.

It should be noted that the total number of face-to-face workshops has not changed (05 according to the budget plan, section 1.5), but these have moved, proposing in this deliverable, the development of 4 face-to-face workshops in output 3, and one face-to-face workshop in output 4; and replacing the output 2 workshops as virtual workshops.

Table 7. Preliminary description of the workshops

Code	Meeting type	Target	Preliminary agenda	Start date	Final date
Wsp1	Virtual	Training on TNA processes for all national actors (two sessions)	<ol style="list-style-type: none"> 1. Presentation of an example process of TNA 2. Questions and answers 	25/05/2022	26/05/2022
Wsp2.1	Face-to-face	Discussion and validation of the LAPs developed in activity 3.2 – Water Resources	<ol style="list-style-type: none"> 1. Presentation of the selection of priority technologies. 2. Presentation and debate at the end of each of the 11 subsections (chapters) contained in the sectoral TAP. 3. Discussion of the most priority technologies in each sector. 4. Exchange of experiences and ideas with priority technologies in the TAP 5. Lessons learned and best practices. 	17/01/2023	17/01/2023
Wsp2.2	Face-to-face	Discussion and validation of the TAPs elaborated in activity 3.2 – Forestry and agriculture		19/01/2023	19/01/2023
Wsp2.3	Face-to-face	Discussion and validation of the TAPs elaborated in activity 3.2 - Energy and Transport		23/01/2023	23/01/2023
Wsp2.4	Face-to-face	Discussion and validation of the TAPs developed in activity 3.2 – Waste Management		25/01/2023	25/01/2023
Wsp3	Face-to-face	Training on the results of the TNA and TAP – and separated into 4 groups of mini auditoriums per sector	<ol style="list-style-type: none"> 1. Presentation selection of prioritized technologies 2. Market mapping and problem trees to allow them to become more familiar with the identified technologies. 3. Presentation of gender awareness tools to improve implementation capacities. 4. Allow access to financing for priority technologies through national and international sources. 5. Discuss the environmental and social risk considerations of each of the technologies. 6. Review technical capacity, operation, maintenance, and data collection. 7. Participation of the private sector, improvement of the capacities of SMEs. 8. Discussion on mitigation and adaptation needs and how to achieve the goals. 	18/04/2023	18/04/2023

1.4. Risk analysis

During this section, the potential risk associated with the different products of the consultancy will be presented, as well as the level of risk and the management of those risks. A score from 1 to 9 was used; each score represents a level of risk, with a lower score meaning you are at higher risk, while a higher score means your risk level is low.

Figure 1. Determination of the level of risk

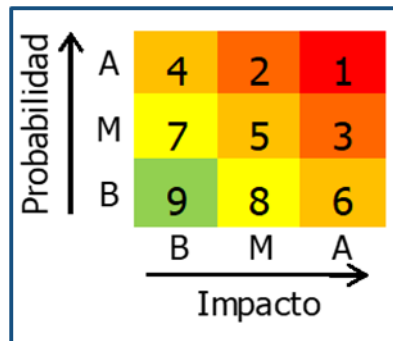


Table 8. Risk analysis matrix for consulting

Activity	Risk	Impact	Probability	Severity	Level of Risk	Mitigation of Risk	Mitigation Manager
2.1	Low interest of the interested parties for the participation of the consultancy	Delays or difficulties in meeting the objectives of this technical assistance.	MEDIUM	HIGH	3	The Consortium has experience working with actors in the country, among the four relevant sectors, and has an enormous network of contacts that allows us to guarantee participation.	Local experts
2.2	Difficulties in identifying a small number of actors to be part of the TNA Committee	Huge TNA committee that could put barriers in the decision-making process	LOW	MEDIUM	8	Consider a reduced number of participants with the necessary diversity to ensure the different points of view of the group of actors.	CP
2.1, 2.2, 2.4	Staff turnover due to change of government	Changes in the identification of key actors for the selection of the TNA Committee	HIGH	HIGH	1	Prioritize the identification of roles and positions over the identification of people, in order to ensure the participation of the management/institution regardless of the change in personnel	Local experts
2.3, 3.1, 3.2, 3.4, 4.2	Logistical problems for the organization of workshops.	Delays in planning workshops with low number of participants	MEDIUM	HIGH	3	The additional experts in the team will coordinate with the team of key personnel and help them with logistical and organizational aspects using different tools such as query patterns, agile methodologies, etc.	KA, CA, IF
2.1, 2.3, 3.4, 4.2	Difficulties in involving a large number of stakeholders	Delays in the planning of workshops or delay in the development of consultancy activities	LOW	LOW	9	The Consortium has experience working with actors in the country, among the four relevant sectors, and has an enormous network of contacts that allows us to guarantee participation.	Local experts
3.1	Unclear prioritized or relevant challenges in the selected sectors	Development of the TA without a good base to cause a positive impact for the country	LOW	HIGH	6	Review all the background information and a process of constant consultation with the sectoral actors	Local experts

Product 1

Technology Needs Assessment (TNA) and Technology Action Plan (TAP) for the implementation of Chile's NDC

Activity	Risk	Impact	Probability	Severity	Level of Risk	Mitigation of Risk	Mitigation Manager
3.1, 3.2	Low availability of information	Difficulty identifying relevant actors, validating technologies, etc.	LOW	HIGH	6	Take advantage of the contacts made for prior technical assistance made by DEUMAN in Chile	Local experts
3.4, 4.2	Quarantine due to outbreak of new COVID-19 variables	Impossibility of holding face-to-face workshops or working groups	MEDIUM	LOW	7	Planning the workshop in advance and being flexible to change it to a hybrid or virtual form considering the context.	CP
3.2, 3.3	Difficulty adapting an international methodology to the local context	General TNA and TAP without considering the particular context of the country	MEDIUM	HIGH	3	Adapt the methodology, if requested, considering the particular challenges and context of Chile	CP, JP
4.1, 4.2	Different level of knowledge among stakeholders	Difficulties in developing capacity building for all relevant actors	HIGH	MEDIUM	two	Preparation of a preliminary questionnaire asking the level of knowledge to develop skills according to their initial level of knowledge and experience	JP
All Activities	Difficulty in communicating with the NDE	Delays in the development of technical assistance	LOW	MEDIUM	8	Assign a person in charge of coordination and communications to assist the lead expert	IF
All Activities	Delays in the delivery of products due to delays in the development of the workshops	Changes in the work plan	HIGH	LOW	4	Have a progress meeting with the counterpart to coordinate and communicate changes in planning in advance.	DEUMAN

1.5. Detailed budget plan

The following table presents the detailed budget plan for this Technical Assistance.

