Software Requirement Specification & Design Document

Development of Mauritius NDC Registry Platform

UNEP DTU, Ministry of Environment, Solid Waste Management and Climate Change (MoESWMCC)

14 December 2021

Strictly private and confidential

Contents

Disclaimer

This document is prepared solely for UNEP DTU, Ministry of Environment, Solid Waste Management and Climate Change (MoESWMCC) and Government of Mauritius (GoM) ("herein referred to as Client") whom it is addressed.

Notwithstanding the above, in the event that the Client forms the view that it requires to communicate this document to a Court of Law in connection with any proceedings by or against PricewaterhouseCoopers Ltd ("PwC"), the Client shall be entitled to disclose same after having informed PricewaterhouseCoopers Ltd ("PwC") accordingly.

Subject to the above, our document should not be relied upon for any other purpose or by any other party. PwC will not accept any responsibility or liability to third parties to whom our document may be shown or into whose hands it may come. Consequently, you should not make our document available to any third party unless we specifically agreed with you and that third party the basis on which our document may be made available.

Document Purpose

This document sets out the software requirement specifications and system design description to design and build the Mauritius NDC Registry platform. It includes the conceptual model, key stakeholders, channels for interaction, To-Be user journeys and the detailed functional and non-functional requirement specifications with mock-up screens to illustrate how the requirements have been addressed.

Intended Audience

This document has been addressed to the following stakeholders:

- UNEP DTU Partnership
- Ministry of Environment, Solid Waste Management and Climate Change (MoESWMCC).

Document Release Note

Final Version

Authors/Reviewers	Title	Project Role	Organisation
Vikas Sharma	Partner	Engagement Leader	PwC
Justin Goodwin	Director	Functional Lead	Aether
Jaya Sreekeessoon	Senior Manager	Project Manager	PwC
Laurence Opie	Senior Consultant	MRV Expert	Aether
Ashfaq Balooram	Senior Consultant	Team Member	PwC
Tekanand Roopnarain	Consultant	Team Member	PwC

Reviewers	Review Comments	Date Comments Received
UNEP DTU MoESWMCC	Comment tracker shared by MoESWMCC	21 October 2021
UNEP DTU MoESWMCC, CIB, GOC	Comments shared by MoESWMCC	13 December 2021

Revision History

Release	Issue Date	Change Details	Reviewed by
Version 1.0	04 October 2021	First release	PwC
Version 2.0	25 October 2021	Second release including comments and system design description	PwC
Version 3.0	14 December 2021	Final version ncluding comments.	PwC

1. Introduction

1.1 Project Background and Objective

As signatory of the COP 21 agreement, Mauritius is required to monitor and report on the NDCs implementation progress and achievement based on established targets and objectives for national climate change mitigation and adaptation. As such, Ministry of Environment, Solid Waste Management and Climate Change (MoESWMCC) in collaboration with UNEP DTU seeks to establish Mauritius' NDC Registry Platform. This initiative is in line with the NDC 2020 revision exercise which was submitted to United Nations Framework Convention on Climate Change (UNFCCC) on 05 October 2021.

The NDC Registry will enable MoESWMCC to monitor and report on the implementation and achievement of the NDCs, including both mitigation and adaptation policies and measures, actions plans and Indicators. It also includes cross-cutting policies and measures from economic diversification plans with co-benefits for other areas of society such as resilience or health sector.

Key objectives of Mauritius NDC Registry Platform are:

- Improve engagement of stakeholders by providing a one stop platform for data input, view past submissions, assigned tasks and update implementation status.
- Provide evidence based and support transparent data management across the registry.
- Facilitate the setting up of an MRV framework by allowing stakeholders to report progress on Indicators and ultimately on NDCs targets and pave the way for verification of the information reported.
- Provide a flexible common focal point for collating and analysing data by relevant organisational collaborations.
- Track and report on cross cutting mitigation and adaptation policies and actions.
- Report on overall NDC progress versus the targets.
- Proactive decision making based on the output; and
- Consolidate institutional memory and transparency around domestic legal and institutional organisational structures, systems and capacities.

Project Outcome

The Mauritius NDC Registry will provide a central repository to track and monitor NDC progress and achievements by:

1. Providing an accessible, centralised, and transparent NDC tracking tool.
2. Engaging stakeholders for rapid implementation of climate action through real time notifications and workflows; and
3. Laying the building blocks for a comprehensive MRV system.

1.2 Design Principles

To achieve above set objectives, the NDC Registry Platform has been conceptualised based on the **5 core design principles** below:

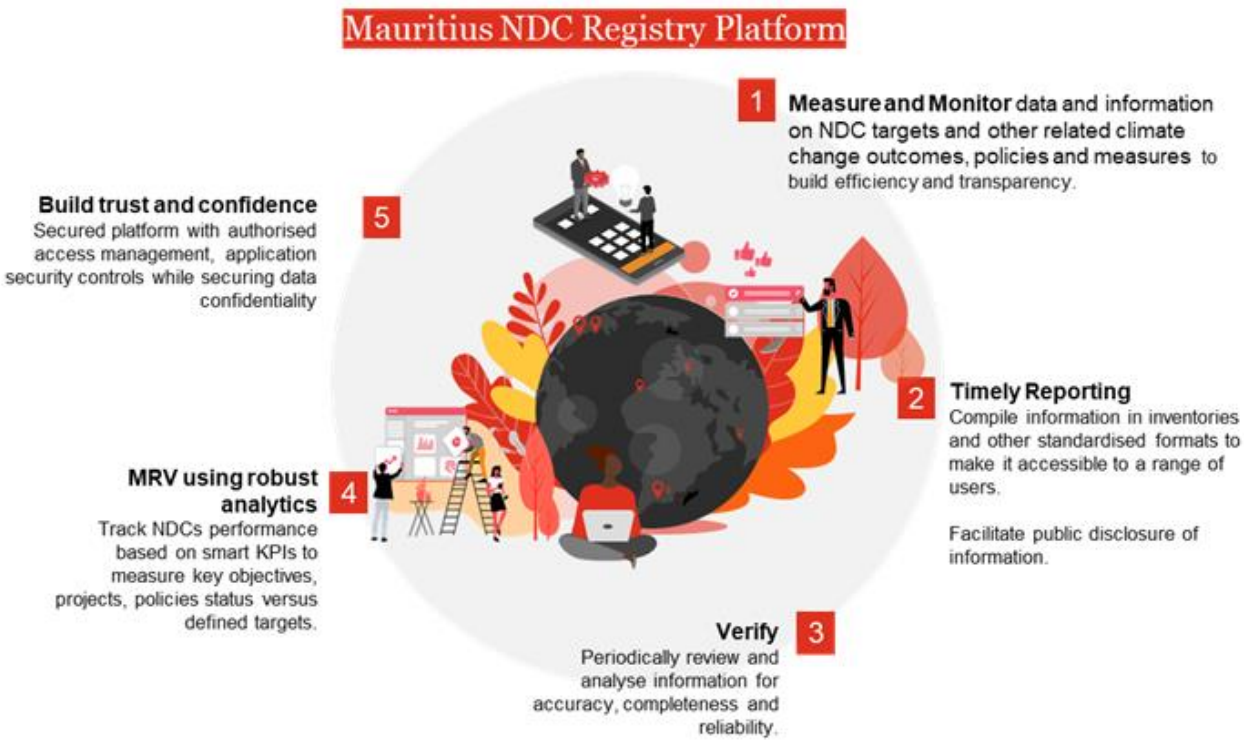


Figure 1: Design Principles for Mauritius NDC Registry Platform

The Mauritius NDC Registry Platform will embed the following design principles to achieve intended project goals and objectives.

01 **Measure and Monitor**
Collaborative platform to enhance stakeholders contribution towards achieving NDC objectives.

02 **Timely Reporting**
MESWMCC is able to track and report on data/information and perform timely reporting on NDCs Targets.

03 **Verify**
Independent verifiers as well as other key stakeholders must be able to perform Quality Control and Quality Assurance on data/information in the Registry.

04 **MRV Using Robust Analytics**
The Registry must lay the building blocks to a comprehensive MRV system backed by analytics towards quantitative and qualitative metrics.

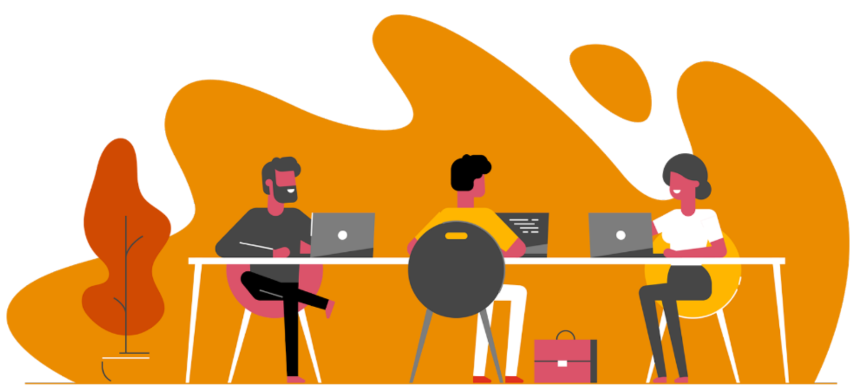
05 **Build Trust and Confidence**
System must be robust, secured and ensure data confidentiality & privacy.

1.3 Approach to Execution

This document is based on our understanding and information captured during meetings, document reviews and feedback from MoESWMCC and UNEP DTU.

Key activities include:

- **Conduct 10+ meetings and calls**
  Meetings were conducted with the ministry to deep dive into their current context, current processes and procedures and requirements. Different perspectives in approaching the system requirement and design were also shared with MoESWMCC.
  Refer to Appendix A for meetings conducted.
- **Onboard IT Team (GOC, CISD, CIB, ITSU)**
  IT Team was engaged to provide insights on existing systems used by government entities. The NDC Registry system requirement was also discussed in terms on the hardware/infrastructure, security and hardening of operating systems.
- **Stock-take on relevant projects** (NAMA Project, Climate Promise, Update of NDCs)
  Consultants working on other related projects were consulted to obtain their input to the NDC Registry such as AETS Cibola Partners and ELIA.
- **Perform Document reviews**
  Analysis of document shared to understand the terminologies, stakeholders, reporting among others.
- **Leverage on Subject Matter Expertise**
  Conceptualisation of the NDC Registry based on the team expertise in developing MRV frameworks as well as software development.
- **Demos**
  Presentation of existing MRV systems to provide a high-level overview of the key features, workflows and data visualisation to the Ministry.



1.4 High Level Conceptual Design of Mauritius NDC Registry

The diagram below illustrates the conceptual design of the Mauritius NDC Registry and includes the various stakeholder's interaction, channels, data structure and infrastructure required for the implementation.

S.No	Component	Description
A	**Stakeholders**	Stakeholders are groups of persons who will **be interacting with the system directly and indirectly.** These consist of users of the system, system administrators, hosting entity, first level of support etc.
B	**Channels**	Channels used for interaction for all system uses and for sharing content generated by the system such as **Portal and Mobile devices**.
C	**Presentation and Application layer**	Building blocks of the system made up of **modules and functionalities**. These will define the requirements and ultimately the blueprint of the system
D	**Data Layer**	Data Layer represents the **data tables and information** which will make up the system. As and when users interact with the system, these tables will be populated or will guide what the user sees on the system.
E	**Infrastructure and Security Layer**	This layer represents components which will facilitate running the system including devices on which the system is supported, **hardware to host the system and network** to enable data communication.
F	**Support Layer**	Enabling environment which will support usage of the system such as **regulations, acts, policies and support framework** among others.

Table 1: Core elements of the Mauritius NDC Registry

Refer to next page for high level design of Mauritius NDC Registry.