Table 9. Detailed budget plan

Output	Activities	Budget category	Unit	Detailed budget (in US\$)							Sum Units	Per unit	Total budget per component	Total budget per output
				Intern. E1	Intern. E2	National E3	National E4	National E5	Gender Expert					
Output 1: Development of the work plan and related communication documents	Activity 1.1: Develop a detailed implementation plan	Consultant - International	Days	2	0.5						2.5	350	875.00	6,447.50
		Consultant - National	Days			0.5	0.5	0.5	1	2.5	305	762.50		
	Activity 1.2: Develop an M&E plan	Consultant - International	Days	3	1					4	350	1,400.00		
		Consultant - National	Days							0	305	-		
	Activity 1.3: Impact Statement of CTCN technical assistance	Consultant - International	Days	3	2					5	350	1,750.00		
		Consultant - National	Days						2	2	305	610.00		
	Activity 1.4: A Technical Assistance Closing Report	Consultant - International	Days	2	1					3	350	1,050.00		
		Consultant - National	Days							0	305	-		
Output 2: Establishment of an TNA Committee	Activity 2.1: Conduct stakeholder's analysis	Consultant - International	Days	4	10					14	350	4,900.00	59,455.00	
		Consultant - National	Days			8	8	8	1	25	305	7,625.00		
		Interview/Virtual Meeting	Days							1	250	250.00		
	Activity 2.2: Support the establishment of a TNA Committee	Consultant - International	Days	12	15					27	350	9,450.00		
		Consultant - National	Days			10	10	10	2	32	305	9,760.00		
	Workshop/Virtual Meeting	Days							1	3000	3,000.00			
	Activity 2.3: Sector working group formation and capacity building	Consultant - International	Days	10	8					18	350	6,300.00		
Consultant - National		Days			6	6	6	2	20	305	6,100.00			

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Technology Needs Assessment (TNA) and Technology Action Plan (TAP) for the implementation of Chile's NDC

Output	Activities	Budget category	Unit	Detailed budget (in US\$)							Sum Units	Per unit	Total budget per component	Total budget per output
				Intern. E1	Intern. E2	National E3	National E4	National E5	Gender Expert					
	groups and capacity building	Workshop/Virtual Meeting	Days							1	3000	3,000.00		
	Activity 2.4: Development and endorsement of TNA committee work plan for monitoring and oversight	Consultant - International	Days	8	5					13	350	4,550.00		
		Consultant - National	Days			4	4	4	2	14	305	4,270.00		
		Interview/Virtual Meeting	Days							1	250	250.00		
Output 3: Prioritization of technologies and relevant action for increased access to finance	Activity 3.1: Validation of prioritized challenges	Consultant - International	Days	8	5					13	350	4,550.00	73,560.00	
		Consultant - National	Days			8	8	8		24	305	7,320.00		
		Workshop/ Virtual Meeting/ Interview	Days							1	3000	3,000.00		
	Activity 3.2: Assessment, prioritization and validation of key technologies	Consultant - International	Days	18	13					31	350	10,850.00		
		Consultant - National	Days			10	10	10	2	32	305	9,760.00		
		Interview/Virtual Meeting	Days							1	250	250.00		
	Activity 3.3: Development of a Technological Action Plan by sector and/or subsector	Consultant - International	Days	20	20					40	350	14,000.00		
		Consultant - National	Days			15	15	15	2	47	305	14,335.00		
		Interview/Virtual Meeting	Days							1	250	250.00		
	Activity 3.4: National consultation workshop to ensure national ownership and deployment of technology	Consultant - International	Days	5	5					10	350	3,500.00		
		Consultant - National	Days			3	3	3		9	305	2,745.00		
		Workshop/Virtual Meeting	Days							1	3000	3,000.00		

Product 1

Technology Needs Assessment (TNA) and Technology Action Plan (TAP) for the implementation of Chile's NDC

Output	Activities	Budget category	Unit	Detailed budget (in US\$)							Sum Units	Per unit	Total budget per component	Total budget per output
				Intern. E1	Intern. E2	National E3	National E4	National E5	Gender Expert					
Output 4: Implementation of the Technology Action Plan with communications, guidance and training	Activity 4.1: Development of training materials and dissemination strategy	Consultant - Individual - International	Days	3	2					5	350	1,750.00	16,450.00	
		Consultant - Individual - National	Days			1	1	1	1	4	305	1,220.00		
	Activity 4.2: Delivery of TNA training workshops	Consultant - Individual - International	Days	8	8					16	350	5,600.00		
		Consultant - Individual - National	Days			5	5	5	1	16	305	4,880.00		
		Workshop/Virtual Meeting	Days							1	3000	3,000.00		
			Days	106	95.5	70.5	70.5	70.5	16			155,912.50	155,912.50	



Deliverable 1.2

Technology Needs Assessment (TNA) and Technology Action Plan (TAP) for Chile's NDC implementation

Monitoring & Evaluation Plan (M&E)

2. Monitoring and Evaluation Plan (M&E)

2.1. Basic information

The second deliverable (1.2) is based on the CTCN Monitoring and Evaluation Plan and the Technical Assistance Response Plan, for the subsequent preparation of the closure report at the end of the assistance, in addition to the selection of the relevant quantitative and qualitative indicator. .

The Table displays the main information of the project.

Table 11. Basic information

Characteristic	Information
Response Plan Title	"Technology Needs Assessment (TNA) and Technology Action Plan (TAP) for the Implementation of the NDC of Chile"
Technical support number	3100004846
Country	Chile
NDE focal point and organization	NDE Focal Point – Agency for Climate Change and Sustainability (ASCC) NDE Coordinator – Giovanni Calderón, Executive Director
Sectors addressed	(1) Water resources; (2) Forestry and agriculture; (3) Energy and Transportation; and (4) Waste Management.
Compatible technologies	Mitigation and adaptation technologies
Implementation period and total duration	15 months
Total budget for implementation	155,912.5
Response Plan Designer	CTCN – UNIDO
Response Plan Implementer	DEUMAN ENGINEERING SERVICES LIMITED & Anthesis Lavola

2.2. Monitoring and evaluation plan

For each of the products and activities to be presented, in accordance with the Terms of Reference, a series of indicators have been carefully selected to measure our results. These are shown in the following table.

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Table 10. Indicators of the Monitoring and Evaluation Plan

(A) Product and activities	Indicator	Expected result	Method and frequency for data collection	Comments
<p>Output 1: Development of communication documents and implementation planning</p>	<p>Product presentation a) Number of deliverables produced - Number of tools and technical documents reinforced, revised or developed</p>	<p><u>Total: 3 deliverables</u> 1 deliverable with: 1 work plan 1 follow-up and monitoring plan (M&E) 1 evaluation impact description (initial version) 1 deliverable with impact description (final version) 1 deliverable of the closure report and data collection (end of technical assistance)</p>	<p>Methodology: The data will be collected at the beginning of the technical assistance, once deliverables 1.1, 1.2 and 1.3 have been completed for the presentation of the product, and at the end of the technical assistance to complete deliverables 1.3 (final version) and 1.4. Frequency: At the beginning of the consultancy and at the end for the Follow-up and Monitoring Plan (M&E). At the end of the consultancy for the impact description.</p>	<p>CTCN model documents will be used.</p>
	<p>- Number of other information materials strengthened, revised or created</p>	<p>2 product presentations (ppt)</p>		
	<p>b) Number of presentation meetings</p>	<p>2 presentation meetings held 2 meeting minutes, including the list of participants</p>		
<p>Activity 1.1: : A detailed work plan for all activities, deliverables, products, timelines, and responsible persons or organizations, including a study of gender and a detailed budget to implement the Response Plan.</p>	<p>Product presentation a) Number of deliverables produced</p>	<p><u>Total: 1 deliverable</u> 1 detailed work plan including controls and management rules, roles and responsibilities in the decision-making processes throughout technical assistance</p>	<p>Methodology: The data will be collected at the beginning of the technical assistance.</p>	<p>CTCN model documents will be used.</p>
<p>Activity 1.2: A monitoring and evaluation plan</p>	<p>Product presentation a) Number of deliverables produced in this product</p>	<p><u>Total: 1 deliverable</u> 1 monitoring and evaluation plan</p>	<p>Methodology: The data will be collected at the beginning of the technical assistance.</p>	<p>CTCN model documents will be used.</p>
<p>Activity 1.3: A two-page CTCN impact description formulated at the beginning of the technical assistance and updated/revised once the technical assistance has been fully delivered.</p>	<p>Product presentation a) Number of deliverables produced in this product</p>	<p><u>Total: 2 deliverables</u> 1 impact description document (initial version) 1 impact description document (final version)</p>	<p>Methodology: The data will be collected at the beginning of the technical assistance, for the initial version, and at the end of the technical assistance to complete the deliverable 1.3.</p>	<p>CTCN model documents will be used.</p>
<p>Activity 1.4: A Closing Report and Data Collection completed at the end of the technical assistance.</p>	<p>Product presentation a) Number of deliverables produced in this product</p>	<p><u>Total: 1 deliverable</u> 1 document with the closure report and data collection (end of technical assistance)</p>	<p>Methodology: Data will be collected during technical assistance and at the end of technical assistance to complete deliverable 1.4.</p>	<p>CTCN model documents will be used.</p>

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(A) Product and activities	Indicator	Expected result	Method and frequency for data collection	Comments
<p>Output 2. Establishment of a TNA Committee</p>	<p>Product presentation a) Number of deliverables produced - Number of tools and technical documents reinforced, revised or developed</p>	<p><u>Total: 4 deliverables (1 per activity)</u> 1 document with the mapping of interested parties 1 document with: (a) constitution of the TNA that reports on the work of the TNA Committee, and (b) Alignment of TNA-TAP and validation of sector and subsector 1 key stakeholder group and sector working group document, training report (list of participants and graphic documentation of activity 2.3) 1 document with the work plan of the TNA Committee and reports of the Committee meetings</p>	<p>Method: Prepare research report, consultation and systematization and analysis of information. Carry out a quality control process and submit for counterpart review and comment. Preparation of a ppt presentation and recording of any suggestions and comments considered. Frequency: At the end of each activity.</p>	<p>The review of the CTCN will be considered to coordinate the presentation of the product to the client. There is a minute's format that must be completed at the end of each meeting with its respective attendance sheet. Use of UNEP methodology, how the <i>Guide to the Identification and Participation of Stakeholders in the TNA Process: A Guide for National TNA Teams</i>; and the TNA Guide: step by step</p>
	<p>-Number of communication materials, including press releases, newsletters, articles, presentations, social media posts, etc.</p>	<p>1 official government circular establishing the TNA national committee</p>		
	<p>- Number of other information materials strengthened, revised or created</p>	<p>3 informative materials for the presentation of the product (ppt) (activity 2.3 and 2.4 together)</p>		
	<p>b) Number of presentation meetings</p>	<p>3 presentation meetings held 3 meeting minutes, including the list of participants.</p>		
<p>Activity 2.1: Conduct stakeholder's analysis</p>	<p>Key stakeholders a) Identify key stakeholders to participate directly in the TNA National Committee running the project b) Identify stakeholders in the TNA and TAP process</p>	<p><u>TNA National Committee</u> 10 stakeholders as part of the committee <u>TNA and TAP process</u> 20 actors identified (5 per sector)</p>	<p>Method: This activity will be conducted in accordance with the Guide to Stakeholder Identification and Participation in the TNA Process: A Guide for TNA National Teams.</p>	<p>The stakeholder mapping will be finalized and agreed upon in a two-day meeting (working group meetings).</p>
	<p>Bilateral meetings Total, number of meetings with stakeholders</p>	<p><u>Total: 10 bilateral meetings (BM1)</u> 10 stakeholders minimum 1 reference guide prepared 1 meeting minute for bilateral meetings</p>	<p>Method: Record of minutes and attendance lists in all technical assistance meetings. Frequency: At the end of the activity.</p>	<p>At the end of each meeting, an attendance form will be filled out with each minute, with an image of the participants (virtual).</p>
	<p>Progress meetings a) Number of TA progress meetings with NDE and CNCCMDL b) Number of other information materials strengthened, revised or created</p>	<p><u>Total: 1 progress meetings (PM1)</u> 1 progress meeting with the NDE and CNCCMDL for stakeholder validation 1 informational materials created: PowerPoint (1 per progress meeting) 1 minutes of the meeting, including the list of participants.</p>	<p>Method: Communication of the agenda to the participants and preparation of the Ppt presentation for the meeting Record of minutes and attendance lists in all technical assistance meetings. Frequency: Every two weeks, except when there is another type of meeting</p>	<p>There is a minute's format which must be completed at the end of each meeting with its respective attendance sheet. The agenda of this meeting is the preliminary presentation of the prioritization criteria and the verification of the database.</p>