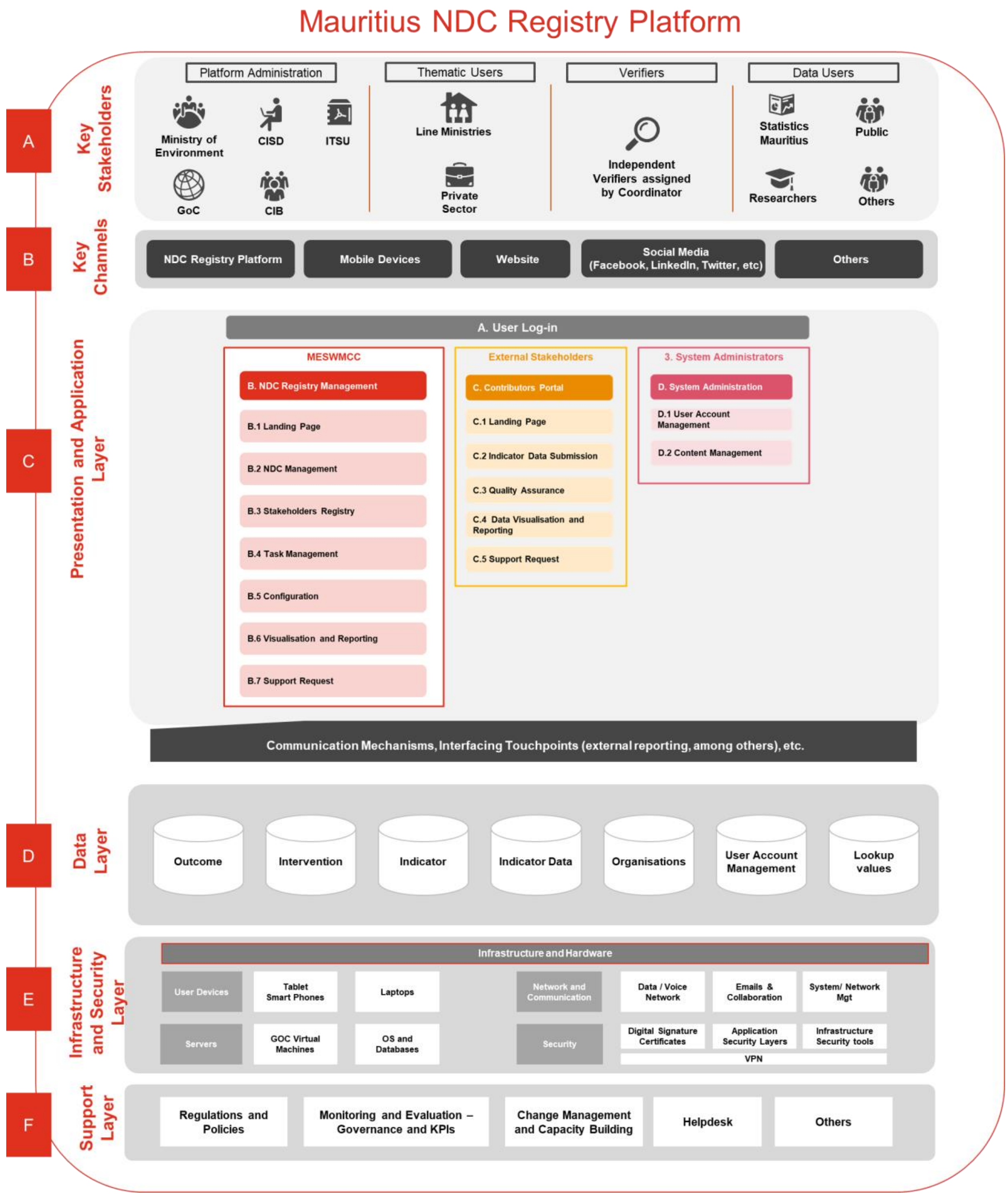


Figure 2:Conceptual Model of Mauritius NDC Platform

A. Key Stakeholders

The NDC Registry Platform is primarily designed for technical expert users to manage and maintain data/information on national climate change targets, Interventions and Indicators. As such, the main users of the platform are as follows:

S.No	Role	Description	Stakeholder Type	Key Responsibility	System interaction
1	**System Administrators**	Technical resources with system admin knowledge. (CISD Representative at MoESWMCC)	Internal	• Make sure platform runs smoothly. • Provide technical assistance. • Create users on the system. • Provide onsite full time support to MoESWMCC Coordinators.	• System Configuration • User Access Management • Content Management • Super User Access • Support
2	**Coordinators**	Staff within the climate change department.	Internal	• Maintain NDC Registry and generate reports. • Ensure data submitted is complete and accurate. • Create users on the system.	• Manage NDCs Registry • Allocate Indicators • Conduct QA on data • Generate reports • Update lookup vocabularies
3	**Thematic Owners***	Focal points in charge of different thematic/technical working groups.	External	• Take ownership of TWG and make sure accurate data is submitted on time. • Conduct quality control on data submitted.	• View Thematic User Groups* • View tasks allocated/status • Update QA/QC Status
4	**Thematic Contributors***	Focal Point Users having technical and thematic knowledge of climate actions and Indicators.	External	• Responsible for managing and updating the NDC Registry Platform based on Indicators allocated.	• Submit data on platform • View visualisations
5	**Verifiers**	Independent users with knowledge of NDC reporting.	External	• Conduct Quality Assurance on data submitted on system.	• View data submitted on platform • Update QA/QC Status

Table 2: Key Stakeholders

***Thematic Owner and Contributor will be organised into Thematic Working Groups (TWGs).**

- The TWGs will be organised by sector and will be used to group thematic experts and content to facilitate the role of the thematic owner in reviewing all sectoral content supplied to the Platform.
- Thematic contributors may belong to multiple TWGs. Each of the thematic working groups is likely to be made up of 2-20 contributors from one or more organizations working together on climate related data from a wide range of different structured (excel sheets and databases) and unstructured (reports) sources.
- Each thematic working group will have a thematic owner who may be responsible for one or more areas. Thematic owners will be able to move, edit contents on the NDC Registry.
- System will allow users to define roles (Thematic Owners and Thematic Coordinator) and assign each user role to a TWG. One user can be a Thematic Owner in a TWG and Thematic Contributor in another TWG. User cannot have both roles in the same TWG.
- Each TWG will only have access to view and submit data assigned to this TWG.

A list of the TWGs is provided in the table below.

Thematic Working Group	Stakeholders	Approx. number of users
Statistics	Environment Statistics Unit and Statistics Mauritius	5
Energy Sector	Ministry of Energy and Public Utilities Central Electricity Board Mauritius Renewable Energy Agency Energy Efficiency Management Office Utility Regulatory Authority	5
Transport Sector	Ministry of Land Transport and Light Rail National Land Transport Authority Traffic Management and Road Safety Unit Metro Express Limited Mauritius Ports Authority Civil Aviation Airports of Mauritius Co. Ltd Air Mauritius	7
Agriculture and Forestry Sector	Ministry of Agro Industry and Food Security (Agricultural Services) Forestry Services FAREI (Crop) FAREI (Livestock) Mauritius Cane Industry Authority Irrigation Authority	6
Waste Sector	Wastewater Management Authority Solid Waste Management Division Ministry of Energy and Public Utilities	3
Industry Sector	Ministry of Industrial Development, SMEs, and Cooperatives (Industrial Development Division) National Ozone Unit (MoESWMCC)	3

Thematic Working Group	Stakeholders	Approx. number of users
Infrastructure Sector	Ministry of National Infrastructure and Community Development (National Infrastructure Division) Ministry of National Infrastructure and Community Development (Architect Division) Land Drainage Authority Road Development Authority Mauritius Ports Authority National Development Unit	6
Disaster Risk Reduction Sector	Ministry of Local Government, Disaster and Risk Management (Local Government Division) National Disaster Risk Reduction and Management Centre	2
Coastal Zone Management Sector	ICZM Division (MoESWMCC) Ministry of Tourism	2
Water Sector	Ministry of Energy and Public Utility Water Resources Unit Central Water Authority	3
Biodiversity Sector	National Parks and Conservation Service Ministry of Blue Economy, Marine Resources, Fisheries and Shipping Mauritius Oceanography Institute Mauritius Wildlife Foundation	4
Fisheries/Blue Economy Sector	Ministry of Blue Economy, Marine Resources, Fisheries and Shipping Albion Fisheries Research Centre (AFRC)	2
Health Sector	Ministry of Health and Wellness	1
Other contributors (Alternate Users)	To be defined by MoESWMCC	10

Table 3: Thematic Working Group and Stakeholders

The system will also require support from different IT teams as per table below.

S. No.	Stakeholder	Description
1	**Government Online Centre (GoC)**	Responsible for hosting the NDC Registry platform and manage hardware and infrastructure requirements including backups and recovery.
2	**Central Information Systems Division (CISD)**	Responsible for assisting MoESWMCC with technical administration of the platform including configuration of master data (such as sectors) and provide first level of support to end users.
3	**Central Informatics Bureau (CIB)**	Acts as project manager on behalf of MoESWMCC. CIB will oversee implementation of the platform as well as any future enhancement and provide strategic direction.
4	**IT Security Unit (ITSU)**	Responsible for managing the cyber security aspect of the system.

Table 4: List of IT Stakeholders

B. Channels

The channels identified for interacting with NDC Registry are as follows:

S. No.	Channel	Description
1	**NDC Registry Platform**	The platform will be used by stakeholders to **Measure, Report and Verify** progress on NDCs. • MoESWMCC will be the owner of the platform and will manage contents and users. • Stakeholders will access the platform to capture data and information through forms or data upload. • Independent verifiers can access data submitted to conduct Quality Assurance.
2	**Mobile Devices**	The platform will be accessible through mobile devices using IOS and Android environment.
3	**Website**	The website of MoESWMCC will contain a link which will redirect to the NDC Registry Platform as well as to specific contents of the platform.
4	**Social Media**	MoESWMCC manages social media accounts will promote the platform and share reports and visualisations.

Table 5: Channels for interaction with NDC Registry

C. Presentation and Application Layer

The NDC Registry Platform will be used to collect, store and manage information on national mitigation and adaptation climate change **outcomes**, i.e., targets and objectives such as the NDC targets, high level national **Indicators** to track progress against those targets, associated **Interventions** (tangible policies, measures, actions and projects) that will have an impact on national climate change outcomes, and **Indicators** that monitor the progress of those individual Interventions.

The NDC Registry Platform will facilitate the expert compilation and calculation required to extrapolate data for the high-level national Indicators from Intervention level Indicators. This logic is represented in the diagram below.

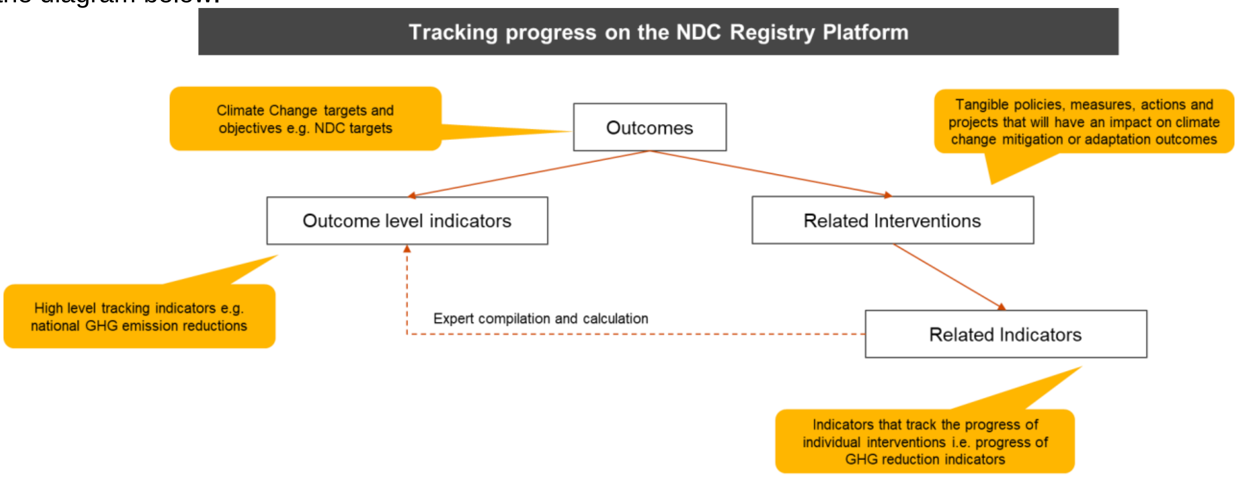


Figure 3: Tracking Progress on the NDC Registry Platform

To enable effective progress tracking as described above, the NDC Registry Platform uses **five main conceptual entities** to structure and store data. The data in these entities are linked and are supported by a series of lookup tables that provide the common vocabularies to classify, categorise and organise the data. Detail on each entity is provided below.

1. Outcomes

Outcomes are used to **manage the targets and objectives in the NDC** and other key policy documents (such as the NAP, National Climate Change Mitigation Strategy and Action Plan or sectoral strategies). These qualitative and quantitative targets and objectives are classified with relevant sectors, geography, stakeholders etc. and will be linked to relevant Indicators for the targets, and the contributing Interventions.