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(A) Product and activities	Indicator	Expected result	Method and frequency for data collection	Comments
	<p>Working group meetings</p> <p>a) Total number of events organized by proponents and implementing partners</p> <p>b) Number of participants in events organized by proponents and implementing partners</p> <p>c) Number of other information materials strengthened, revised or created</p> <p>d) Number of communication materials, including press releases, newsletters, articles, presentations, social media posts, etc.</p>	<p><u>1 Working Group meeting (WG1)</u></p> <p>10 participants minimum for stakeholder mapping validation</p> <p>1 meeting minute, including attendance list, meeting results</p> <p>1 communication material for the workshop (ppt)</p> <p>1 communication material (flyer) for the dissemination of the Working Group meeting</p>	<p>Method:</p> <p>Verification of the participants in the attendance list (the Interministerial Committee for the Development and Transfer of Climate Technologies, NDE, the gender focal point and other interested parties must be present) and the materials used.</p> <p>Analysis of the questions formulated and answered, and of the activities carried out.</p>	<p>There is a minute's format which must be completed at the end of each meeting with its respective attendance sheet.</p> <p>The agenda of these meetings will be established according to the need, with the purpose of validating approaches, presenting and collecting feedback on progress, coordination, etc.</p> <p>In addition, the type of participants who will be invited to the different workshops will be identified.</p>
	<p>Product presentation</p> <p>a) Number of deliverables produced</p>	<p>1 stakeholder mapping report</p>	<p>Method:</p> <p>Prepare research report, consultation and systematization and analysis of information. Carry out a quality control process and submit for counterpart review and comment.</p> <p>Frequency:</p> <p>At the end of the activity.</p>	<p>The review of the CTCN will be considered to coordinate the presentation of the product to the client.</p>
<p>Activity 2.2: Support the establishment of a TNA Committee</p>	<p>NCD Committee</p> <p>Total, number of members (stakeholders)</p>	<p>10 TNA committee members</p>	<p>Method:</p> <p>The TNA committee will consist of 10 members, including the TNA coordinator. The TNA Committee will include representatives from the public, private, and academic sectors and will consider gender balance and appropriate Representation.</p> <p>TNA Step by Step Guide Review</p>	<p>The proponents (Ministries of Environment and Science and NDE) will play a leading role in supporting the establishment of the TNA Committee.</p>
	<p>Progress meetings</p> <p>a) Number of TA advance meetings with NDE and CTCN</p> <p>b) Number of other information materials strengthened, revised or created</p>	<p><u>Total: 1 progress meetings (PM2)</u></p> <p>1 progress meeting with the NDE and CTCN for validation of interested parties.</p> <p>1 informative material created: PowerPoint (1 per progress meeting)</p> <p>1 minute of the meeting, including the list of participants.</p>	<p>Method:</p> <p>Communication of the agenda to the participants and preparation of the Ppt presentation for the meeting.</p> <p>Record of minutes and attendance lists in all technical assistance meetings.</p> <p>Frequency:</p> <p>Every two weeks, except when there is another type of meeting.</p>	<p>There is a minute's format which must be completed at the end of each meeting with its respective attendance sheet.</p> <p>The agenda of these meetings will be established according to the need, with the purpose of validating approaches, presenting and collecting feedback on progress, coordination, etc.</p>

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(A) Product and activities	Indicator	Expected result	Method and frequency for data collection	Comments
	<p>Working group meetings</p> <p>a) Total number of events organized by proponents and implementing partners</p> <p>b) Number of participants in events organized by proponents and implementing partners</p> <p>c) Number of other information materials strengthened, revised or created</p> <p>d) Number of communication materials, including press releases, newsletters, articles, presentations, social media posts, etc.</p>	<p><u>1 working group meeting (WG2) held</u></p> <p>10 participating members of the TNA committee</p> <p>1 minute of the working group meeting including attendance list</p> <p>1 communication material for working group meeting (ppt)</p> <p>1 communication material (invitation) for the dissemination of the working group meeting</p>	<p>Method:</p> <p>Previous preparation of the presentation of the workshop, dynamics and activities and its validation with the NDE.</p> <p>Verification of the participants in the attendance list (the NDE and the largest number of interested parties must be present) and the materials used.</p>	<p>There is a minute's format which must be completed at the end of each meeting with its respective attendance sheet.</p> <p>The agenda of these meetings will be established according to the need, with the purpose of validating approaches, presenting and collecting feedback on progress, coordination, etc.</p>
	<p>Product presentation</p> <p>a) Number of deliverables produced</p> <p>b) Number of communication materials, including press releases, newsletters, articles, presentations, social media posts, etc.</p>	<p>1 report with: (b) TNA constitution document reporting on the work of the TNA Committee, (b) TNA-TAP alignment and sector and subsector validation</p> <p>1(a) official government circular establishing the TNA national committee</p>	<p>Method:</p> <p>Prepare research report, consultation and systematization and analysis of information. Carry out a quality control process and submit for counterpart review and comment.</p> <p>Frequency:</p> <p>At the end of the activity.</p>	<p>The review of the CTCN will be considered to coordinate the presentation of the product to the client.</p>
<p>Activity 2.3: Formation of sectoral working groups and capacity building</p>	<p>Members of the sector working group</p> <p>a) Total, number of members (stakeholders) by sector</p> <p>b) Percentage of men and women</p>	<p><u>20 members for sector working groups</u></p> <p>5 members (minimum) specialists in each sector: (1) Water Resources; (2) Forestry and agriculture; (3) Energy and Transportation; and (4) Waste Management.</p> <p>Approximately 50% women 50% men</p>	<p>Method:</p> <p>The sectoral working groups will include representatives of the government departments that have responsibility for the formulation and/or regulation of policies already identified; industry representatives from the public and private sectors; delegates from electric companies and regulators; representatives from technology providers, finance, technology end users, associations promoting GEEW, and technology experts.</p>	<p>The selection of the members of each working group will be carried out through a prioritization matrix of key actors and the validation of the TNA committee.</p>
	<p>Working group meetings</p> <p>a) Total number of events organized by proponents and implementing partners</p> <p>b) Number of participants in events organized by proponents and implementing partners</p> <p>d) Number of other information materials strengthened, revised or created</p>	<p><u>1 working group meeting (WG3) held</u></p> <p>10 participants</p> <p>1 report on the results of the working group meeting</p> <p>1 minute of the working group meeting including attendance list</p> <p>1 communication material for working group meeting (ppt)</p>	<p>Method:</p> <p>Previous preparation of the presentation of the workshop, dynamics and activities and its validation with the NDE.</p> <p>Verification of the participants in the attendance list (the NDE and the largest number of interested parties must be present) and the materials used.</p>	<p>There is a minute's format which must be completed at the end of each meeting with its respective attendance sheet.</p> <p>The agenda of these meetings will be established according to the need, with the purpose of validating approaches,</p>