2. Interventions

Activities to address climate change (including reducing GHGs in the atmosphere and building resilience to the effects of climate change). This includes policies, action and projects, including, but not limited to, those listed in the NDC. The Interventions table will provide a central repository for managing and tracking national climate actions and projects that are supporting Mauritius' efforts to achieve its climate change targets and outcomes.

Hierarchy or labelling will enable organisation of contents, e.g., Policy > Strategy > Action > Project.

Interventions are not aspirational, they are **tangible policies, measures, actions and projects** that will have an impact on either climate change mitigation or adaptation outcomes. Focal points and verifiers can be assigned to policies, actions and projects by linking to the Organisation entity. Interventions will link to relevant Indicators and outcomes (e.g., NDC targets) to support tracking.

3. Indicators

Indicators will be used to provide information to track progress with outcomes and Interventions. Indicators can include **measured/monitored data** (e.g., climate information, estimated data, GHG emissions and emission factors, national statistics and/or information on progress and ambition around specific Interventions or groups of Interventions). Most Indicators will be focused on tracking progress and highlighting ambition around NDC targets and sub-components of the NDC efforts. It will be linked to Interventions to track progress of specific actions against linked outcomes. The Indicator entity will enable management of **quantitative target data** (as ex-ante estimates), and progress tracking data (as ex-poste data).

4. Organisation

Organisations are institutions responsible in the NDC progress such as NDC management, reporting, measurement and verification. Users will be created under the organisation hierarchy. It Includes above user classes (Refer to Section 1.4, 0 A. Key Stakeholders), focal points and verifiers as well as stakeholders who monitor and implement Interventions/action. The NDC Registry Platform will host a data table to contain organisation information and to elaborate on specific MRV/transparency implementation of roles and responsibilities.

D. Data Layer

The Data layer will comprise of the 5 core data structures as depicted in the diagram below.

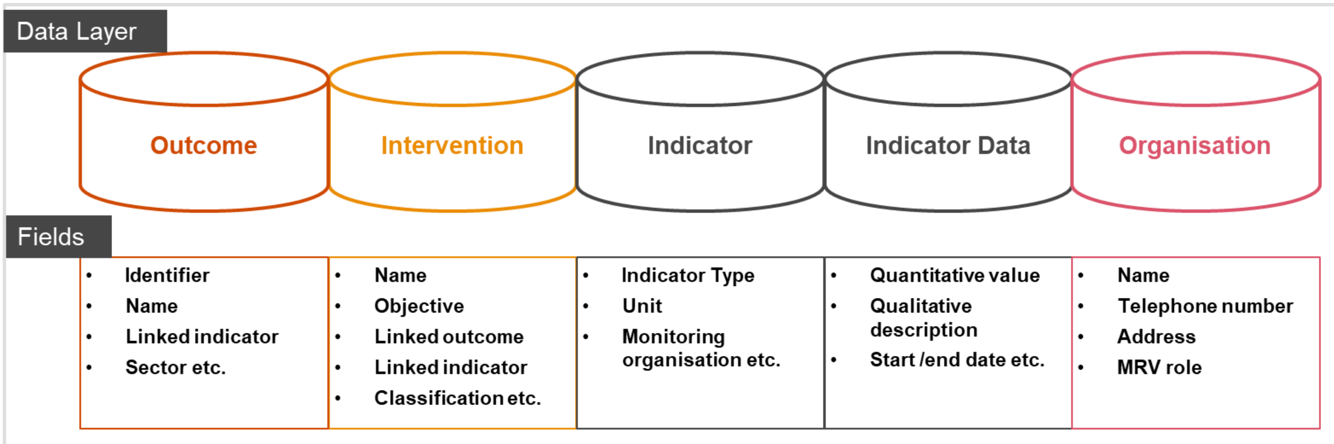


Figure 4: Data Layer Diagram

The diagram below illustrates a sample data flow in the NDC Registry Platform.

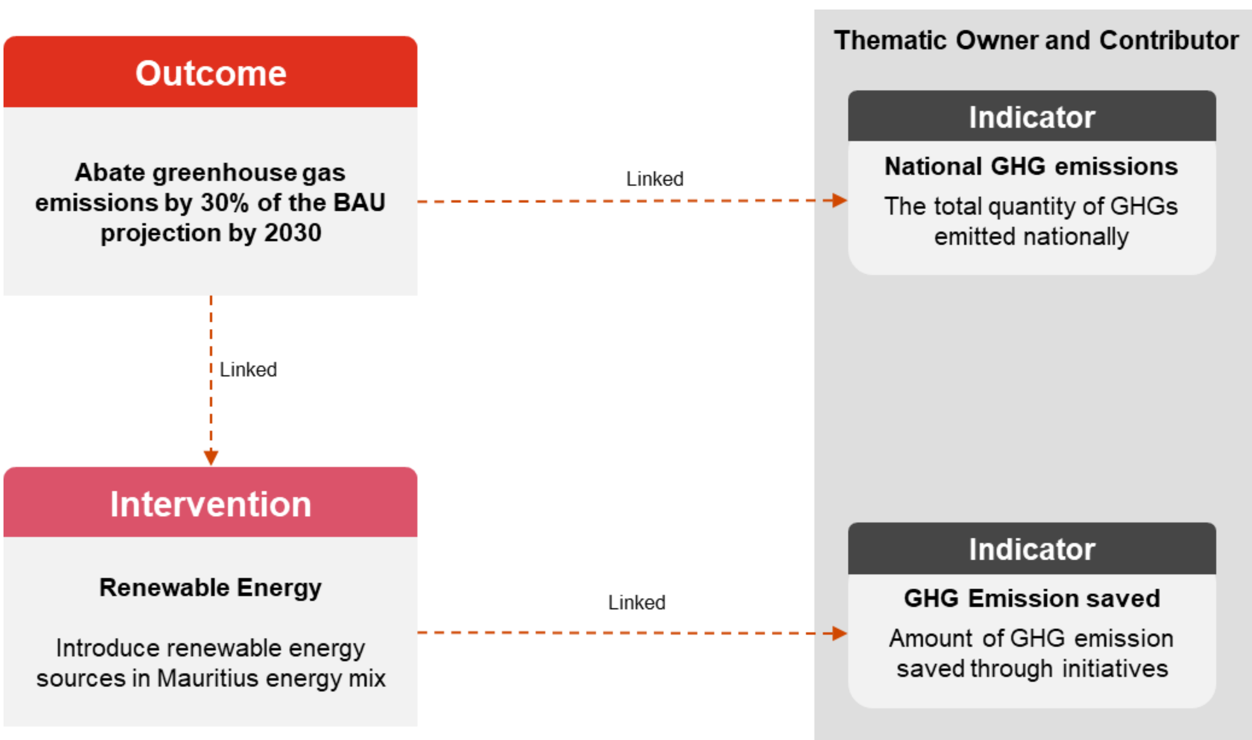


Figure 5: Sample Data Flow

E. Infrastructure

The proposed infrastructure is three-tiered with the following components:

1. Web Tier
2. App tier
3. Database Tier

All connections to the platform will be secured over HTTPS using TLS 1.2. The application infrastructure overview can be seen below:

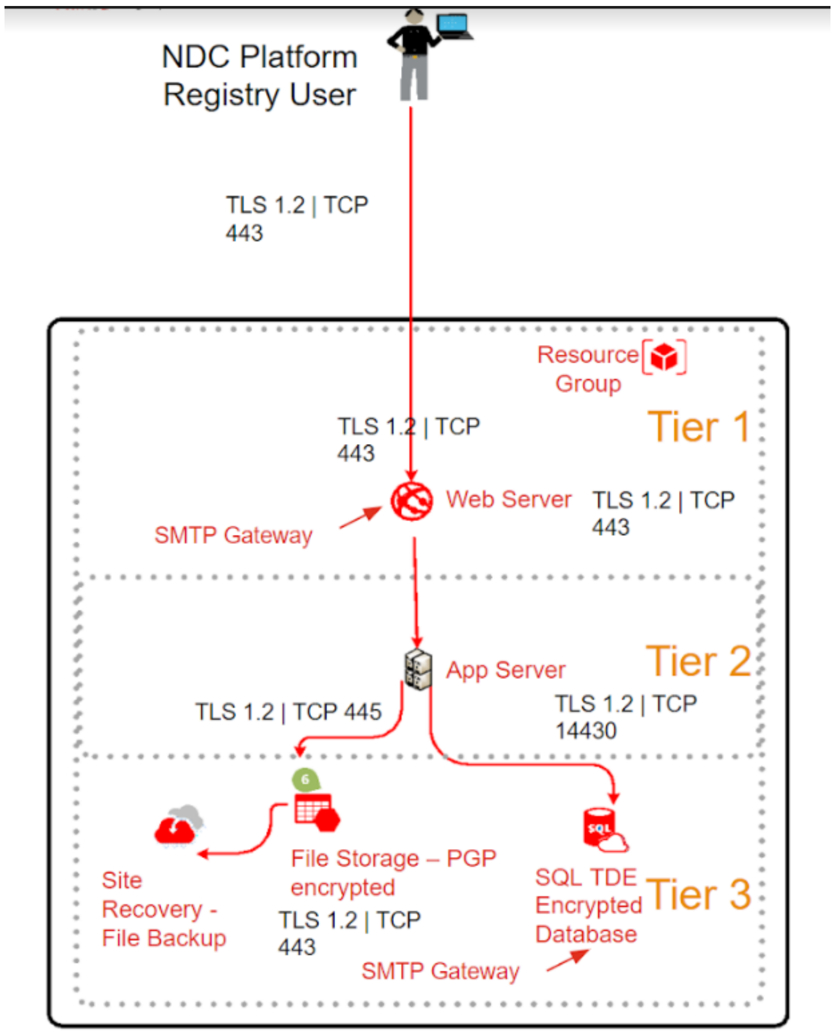


Figure 6: Application Infrastructure Overview

Infrastructure Requirements

Environment	VM	Processor	RAM	Hard Disk	Software
Production	Web Server	8 vCPU	28 GB	500 GB	• Microsoft Windows Server 2019 or later • Internet Information Services (IIS)
	Application Server	8 vCPU	28 GB	500 GB	
	Database Server	8 vCPU	28 GB	500 GB	• Microsoft Windows Server 2019 or later • Microsoft SQL Server 2019 • SQL Server Reporting Services
Test	Web Server	8 vCPU	16 GB	200 GB	• Internet Information Services (IIS)
	Application Server	8 vCPU	16 GB	200 GB	• Microsoft Windows Server 2019 or later • Internet Information Services (IIS)
	Database Server	8 vCPU	16 GB	200 GB	• Microsoft Windows Server 2019 or later • Microsoft SQL Server 2019 • SQL Server Reporting Services

Table 6: Infrastructure Requirement

Operating Environment

The platform shall be compatible with standard browsers - such as Edge, Firefox, Safari, Opera, and Chrome – operating on desktop and tablet devices. That is, it shall operate in Windows, Mac, Linux, Chrome OS, iOS and Android environments.

Security Layer

- All files uploaded on the system will be scanned for malware.
- Passwords will need to meet the following minimum requirements:
    - Be a minimum of eight (8) characters in length.
    - Have three of the following: upper case, lower case, numbers or symbols.
    - Be changed every ninety (90) days and when there is any indication of a system or password compromise.
    - Have a restricted historical password reuse within ten (10) generations.
- All user inputs to be validated and processed which includes filtering of meta characters to detect and block potential SQL Injection and Cross-Site Scripting (XSS) attacks.
- The system will have an audit log which will track key user activities.
- Hardening of the various infrastructure components (OS, database, web server) - TDE for SQL Server.
- System will abide with GOC security policy.
- Implementation of measures will be applicable from the OWASP guides for web application.

- Users' accounts will be locked after a predefined number of failed logs in attempts.
- Passwords are configured to expire after a predefined number of days.
- Access to application is locked after an agreed idle time.

Audit logs

The audit log module will be accessible to authorised users only, who should be able to search and print audit trail information.

- Audit trail data will be stored securely and not be editable.
- Archiving of audit trails data and logs will be available in the system. Logs are isolated from their source system.
- Logs must use a date and time stamp from a system clock that is synchronized to a trusted source.
- The date and time stamp must include time zone information
- Operational teams must verify time synchronisation on Network Time Protocol (NTP) servers/devices at a minimum of every 90 days using a documented review process and procedures or follow their internal policies.
- Privileged users must not have access to delete or modify logs.
- Privileged activities must also be logged.
- The provider must have a defined policy for log retention, archiving and a log review process.

F. Support Layer

Support layer refers to the enabling environment to support functioning of the NDC Registry:

1. **Regulations and Policies**
   These are legally set mandates and procedures for all stakeholders who will be involved with the NDC Registry. It sets out the duties and responsibilities of each stakeholder for e.g., Climate Change Act.

2. **Monitoring and Evaluation – Governance and Key Performance Indicators (KPI)**
   KPIs will be set to evaluate performance and progress of stakeholders.

3. **Change Management and Capacity building**
   Initiatives to support implementation of the system and transition to new ways of working**.** Training will be provided to Coordinators.

4. **Helpdesk**
   Helpdesk will provide first level support to assist users with system related issues or queries.

1.5 To Be User Journeys

This section sets out the journey for different users on the NDC Platform, Thematic User Journey and MoESWMCC User Journey.

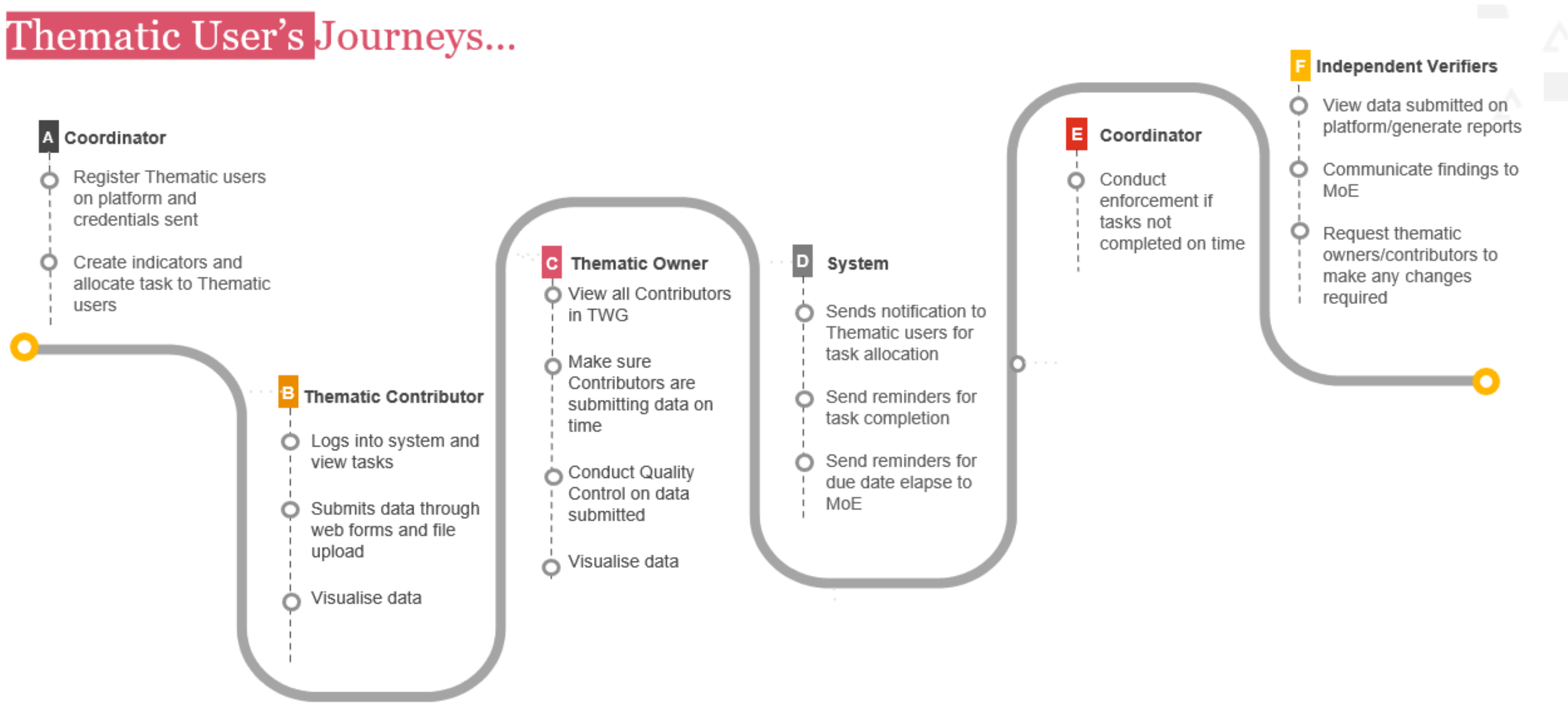


Figure 7: Thematic User's Journey Diagram

MESWMCC User's Journeys…

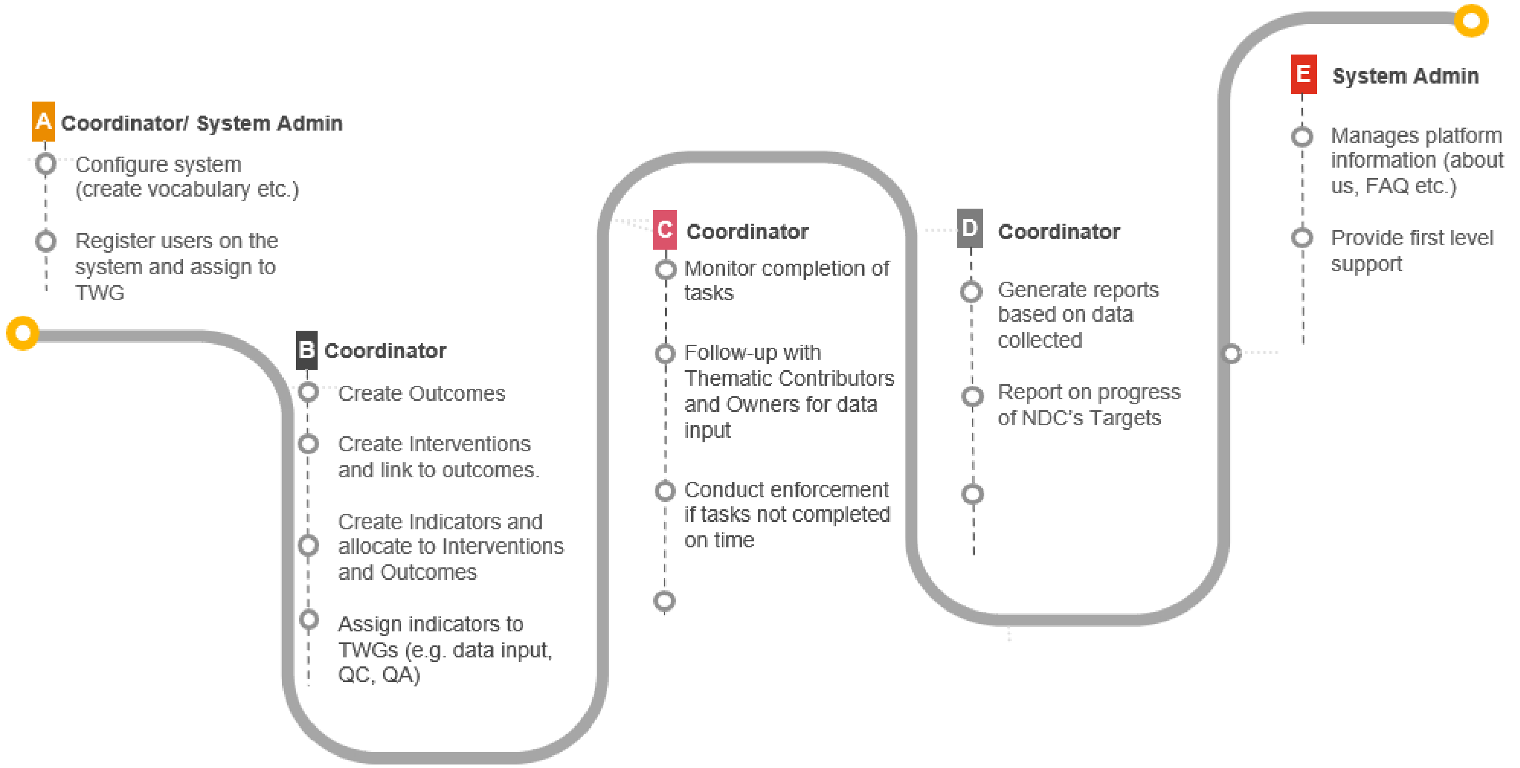


Figure 8: MESWMCC User's Journey Diagram

1.6 Critical Success Factors

Key critical success factor to achieve the intended project objectives are as follows:

- **Trained users to manage and operate on the platform**
    - Stakeholders have been introduced to the platform, and there is enough information on the platform for new users to understand its purpose and objectives.
    - Users have received training and understand how to perform the core functionality e.g., Navigating and data input, editing existing data, producing outputs and exports from the platform.
    - The platform is user friendly, with training material available, so that future users of the platform can easily navigate through.

- **Defined roles and responsibilities**
    - Dedicated coordinators have been identified and resourced, with a plan for long term support.
    - Focal points identified for data input on a timely basis.
    - Frequency, regularity and format of data supply defined and agreed with relevant stakeholders.
    - Well defined roles for QA/QC and verification, clear tasks and engagement outlined for thematic owners and Coordinators.
    - Stakeholders understand their role and interaction touchpoint on the NDC Registry Platform.

- **Defined mandates and policies**
    - Users are mandated to submit data on the platform as per defined frequency.
    - Collaboration on behalf of thematic users must be enforceable, especially in case of non-compliance
    - Data submitted by contributors are accurate and verified.

- **Access to Support**
    - Users must have access to technical support from Coordinators and from CISD, contact details must be communicated to stakeholders.

2. Software Requirement Specification and Design Description

This section of the document details the functional requirement of the NDC Registry platform, which comprises of four (4) core components as follows:

A. **Login Page** – All users will have to provide a valid credentials to access the system.
B. **NDC Registry Management** – For management of NDCs, Interventions, Indicators etc by MoESWMCC.
C. **Contributors Portal** – External access to registered stakeholders for data contribution.
D. **System Administration** – System Administration such as user access management, configuration etc.

The diagram below illustrates the conceptual design of the NDC Registry Platform.

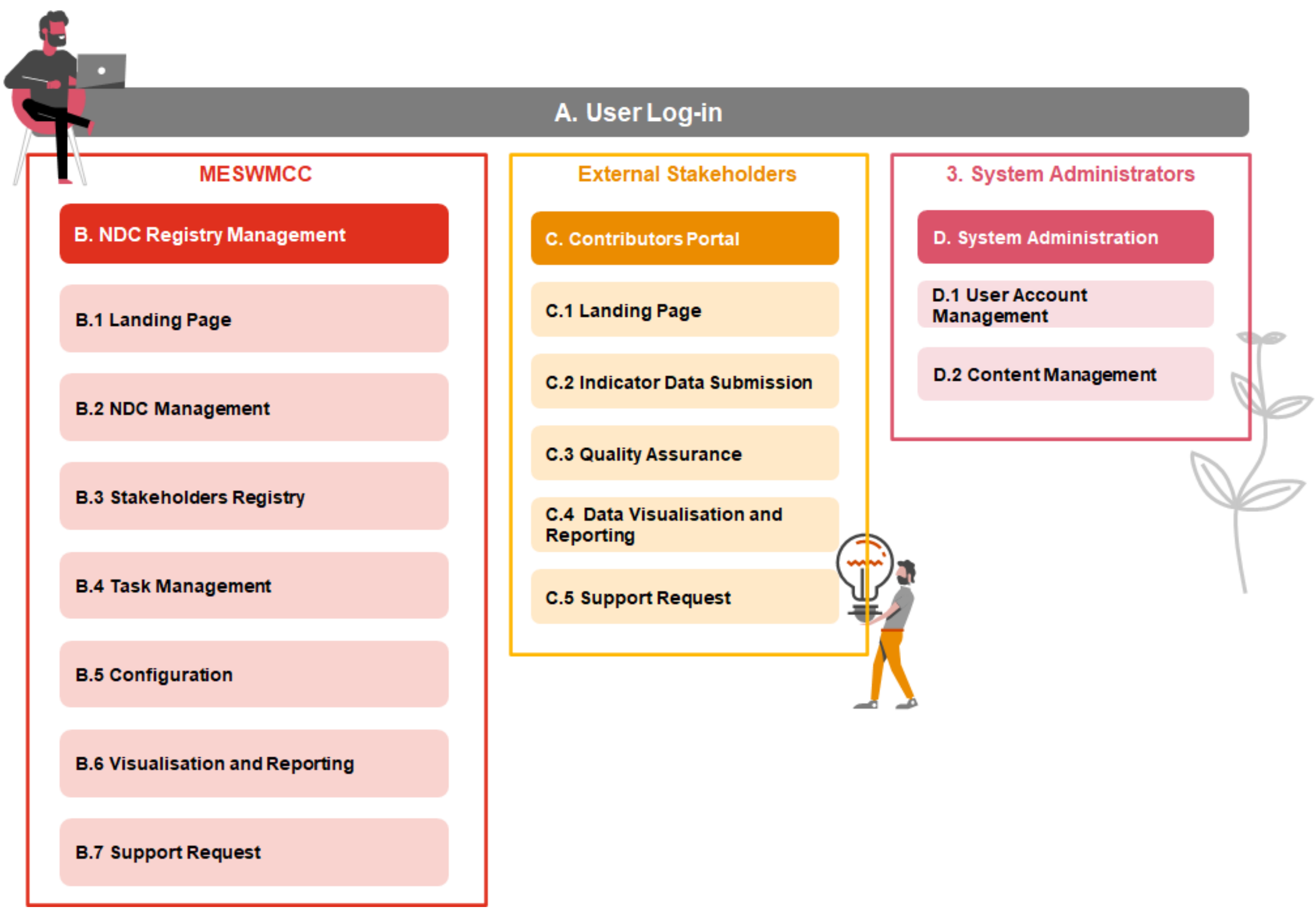


Figure 9: Conceptual Design of the NDC Registry Platform

A. User Log-in

The screen below will allow the users (both internal and external users) to log into the platform