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(A) Product and activities	Indicator	Expected result	Method and frequency for data collection	Comments
	e) Number of communication materials, including press releases, newsletters, articles, presentations, social media posts, etc.	1 communication material (brochure) for the dissemination of the working group meeting		presenting and collecting feedback on progress, coordination, etc.
	Workshop meetings a) Total number of events organized by proponents and implementing partners b) Number of participants in events organized by proponents and implementing partners c) Percentage of men and women d) Number of other information materials strengthened, revised or created e) Number of communication materials, including press releases, newsletters, articles, presentations, social media posts, etc.	<u>1 workshop meeting (Wsp1) held</u> 30 participants from the private sector, NGOs, academia, etc. Approximately 50% women 50% men 1 workshop results report 1 minute of the workshop including attendance list 1 communication material for the workshop (ppt) 1 communication material (brochure) for the dissemination of the workshop	Method: Previous preparation of the presentation of the workshop, dynamics and activities and its validation with the NDE. Verification of the participants in the attendance list (the NDE and the largest number of interested parties must be present) and the materials used. Analysis of the questions formulated and answered, and of the activities carried out.	There is a minute's format which must be completed at the end of each meeting with its respective attendance sheet. The agenda of these meetings will be established according to the need, with the purpose of validating approaches, presenting and collecting feedback on progress, coordination, etc.
	Product presentation a) Number of deliverables produced	1 report with documentation from key stakeholder groups and sector working groups; complete list of participants, photographic documentation and training report.	Method: Prepare research report, consultation and systematization and analysis of information. Carry out a quality control process and submit for counterpart review and comment. Frequency: At the end of the activity.	The review of the CTCN will be considered to coordinate the presentation of the product to the client.
Activity 2.4: Development and approval of the TNA committee work plan for monitoring and supervision	Working group meetings a) Total number of events organized by proponents and implementing partners b) Number of participants in events organized by proponents and implementing partners d) Number of other information materials strengthened, revised or created e) Number of communication materials, including press releases, newsletters, articles, presentations, social media posts, etc.	<u>1 working group meeting (WG4) held</u> 10 attendees at the working group meeting 1 report on the results of the working group meeting 1 minute of the working group meeting including attendance list 1 communication material for working group meeting (ppt) 1 communication material (brochure) for the dissemination of the working group meeting	Method: Previous preparation of the presentation of the workshop, dynamics and activities and its validation with the NDE. Verification of the participants in the attendance list (the NDE and the largest number of interested parties must be present) and the materials used.	There is a minute's format which must be completed at the end of each meeting with its respective attendance sheet. The agenda of these meetings will be established according to the need, with the purpose of validating approaches, presenting and collecting feedback on progress, coordination, etc.
	Product presentation a) Number of deliverables produced	1 TNA Committee work plan and Committee meeting reports.	Method: Prepare research report, consultation and systematization and analysis of information. Carry out a quality control process and submit for counterpart review and comment.	The review of the CTCN will be considered to coordinate the presentation of the product to the client.

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(A) Product and activities	Indicator	Expected result	Method and frequency for data collection	Comments
<p>Output 3: Prioritization of relevant technologies and actions for greater access to financing</p>	<p>Product presentation a) Number of deliverables produced in this product - Number of tools and technical documents reinforced, revised or developed</p>	<p>Total: 7 deliverables 1 challenge validation document, meeting reports. 1 Key Technology Assessment, Prioritization and Validation Document (Technology Data Sheets, Criteria, Workshop Reports, Participants and Photos, TNA Mitigation and Adaptation Report) 4 documents: reports and executive summary of each TAP: 1 TAP of the Water Resources sector 1 industry TAP Forestry and agriculture 1 industry TAP Energy and Transportation 1 TAP in the Waste Management sector 1 workshop report document (list of participants and photos), concept notes, and training materials and tools.</p>	<p>Frequency: At the end of the activity.</p> <p>Method: Prepare a research report, consultation and systematization and analysis of the information. Carry out a quality control process and submit for counterpart review and comment. Prepare slides to accompany the meeting and record any suggestions and comments that are considered.</p> <p>Frequency: At the end of each activity</p>	<p>The review of the CTCN will be considered to coordinate the presentation of the product to the client. The validation of the challenges are those contemplated in the Terms of Reference. The TAP will comply with the 11 sections (chapters) proposed in the Terms of Reference and will be gender sensitive.</p>
	<p>- Number of other information materials strengthened, revised or created</p>	<p>4 informative materials for product presentation (ppt)</p>		
	<p>b) Number of presentation meetings</p>	<p>4 presentation meetings held 4 meeting minutes, including the list of participants</p>		
<p>Activity 3.1: Validation of prioritized challenges</p>	<p>Working group meetings a) Total number of events organized by proponents and implementing partners b) Number of participants in events organized by proponents and implementing partners c) Number of other information materials strengthened, revised or created d) Number of communication materials, including press releases, newsletters, articles, presentations, social media posts, etc.</p>	<p><u>2 working group meetings (WG5)</u> 10 participants per working group meeting (5 participants per sector) 1 report on the results of the meeting of the 4 working groups 1 minute of the meeting for each working group including attendance list and a photo 1 communication material for working group meeting (ppt) 1 communication material (brochure) for the dissemination of the working group meeting</p>	<p>Method: Prior preparation of the presentation of the working group; the dynamics and activities are validated with the NDE. Verification of the participants in the attendance list (the NDE and the largest number of stakeholders from the sector groups must be present) and the materials used. The validation of the challenges are those contemplated in the Terms of Reference.</p>	<p>There is a minute's format which must be completed at the end of each meeting with its respective attendance sheet. The agenda of these meetings will be established according to the need, with the purpose of validating approaches, presenting and collecting feedback on progress, coordination, etc.</p>
	<p>Product presentation a) Number of deliverables produced</p>	<p>1 document with the challenge validation report and meeting report.</p>	<p>Method: Prepare research report, consultation and systematization and analysis of information. Carry out a quality control process and submit for counterpart review and comment.</p>	<p>The review of the CTCN will be considered to coordinate the presentation of the product to the client.</p>

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(A) Product and activities	Indicator	Expected result	Method and frequency for data collection	Comments
Activity 3.2: Evaluation, prioritization and validation of key technologies for compliance with the Chilean TNA	<p>Adaptation and mitigation technologies</p> <p>a) Total number of technologies by sector: (1) Water resources; (2) Forestry and agriculture; (3) Energy and Transportation; and (4) Waste Management.</p> <p>b) Numerical technology fact sheets</p>	<p><u>12 selected adaptation and mitigation technologies</u></p> <p>3 adaptation and mitigation technologies per sector (total: 12 technologies)</p> <p>10 technology fact sheets per sector (total: 40 fact sheets)</p>	<p>Frequency: At the end of the activity.</p> <p>Method: Development of a methodology for prioritization and validation of mitigation and adaptation technologies, through Multicriteria Analysis (MCA). It will be developed in a working group meeting, with the participation of the actors identified in each working group by sector (specialists).</p>	<p>The technology fact sheets will help in the process of selecting, prioritizing and validating technologies.</p>
	<p>Number of events related to R&D in climate technology</p> <p>Working group meetings</p> <p>a) Total number of events organized by proponents and implementing partners</p> <p>b) Number of participants in R&D&D events in climate technology</p> <p>c) Percentage of men and women</p> <p>d) Number of other information materials strengthened, revised or created</p> <p>e) Number of communication materials, including press releases, newsletters, articles, presentations, social media posts, etc.</p>	<p>1 working group meeting (WG6) with the four sectoral groups</p> <p>20 participants per sector (total: 80 participants) Approximately 50% women 50% men</p> <p>1 report on the results of the working group meeting</p> <p>1 minutes of the working group meeting including list of attendance by sector</p> <p>1 communication material for working group meeting (ppt)</p> <p>4 communication materials (flyer) for dissemination of working group meetings (1 per sector)</p>	<p>Method: Previous preparation of the presentation of the working group, dynamics and activities and its validation with the NDE. Verification of the participants in the attendance list (the NDE and the largest number of interested parties must be present) and the materials used. The meeting will have mini rooms that bring together the actors depending on their sector or subsector.</p>	<p>There is a minute's format which must be completed at the end of each meeting with its respective attendance sheet.</p> <p>The agenda of these meetings will be established according to the need, with the purpose of validating approaches, presenting and collecting feedback on progress, coordination, etc.</p>
	<p>Product presentation</p> <p>a) Number of deliverables produced</p>	<p>1 report with (a) technology fact sheets; set of criteria for the exercise of MCA; Workshop reports including full list of participants and photographic documentation; a TNA mitigation and adaptation report; (b) Information system for the prioritization and selection of technologies, inventory of selected technologies</p>	<p>Method: Prepare research report, consultation and systematization and analysis of information. Carry out a quality control process and submit for counterpart review and comment.</p> <p>Frequency: At the end of the activity.</p>	<p>The review of the CTCN will be considered to coordinate the presentation of the product to the client.</p>
Activity 3.3: Development of a Technological Action Plan by sector and/or subsector	<p>Bilateral meetings</p> <p>Total, number of meetings with stakeholders</p>	<p><u>Total: 10 bilateral meetings (BM2)</u></p> <p>10 participating actors (2 per sector)</p> <p>1 reference guide prepared</p> <p>1 meeting minute for bilateral meetings</p>	<p>Method: Record of minutes and attendance lists in all technical assistance meetings.</p> <p>Frequency: At the end of the activity.</p>	<p>At the end of each meeting, an attendance form will be filled out with each minute, with an image of the participants (virtual).</p>

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(A) Product and activities	Indicator	Expected result	Method and frequency for data collection	Comments
	<p>Technology Action Plan Total number of policies, strategies, plans, laws, agreements or regulations supported by assistance</p>	<p><u>4 Technology Action Plans (TAP)</u>, both related to adaptation and mitigation 1 TAP of the Water Resources sector 1 industry TAP Forestry and agriculture 1 industry TAP Energy and Transportation 1 TAP in the Waste Management sector</p>	<p>Method: The process for the development of this TAP should involve some interviews and consultations with key actors in the public, private and academic spheres (with a gender perspective); and will address various experts according to prioritized sectors and technologies.</p>	<p>The TAP will comply with the 11 paragraphs (chapters) proposed in the Terms of Reference. The TAP will be gender sensitive.</p>
	<p>Product presentation a) Number of deliverables produced</p>	<p>4 reports and executive summaries (1 for each Technological Action Plan) for each of the priority technologies in compliance with the TNA</p>	<p>Method: Prepare research report, consultation and systematization and analysis of information. Carry out a quality control process and submit for counterpart review and comment. Frequency: At the end of the activity.</p>	<p>The review of the CTCN will be considered to coordinate the presentation of the product to the client.</p>
<p>Activity 3.4: National consultation workshop to ensure national ownership and deployment of technology</p>	<p>Workshop meetings a) Total number of events organized by proponents and implementing partners b) Number of participants in events organized by proponents and implementing partners c) Percentage of men and women d) Number of other information materials strengthened, revised or created e) Number of communication materials, including press releases, newsletters, articles, presentations, social media posts, etc.</p>	<p><u>4 workshops held (one per sector) (Wsp 2)</u> 40 participants per workshop Approximately 50% women 50% men 10 regional financial sector participants 4 meeting minutes for each workshop including attendance list and photographs 4 communication materials for the workshop: slides (ppt) and others 4 communication materials (flyer) for the dissemination of each workshop</p>	<p>Method: Previous preparation of the presentation of the workshop, dynamics and activities and its validation with the NDE. Verification of the participants in the attendance list (the NDE and the largest number of interested parties must be present) and the materials used. Analysis of the questions formulated and answered, and of the activities carried out.</p>	<p>There is a minute's format which must be completed at the end of each meeting with its respective attendance sheet. A market space will be reserved for B2B type meetings during the workshop, to generate an early opportunity for business development, between stakeholders and international actors.</p>
	<p>Number of tools and technical documents strengthened, revised or developed</p>	<p>4 concept notes of project ideas (1 per sector)</p>	<p>Method: The preparation of conceptual notes on the most relevant topic of the TAP by sector will be developed.</p>	<p>The TAP concept note will be gender sensitive.</p>
	<p>Product presentation a) Number of deliverables produced</p>	<p>1workshop reports document (list of participants and photos), concept notes and training materials and tools.</p>	<p>Method: Prepare research report, consultation and systematization and analysis of information. Carry out a quality control process and submit for counterpart review and comment. Frequency: At the end of the activity.</p>	<p>The review of the CTCN will be considered to coordinate the presentation of the product to the client.</p>