Screen 1: Login Page

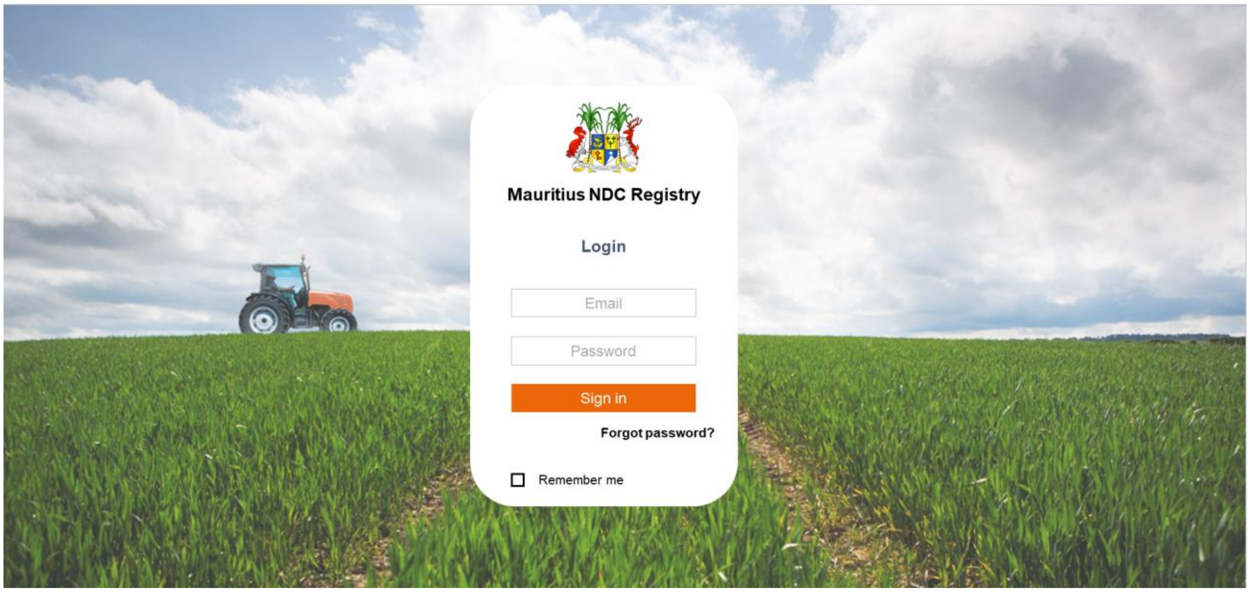


Figure 10: Login Screen

Description of the login screen is as follows:

Data Input

Title	Description	Data Type	Mandatory (Y/N)	Validation Rule
Email	User can insert his/her email address	Text	Y	Need to be valid email address
Password	User can insert password	Alphanumeric	Y	

Table 7: Data Input Login Screen

User Action	Description
Sign in	User clicks to submit credentials
Forgot Password?	User clicks to reset password
Remember me	User clicks to save password on browser

Screen 2: Forgot Password and Reset Password

The following screens will allow the user to reset their password. Once email address has been confirmed, an email is sent with a link to reset password.

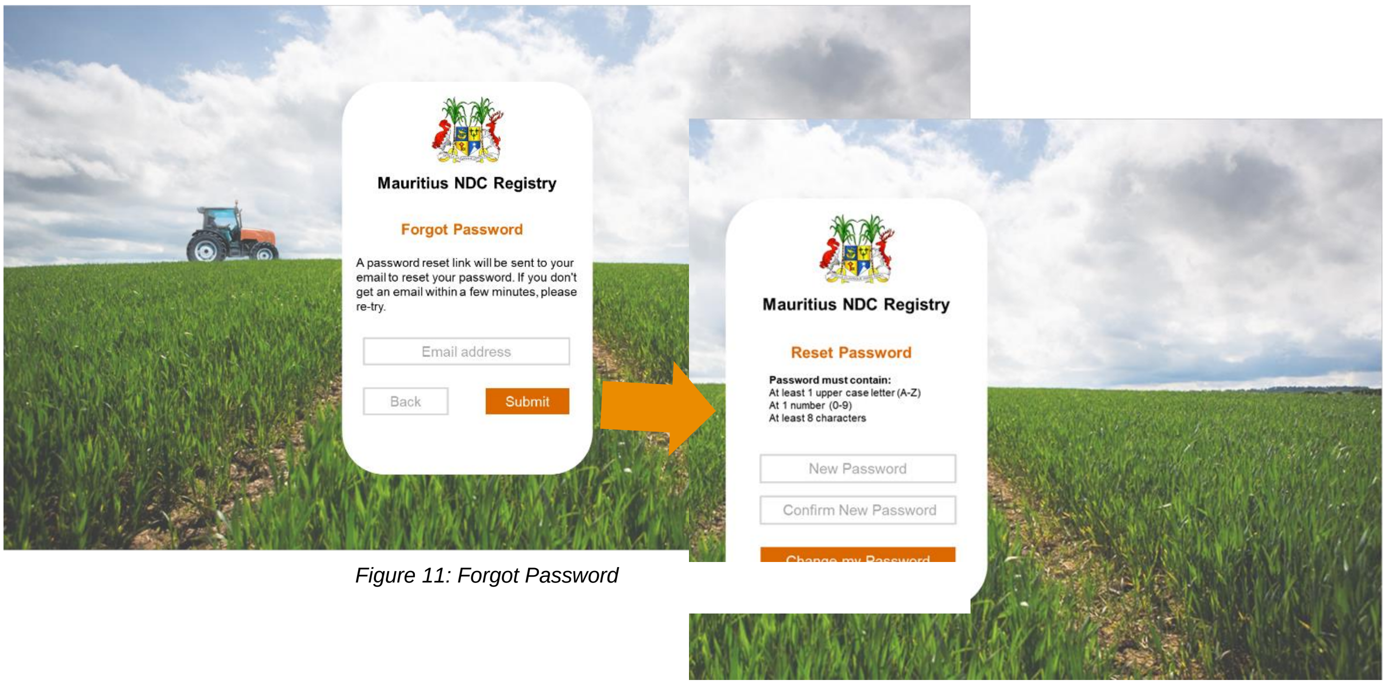


Figure 11: Forgot Password

Description of the forgot password and reset screen is as follows:

Data Input

Title	Description	Data Type	Mandatory (Y/N)	Validation Rule
Email	User can insert his/her email address	Text	Y	Need to be valid email address
Password	User can insert password	Alphanumeric	Y	Password must contain: At least 1 upper case letter (A-Z) At 1 number (0-9) At least 8 characters

Table 8: Data Input Forgot Password

User Action	Description
Email address	User can insert their email address
Submit	User clicks to validate email address and change password.
Back	User clicks if password does not need to be changed
New Password	User can insert new password
Confirm New Password	User can confirm password submitted
Change my Password	User can submit new password

B. NDC Registry Management

B.1 Landing Page

The landing page is the first screen that coordinators will view once authenticated in the system. It comprises of a set of key information such as assigned tasks, notifications and support request received.

Functional Requirement for Coordinator Landing Page (MoESWMCC Users)

Func Req #	Requirement Description
B.1.1	Coordinator landing page to contain the following: 1. Notifications 2. List of Support Requests 3. List of all Tasks assigned
B.1.2	Coordinator landing page to contain navigation pane which is static throughout the system. Navigation pane should allow the coordinator to navigate to any module including: 1. Landing Page 2. NDC Management 3. Stakeholders 4. Config 5. User Account Management 6. Data Visualisation and Reporting 7. Task Management 8. Support Requests

Table 9: Coordinator Landing Page

Table 10: Coordinator Landing Page

Screen 1: Coordinator Landing Page

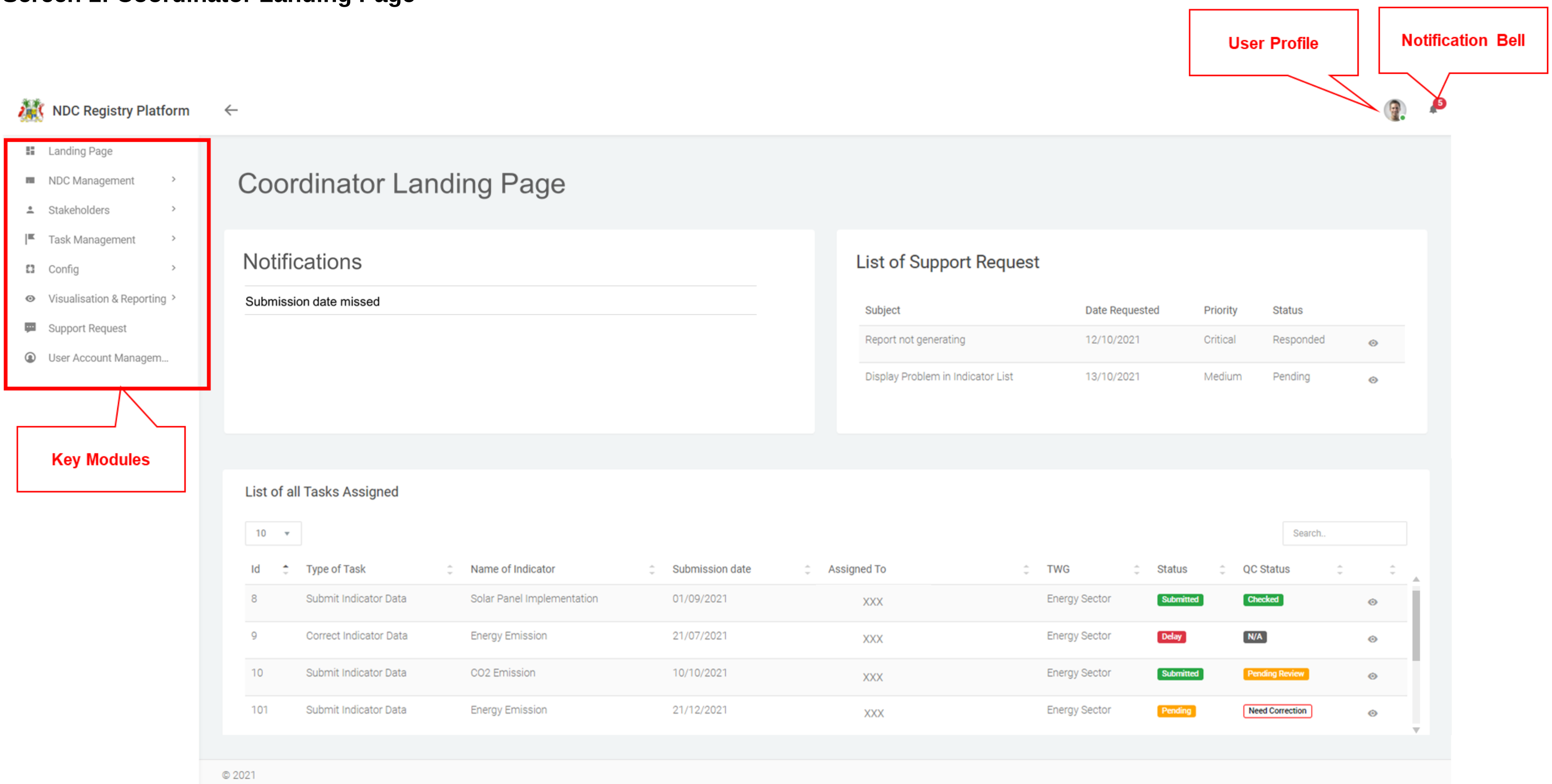


Figure 12: Coordinator Landing Page

B.2 NDC Management

This module is a core component of the platform. It allows a Coordinator to Create /Edit/ Deactivate and View the following:

i. Outcomes.
ii. Interventions.
iii. Indicators.

The detailed requirements for each above function are described in the table below.

i. Outcomes

Outcomes are used to manage the targets and objectives in the NDC and other key policy documents (such as the NAP, National Climate Change Mitigation Strategy and Action Plan or sectoral strategies). These qualitative and quantitative targets and objectives are classified with relevant sectors, geography, stakeholders etc. and will be linked to relevant Indicators for the targets, and the contributing Interventions.

Functional Requirement for Outcome Management (Create/Edit/ Deactivate/View and Export)

Func Req #	Requirement Description
B.2.1	The system shall allow Coordinators to **create outcomes** through the Registry Management module by capturing information such as Name, Description, Sector, Indicators (quantitative and qualitative), Progress, QA/QC Status among others. *Refer to section below for data fields.*
B.2.2	Coordinators shall have access to **deactivate an outcome** if no longer applicable or relevant. All associated data is unaffected, i.e., linked outcomes remain on the platform for reference purposes.
B.2.3	The system should **generate a list of all outcomes** created and allow the user to edit an outcome by clicking on it.
B.2.4	The system shall allow a user to **link an outcome** to one or more Interventions from the Intervention page, as well as link the outcome to one or more Indicators.
B.2.5	The system shall allow users to **view the list of outcomes** using filters such as Type of outcome, Sector, Subsector and monitoring organisation etc. System shall allow users to export list of outcomes to an excel file.
B.2.6	**Outcome QA by Verifiers** • System must allow the coordinator to allocate a specific outcome to Verifiers for Quality Assurance from the outcome page. • Once an outcome has been allocated, the system should send a notification to the verifier concerned. The notification should redirect the user to the QA tab.

Table 11: Outcome Management

Table 12: Outcome Management

Screen 1: List of outcomes

This screen displays the list of all outcomes in a tabular structure with key fields which can also be used as filter. Top level outcomes are displayed with an option to drill down and view child outcomes. User can create new outcome through webform or by using EXCEL template which will generate a pop-up for template download and data upload as shown below.

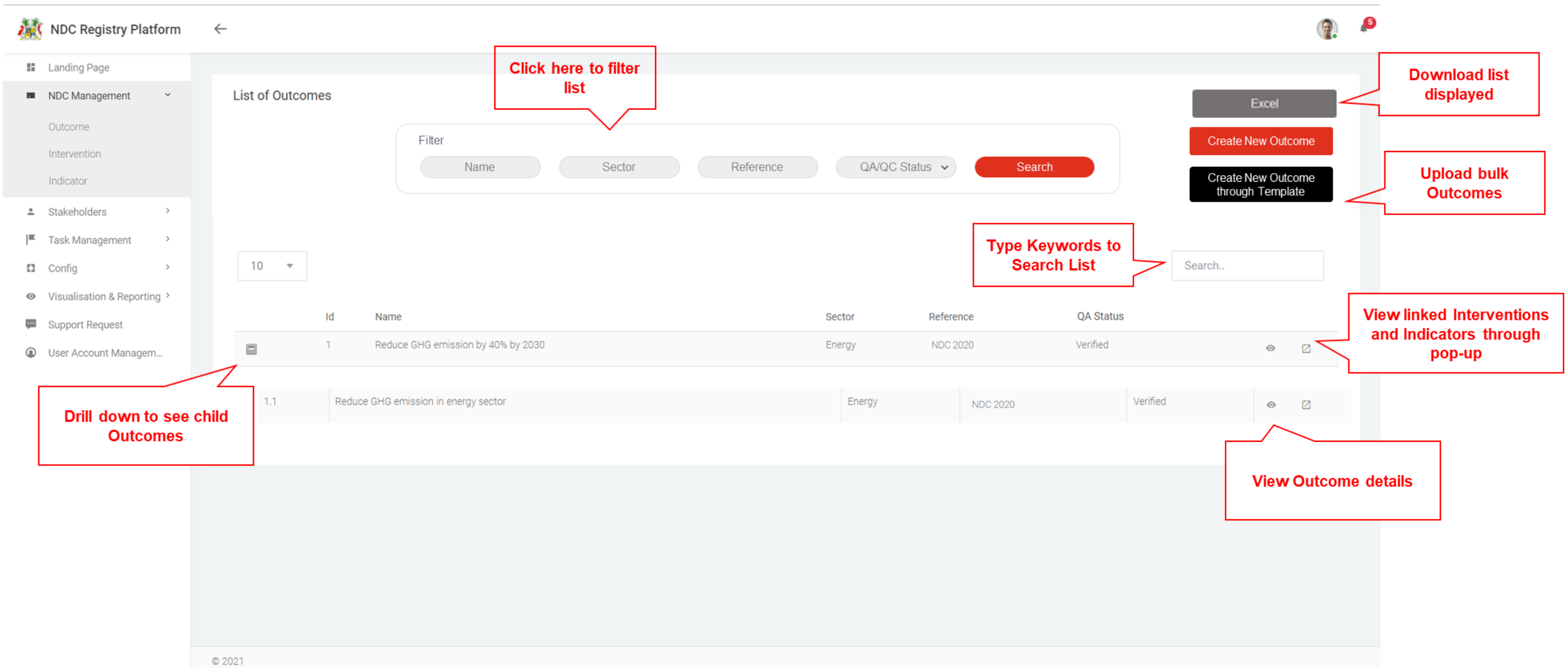


Figure 13: List of Outcomes

Screen 2: Bulk Upload Outcomes

This screen allows the user to upload a list of outcomes on the NDC platform.

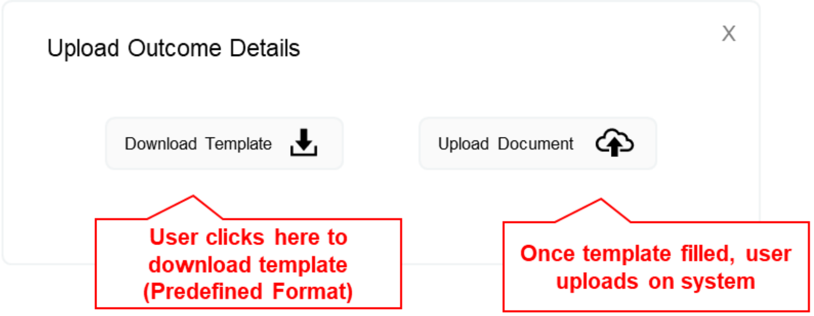


Figure 14: Bulk Upload of Outcomes

Screen 3: Linked Interventions and Indicators

The following is a pop-up that shows linked Interventions and Indicators to the main outcome.

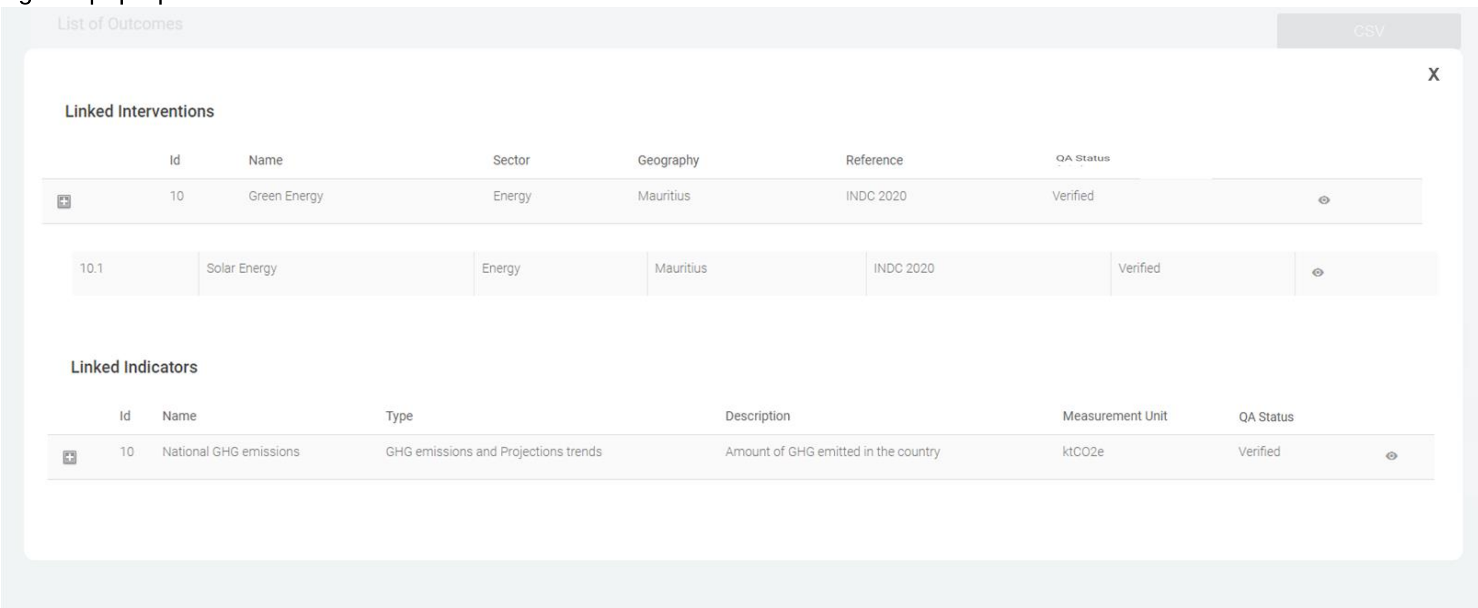


Figure 15: Outcome linked Interventions and Indicators Pop-up

The table below provides a description on fields shown on the screen.

Data Input

Title	Description	Data Type	Mandatory (Y/N)
Filter	These fields can be used to filter the list of outcomes using the following: name, sector, reference, QA/QC Status		
Id	System generated unique identifier for each outcome	Text	View only
Name	Name of outcome	Text	View only
Sector	Sector of outcome	Text	View only
Reference	Which NDC/policy/plan this outcome refers to	Text	View only
QA Status	This refers to the status of QA of the outcome which include not verified, verified, needs correction	Text	View only

Table 13: Data Input for List of Outcomes

User Action	Description
	Button used to drill down into an outcome to see child outcomes.
	Button used to view more details for a specific outcome. Clicking will navigate to detailed outcome view.
	Button used to open popup which displays linked Outcomes, Intervention, and Indicators.
Excel	Button used to generate an excel document with information displayed for all outcomes.
Create New Outcome	Button used to create new outcome.
Search..	Field used to search outcome based on keywords.
Create New Outcome through Template	Button used to create new outcome through Excel template.
Download Template	Button used to generate and download Excel template.
Upload Document	Button used to upload template.

Screen 4: Outcome Details

This screen displays details of a specific outcome. If a user clicks on “edit”, fields will be unlocked for the user to edit changes or deactivate the outcome. The screen also displays sub-outcomes/ child outcomes to the main outcome, linked Interventions and linked Indicators. User can add more Interventions and Indicators from this page in edit mode. User can also assign an independent verifier to perform QA on this specific outcome. A similar screen will be used to create a new outcome.