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(A) Product and activities	Indicator	Expected result	Method and frequency for data collection	Comments
<p>Output 4: Support for the implementation of the Technological Action Plan with communications, orientation and training</p>	<p>Product presentation a) Number of deliverables produced in this product - Number of tools and technical documents reinforced, revised or developed - Number of other information materials strengthened, revised or created</p>	<p>Total: 2 deliverables 1 report with summaries of policies and market use cases for the selected technologies; dissemination strategy; training material and support 1 workshop report document including a full list of participants and photographic documentation</p>	<p>Method: Prepare research report, consultation and systematization and analysis of information. Carry out a quality control process and submit for counterpart review and comment. Prepare a ppt presentation and record any suggestions and comments considered.</p>	<p>The review of the CTCN will be considered to coordinate the presentation of the product to the client.</p>
	<p>b) Number of presentation meetings</p>	<p>2 informative materials for product presentation (ppt) 2 presentation meetings held 2 minutes of the meeting, including the list of participants.</p>	<p>Frequency: At the end of each activity</p>	
	<p>Training materials and dissemination strategy a) Both adaptation and mitigation b) Number of other information materials strengthened, revised or created c) Number of communication materials, including press releases, newsletters, articles, presentations, social media posts, etc.</p>	<p>4 policy briefs, one per sector 4 market uses, one per sector 4 communication materials for the workshop (ppt) for activity 4.2 1 communication material (flyer) for the dissemination of the workshop for activity 4.2 4 dissemination strategies aimed at the sectors</p>		
<p>Activity 4.1: Development of training materials and dissemination strategy</p>	<p>Progress meetings a) Number of TA progress meetings with NDE and CNCCMDL b) Number of other information materials strengthened, revised or created</p>	<p><u>Total: 1 progress meetings</u> 1 progress meeting with the NDE and CNCCMDL for stakeholder validation 1 informative material created: PowerPoint (1 per progress meeting) 1 minute of the meeting, including the list of participants.</p>	<p>Method: Communication of the agenda to the participants and preparation of the Ppt presentation for the meeting. Record of minutes and attendance lists in all technical assistance meetings. Frequency: Every two weeks, except when there is another type of meeting.</p>	<p>There is a minute's format which must be completed at the end of each meeting with its respective attendance sheet. The agenda of these meetings will be established according to the need, with the purpose of validating approaches, presenting and collecting feedback on progress, coordination, etc.</p>
	<p>Product presentation a) Number of deliverables produced</p>	<p>1 report with summaries of policies and market use cases for the selected technologies; dissemination strategy; training material and support</p>	<p>Method: Prepare research report, consultation and systematization and analysis of information. Carry out a quality control process and submit for counterpart review and comment. Frequency: At the end of the activity.</p>	<p>The review of the CTCN will be considered to coordinate the presentation of the product to the client.</p>

Product 1

Technology Needs Assessment (TNA) and Technology Action Plan (TAP) for the implementation of Chile's NDC

(A) Product and activities	Indicator	Expected result	Method and frequency for data collection	Comments
Activity 4.2: Development of TNA training workshops	<p>Workshop meetings</p> <p>a) Total number of events organized by proponents and implementing partners</p> <p>b) Number of participants in events organized by proponents and implementing partners</p> <p>- Percentage of men and women</p> <p>c) Number of other information materials strengthened, revised or created</p>	<p>1 training workshop for all sectors (Wsp3)</p> <p>80 participants (20 participants per sector)</p> <p>Approximately 50% women 50% men</p> <p>1 minute of meeting, including attendance list and photos</p>	<p>Method:</p> <p>Previous preparation of the presentation of the workshop, dynamics and activities and its validation with the NDE.</p> <p>Verification of the participants in the attendance list (the NDE and the largest number of interested parties must be present) and the materials used.</p> <p>Analysis of the questions formulated and answered, and of the activities carried out.</p>	<p>There is a minute's format which must be completed at the end of each meeting with its respective attendance sheet.</p> <p>The agenda of these meetings will be established according to the need, with the purpose of validating approaches, presenting and collecting feedback on progress, coordination, etc.</p>
	<p>Product presentation</p> <p>a) Number of deliverables produced</p>	<p>1 workshop report including a full list of participants, photographic documentation</p>	<p>Method:</p> <p>Prepare research report, consultation and systematization and analysis of information. Carry out a quality control process and submit for counterpart review and comment.</p> <p>Frequency:</p> <p>At the end of the activity.</p>	<p>The review of the CTCN will be considered to coordinate the presentation of the product to the client.</p>
	<p>Expected number of direct and indirect beneficiaries resulting from the TA.</p>	<p><u>80 direct beneficiaries</u></p> <p><u>150 indirect beneficiaries</u></p>	<p>Method:</p> <p>Direct beneficiaries are estimated from the number of stakeholders actively participating in workshops, surveys and/or bilateral meetings.</p> <p>While the indirect beneficiaries are estimated based on the number of actors initially mapped in Output 2.1 who will be able to access the information and resources generated by the technical assistance once it concludes, although not necessarily forming part of it during the consultation process.</p>	<p>The beneficiaries of the elaboration of the TAP, as well as the beneficiaries of the productive chain, both upstream and downstream of the interested parties involved, will be estimated during the consultancy with the list of participants of the surveys, interviews, workshops and working groups developed.</p>



Deliverable 1.3
(initial version)

**Technology Needs Assessment (TNA) and
Technology Action Plan (TAP) for Chile's
NDC implementation**

CTCN Impact
description

3. Description of the impact of the CTCN

This section describes the main impacts of the study, using the template provided by the CTCN.