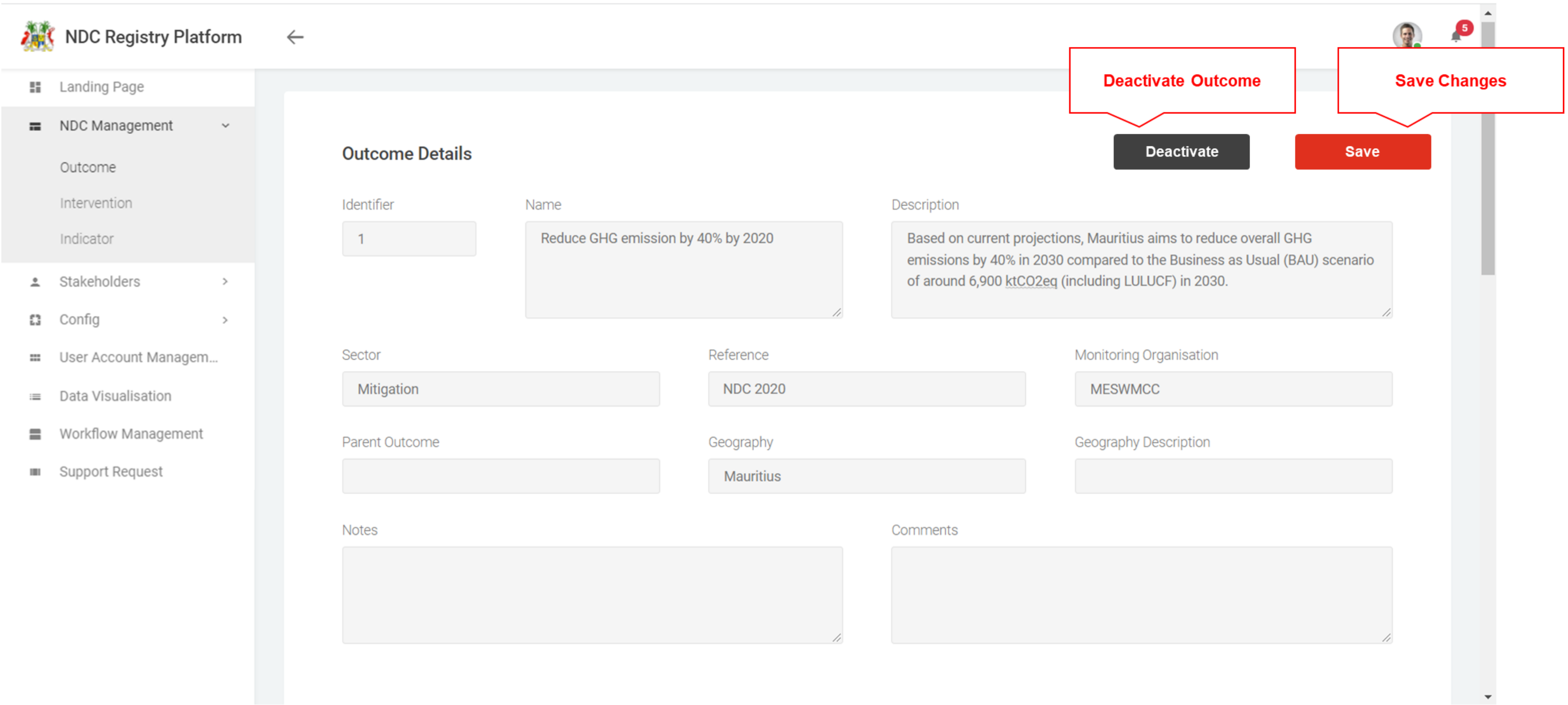


Figure 16: Outcome Details

Screen 4: Outcome Details (Cont.)

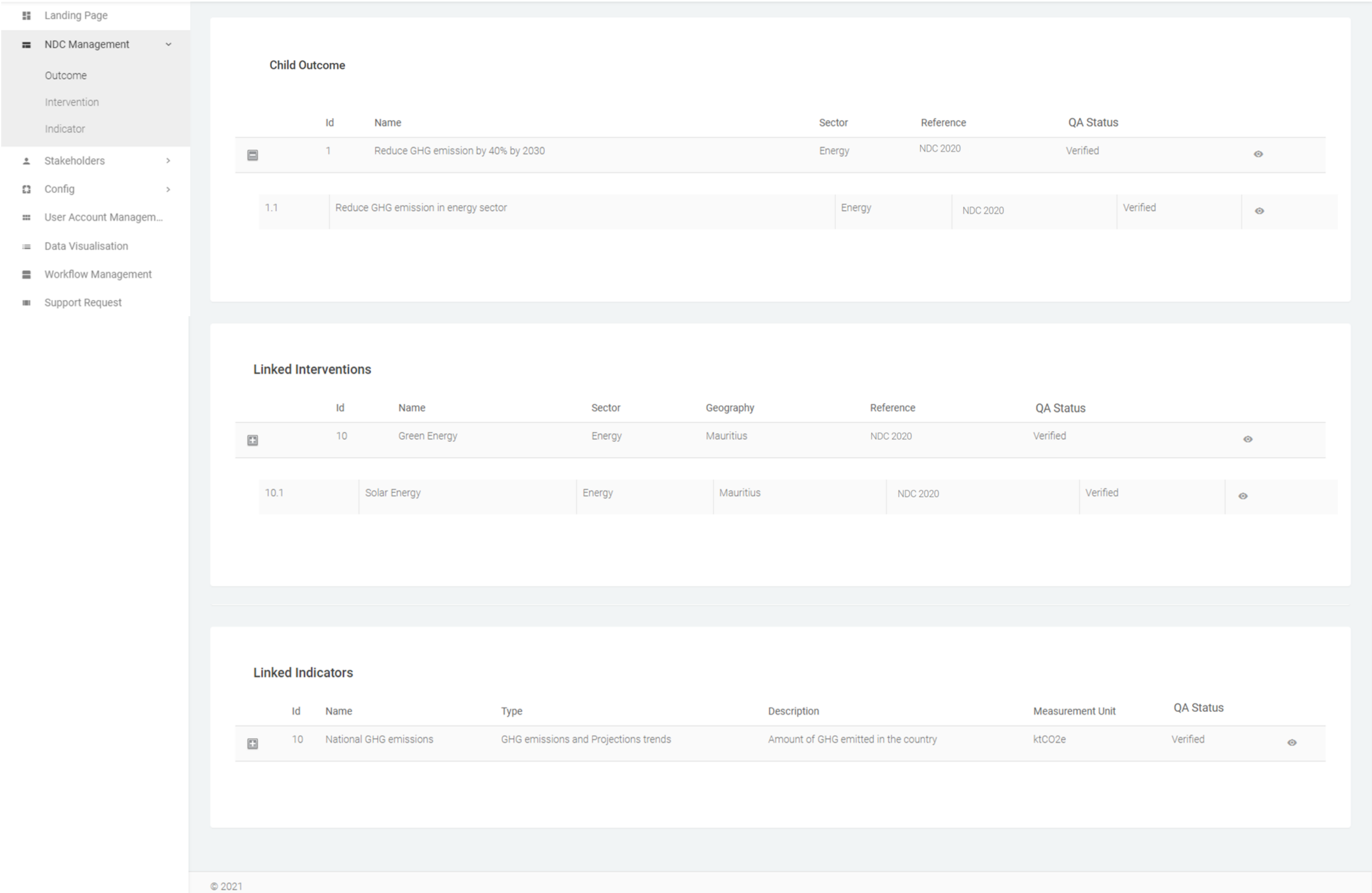


Figure 17: Outcome Details Page (continued)

Screen 4: Outcome Details (Cont.)

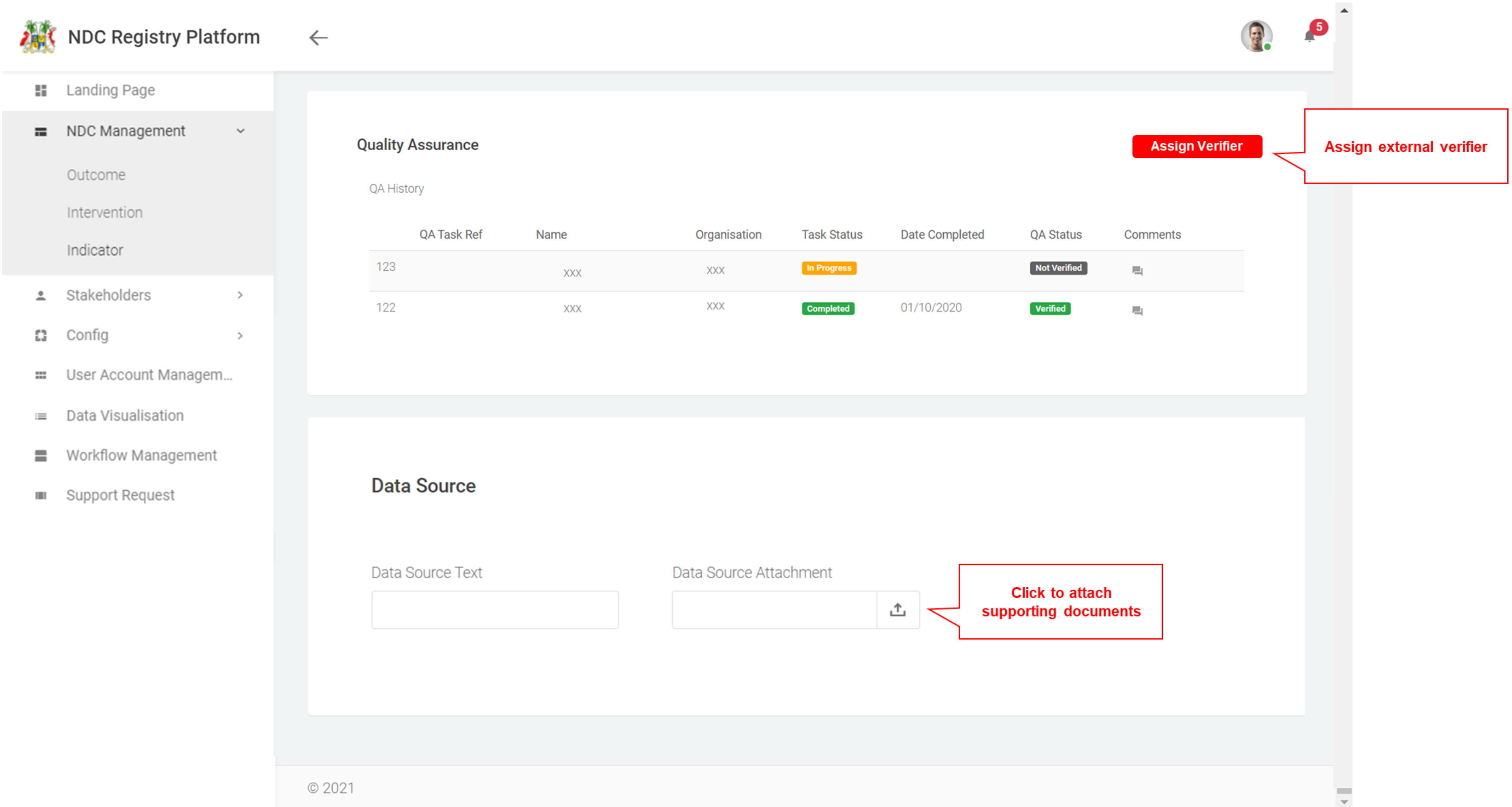


Figure 18: Outcome Details (End of Page)

Screen 4: Outcome Details Cont.
When an outcome is edited, the following options will be available: deactivate outcome, save changes.

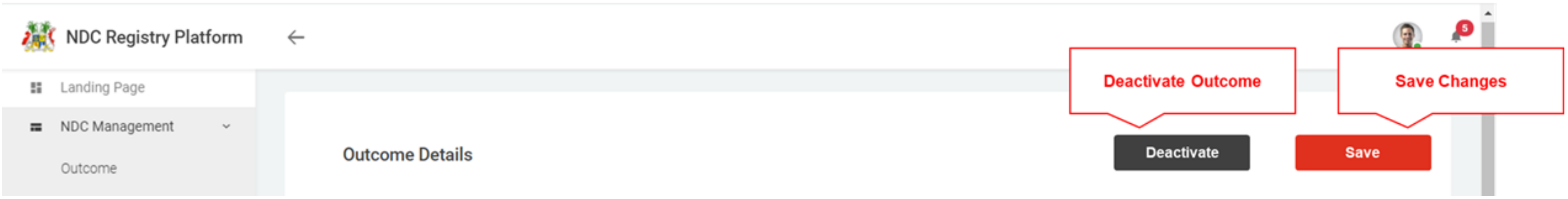


Figure 19: Outcome Details (deactivate and save)

The table below provides a description on fields shown on the screen.