Table 11. Impact Description

Impact Statement	
Challenge	To align Chile's development vision with its commitments under the NDC, it is necessary to address the main barriers the country faces in advancing the climate technologies needed to strengthen mitigation and adaptation measures. The main barrier is the lack of a clear and shared understanding of what the specific needs of each sector are. In addition, several prioritized challenges do not have identified technologies and there is a lack of experience, or lack of knowledge about who has the experience, to select the technologies that meet those needs.
CTCN Assistance	CTCN assistance will provide the following: Establishment of a TNA committee through consideration of key stakeholders. Evaluation, prioritization and validation of key technologies to comply with the Chilean TNA. Preparation of Technological Action Plan (TAP) by sector and/or subsector.
Anticipated impact	Increased resilience and adaptation capacity of the country through the identification of adaptation technologies to climate change in all sectors and subsectors. Improvement of the health of the population by guaranteeing access to drinking water and the management of organic waste. Contribute to improving the capacity of SMEs and their integration with the private sector in opportunities for participation.
Anticipated co – benefits from the TA	The following co-benefits are displayed: -Improvement of institutional processes, policies and regulations for the deployment of climate technologies. -Development of strong NAMAs, programs and technological projects. -Development of more detailed roadmaps or "technology-specific" action plans. - The opportunity to generate successful applications for the GCF and other public and private sector institutions that respond to national priorities in terms of technologies. - Compliance with technological commitments in its NDC.
Gender aspects of TA	The design of the TA defines the active participation of women in each phase and has been protected through the contribution of a gender expert. It is mandatory to ensure gender work balance in all activities such as technology analysis, stakeholders' selection and engagement and in workshops, with the consideration of specific social dynamics that impact participation and the willingness of address gender related issues within the TA, thus will be possible to enable the

Impact Statement	
	<p>identification, assessment and planning of gender-specific social, economic and cultural differences between women and men.</p>
Advance contribution to NDC	<p>The technical assistance will help Chile to have operational mechanisms and instruments for the analysis of needs and for the implementation of technological action plans in the targeted areas.</p> <p>It will also support the country in generating, focusing and linking tools to support technology development and transfer, both for local development and for the transfer of existing technologies at local and global levels in mitigation and adaptation for the various and/or different production sectors prioritized at national and regional levels by 2030.</p> <p>It will promote the generation of an inventory of Research Centers, R&D&I initiatives and projects related to mitigation and adaptation, and capacities to coordinate the Development and Transfer of Technology for climate change by 2022.</p> <p>It will start the implementation of the EDTTCC established in the NDC, including the establishment of its governance at the implementation level, it will also promote the generation of the Climate Technology Inventory System.</p>
the narrative story	<p>Since 2015, a TNA process is part of Chile's NDC and in 2018 the country took the first steps of this process, which resulted in the prioritization of three sectors: water resources; agriculture and forestry; and energy. In 2020, a fourth sector was included, the waste management sector, due to its growing importance in recent decades in the total national GHG mix.</p> <p>With the assistance of the CTCN, the country aims to complete the TNA process through the identification of technological solutions for the prioritized sectors, the development of a Technological Action Plan by challenge, sector and/or subsector and ensure national appropriation and technological deployment.</p> <p>The expected outcomes of this process include providing strategies for long-term participatory transformative action across all identified and prioritized sectors to drive low-carbon, climate-resilient growth and strengthen compliance with country contributions detailed in the “Implementation and operation of mechanisms and instruments for the analysis of needs and for the implementation of technological action plans in specific areas.” of the country’s NDC.</p>
Contribution to the SDGs	<p>SDG 2: Improvement of agricultural practices through the use of technologies for adaptation and mitigation.</p>

Impact Statement	
	<p>SDG 5: It empowers women by ensuring gender balance in the workshops and in the decision-making process, regarding the selected technology and the implementation of plans.</p> <p>SDG 6: It guarantees access to drinking water, both water subsectors are related to drinking water.</p> <p>SDG 7: Through the TNA-TAP process, technologies will be identified for a climate-resilient electricity grid and to provide comprehensive solutions for the use of self-consumption energy.</p> <p>SDG 9: Innovation is promoted through the use of technologies for adaptation and mitigation; construction of resilient infrastructure related to the energy-transportation sector.</p> <p>SDG 12: It guarantees the use of sustainable technologies for mitigation and adaptation.</p> <p>SDG 13.1: Through the TNA-TAP process, climate change adaptation technologies will be identified in various sectors and sub-sectors that will increase Chile's resilience and adaptive capacity.</p> <p>SDG 13.a: The TNA-TAP process will result in a set of priority mitigation and adaptation technologies that include financing opportunities through the public and private sectors (ex, GCF).</p>
Reference to knowledge products	<p>The following documents are expected to be used:</p> <ul style="list-style-type: none"> -Innovative Approaches to Accelerate and Scale Up Implementation of Climate Technologies for Mitigation and Adaptation¹ -Capacity development in climate technologies: understanding of gaps, needs, challenges and enabling measures to promote endogenous capacities and technologies² - White paper on emerging climate technologies in the energy supply sector³ - TEC Brief #14 - Innovative Approaches to Accelerate and Scale Up Implementation of Mature Climate Technologies⁴ -TEC Brief #13: Improving Implementation of Technology Needs Assessment Results⁵ - TNA Step by Step⁶

1 <https://unfccc.int/tclear/tec/innovativeapproaches>

2 <https://unfccc.int/tclear/endogenous/index.html>

3 <https://unfccc.int/tclear/tec/energysupplysector.html>

4 <https://unfccc.int/tclear/tec/brief14.html>

5 <https://unfccc.int/tclear/tec/brief13.html>

6 <https://tech-action.unepdtu.org/tna-methodology/> (for download)

Impact Statement	
	<ul style="list-style-type: none">- Guide for a Technology Needs Assessment with a gender perspective⁶- Improving the implementation of the Technology Needs Assessment – Guide for the preparation of a Technology Action Plan⁶- Identification and engagement of stakeholders in the TNA⁶ process- Identifying and prioritizing technologies for adaptation⁶- Identifying and prioritizing technologies for mitigation⁶- Evaluating measures for the inclusion of a Technological Action Plan⁶- Indigenous communities and climate technologies⁶- Technologies for adaptation to climate change – Water Sector⁶- Technologies for adaptation to climate change - Agriculture Sector⁶- Technologies for adaptation to climate change - Transport Sector⁶



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