Data Input

Title	Description	Data Type	Mandatory (Y/N)
Outcome Details			
Identifier	System generated unique identifier for each outcome	Text	View Only
Name	Name of outcome	Text	Y
Description	Description of outcome	Text	Y
Sector	Sector of outcome	Look up	Y
Reference	Which NDC/policy/plan this outcome refers to	Look up	Y
Monitoring Organisation	Organisation in charge of monitoring this outcome	Look up	N
Parent Outcome	Which higher level outcomes does this outcome fall under.	Look up	N
Geography	Which geographical area this outcome is linked to	Look up	Y
Notes	Notes to the outcome	Text	N
Comments	Comments added to the outcome	Text	N
Quality Assurance			
Verification Task Ref	Unique system generated reference for specific verification task	Text	View Only
Name	Name of verifier	Text	View Only
Organisation	Organisation of Verifier	Text	View Only
Task Status	Status of verification task (In Progress, Completed)	Text	View Only
Date Completed	Date Verification task completed	Text	View Only

Title	Description	Data Type	Mandatory (Y/N)
QA Status	Quality assurance status: not verified, verified, need correction	Text	View Only
Data Source			
Data Source Text	Description of the data source	Text	N

Table 14: Data Input for Outcome Details

User Action	Description
Edit	Button used to unlock fields available for edit.
Comments	Button to view Comments added by verifier. Clicking button will open pop-up.
Assign Verifier	Button to allocate verifier to outcome.
Data Source Attachment	Supporting documents for data source.

ii. Interventions

Interventions are activities to address climate change (including reducing GHGs in the atmosphere and building resilience to the effects of climate change). This includes policies, actions and projects, including, but not limited to, those listed in the NDC.

Functional Requirement for Intervention Management (Create/Edit/ Deactivate/View and Export)

Func Req #	Requirement Description
B.2.7	The system shall allow Coordinators to **create Interventions** through the Registry Management module by capturing information such as Name, Description, Sector, Indicators (quantitative and qualitative), Progress, QA/QC Status, Classification, Quantified objective, Methodologies and Assumptions among others.
B.2.8	Coordinators shall have access to **deactivate an Intervention** if no longer applicable or relevant. All associated data is unaffected, i.e., linked Interventions remain on the platform for reference purposes.
B.2.9	The system should **generate a list of all Interventions** created and allow the user to edit an Intervention by clicking on it.
B.2.10	The system shall allow a user to **link Interventions** to one or more outcome as well as link to one or more Indicators.
B.2.11	The system shall allow users to **view the list of Interventions** using filters such as dates, Type of Intervention, Sector, Sub-Sector and monitoring organisation, classification. System shall allow users to export list of Interventions to an excel file.
B.2.12	Coordinators can assign Interventions to a TWG Owner through the Intervention page. Once an Intervention has been allocated to a Thematic Owner, they will then be able to edit the Intervention.
B.2.13	System to provide access for data input through the following: Data input can be performed through the following ways: 1. Web form data entry 2. Excel file upload (structured) **Web forms** The system shall allow thematic contributors to input data directly on the portal. User must capture mandatory fields. **Excel file upload** • The system shall allow thematic contributors to generate an Excel file on the platform. This file has a predefined structure. • System allows the user to upload filled excel templates. • Once upload is complete, system validates the data/information as per data validation rules. • In case of error: System display error message and the contributor must correct the file before re-uploading. Else system displays the uploaded data set on the screen and the user must click on confirm to submit the data set.

Func Req #	Requirement Description
B.2.14	**Intervention QA by Verifiers** • System must allow the coordinator to allocate a specific Intervention to Verifiers for Quality Assurance from the Indicator page. • Once an Intervention has been allocated, the system should send a notification to the verifier concerned. The notification should redirect the user to the QA tab.

Table 15: Intervention Management

Screen 1: List of Interventions

This screen displays the list of all Interventions in a tabular structure with key fields which can also be used as filter. Top level Interventions are displayed with an option to drill down and view child Interventions. User can create new Intervention through webform or by using EXCEL template which will generate a pop-up for template download and data upload.

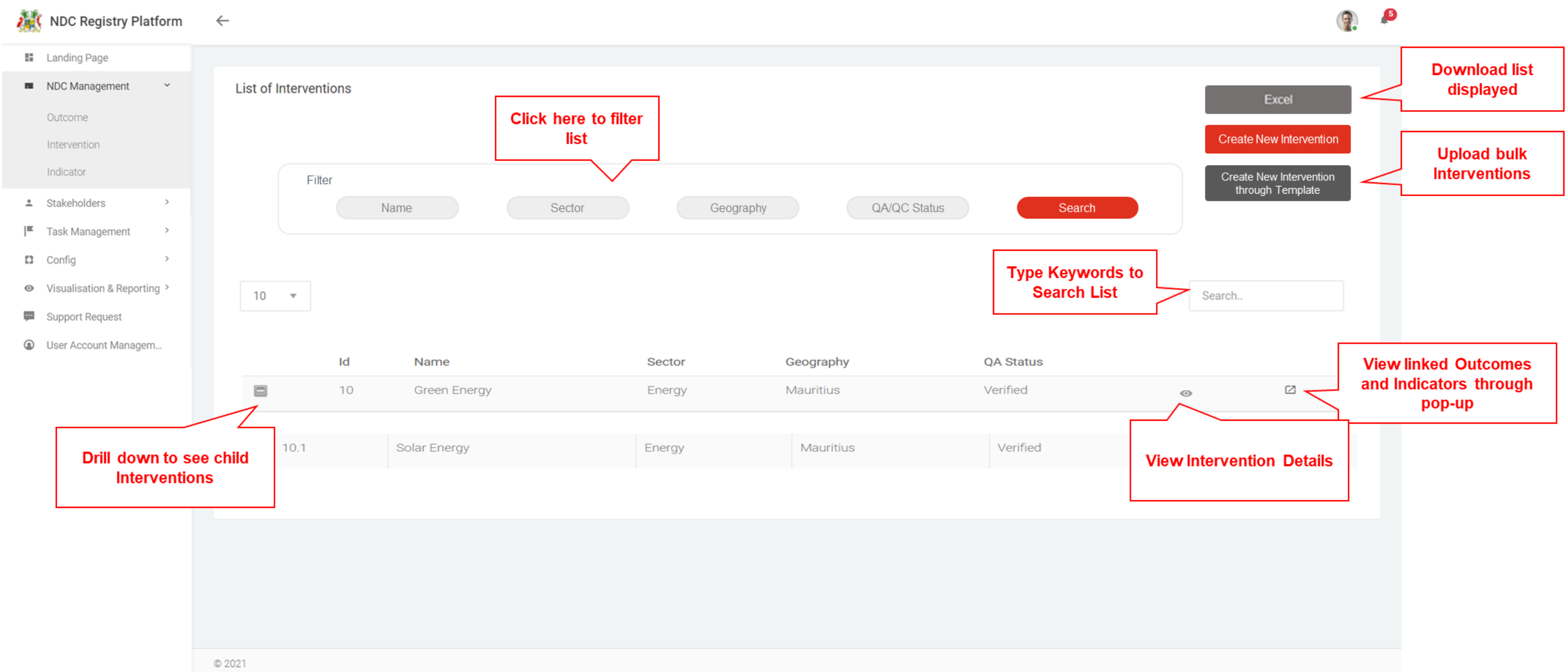


Figure 20: List of Interventions

Screen 2: Linked outcomes and Indicators

The following is a pop-up that shows linked Outcomes and Indicators to the main Intervention.

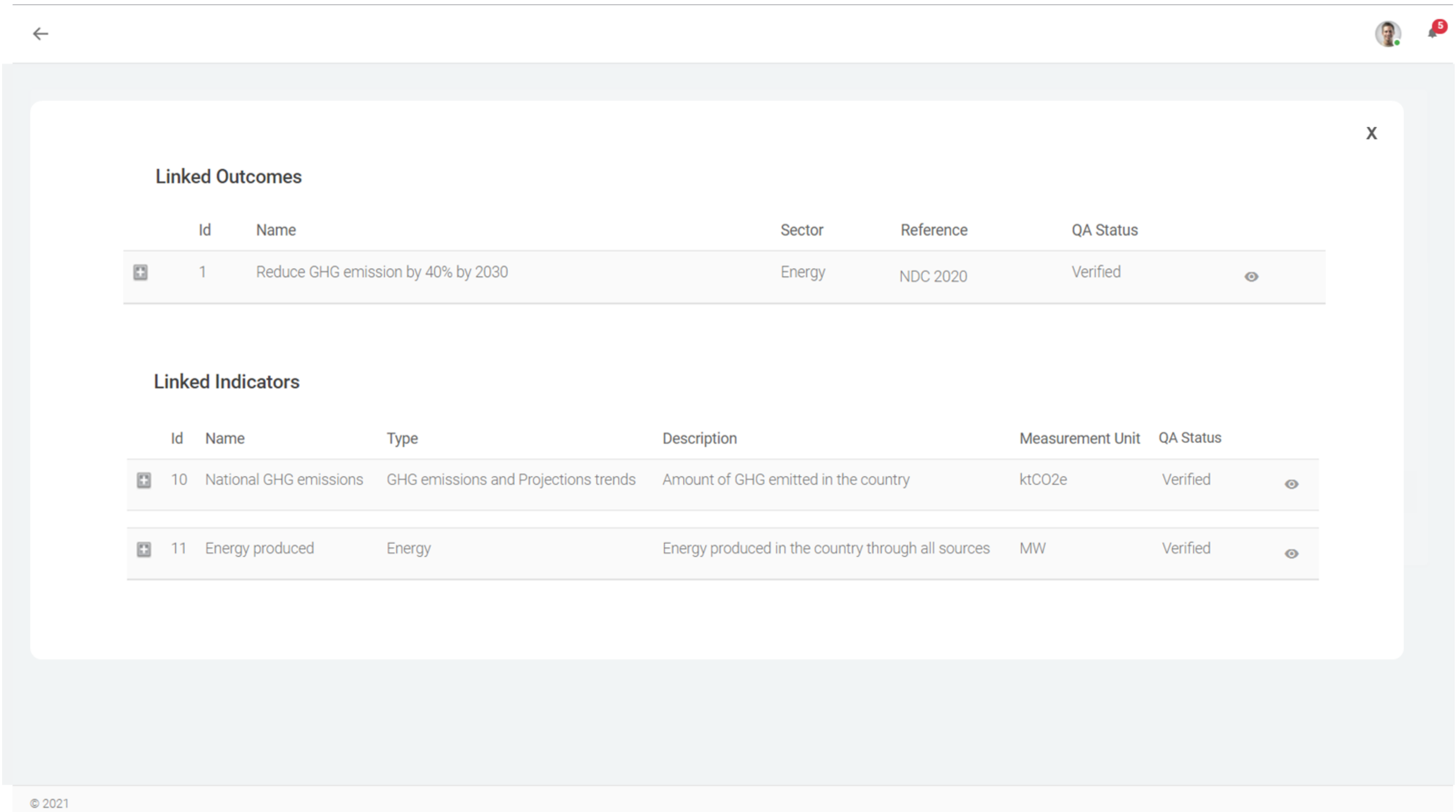


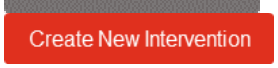
Figure 21: Intervention Pop-up

The table below provides a description on fields shown on the screen.

Data Input

Title	Description	Data Type	Mandatory (Y/N)
Filter	These fields can be used to filter the list of Interventions using the following: Name, Sector, Geography, QA/QC Status		
Id	System generated unique identifier for each Intervention	Text	View only
Name	Name of Intervention	Text	View only
Sector	Sector of Intervention	Text	View only
Geography	Geography of Intervention		View only
Reference	Which NDC/policy/plan this Intervention refers to	Text	View only
QA Status	This refers to the status of QA of the Intervention which include not verified, verified, needs correction	Text	View only

Table 16: Data Input for List of Interventions

User Action	Description
	Button used to drill down into an Intervention to see child Interventions.
	Button used to view more details for a specific Intervention. Clicking will navigate to detailed Intervention view.
	Button used to open popup which displays linked Outcomes, Intervention and Indicators.
	Button used to generate an excel document with information displayed for all Interventions.
	Button used to create new Intervention.
	Field used to search Intervention based on keywords.
	Button used to create new Intervention through Excel template.

Screen 3: Intervention Details

This screen displays details of a specific Indicator. If a user clicks on "edit", fields will be unlocked for the user to edit changes. The screen also displays sub-Interventions/ child Interventions to the main Interventions as well as linked outcomes and linked Indicators. User can add more outcomes and Indicators from this page in edit mode. User can also assign an independent verifier to perform QA on this specific Intervention. A similar screen will be used to create a new Intervention. User can assign thematic owners to the Intervention. A similar screen will be available to owners for Intervention details edit.

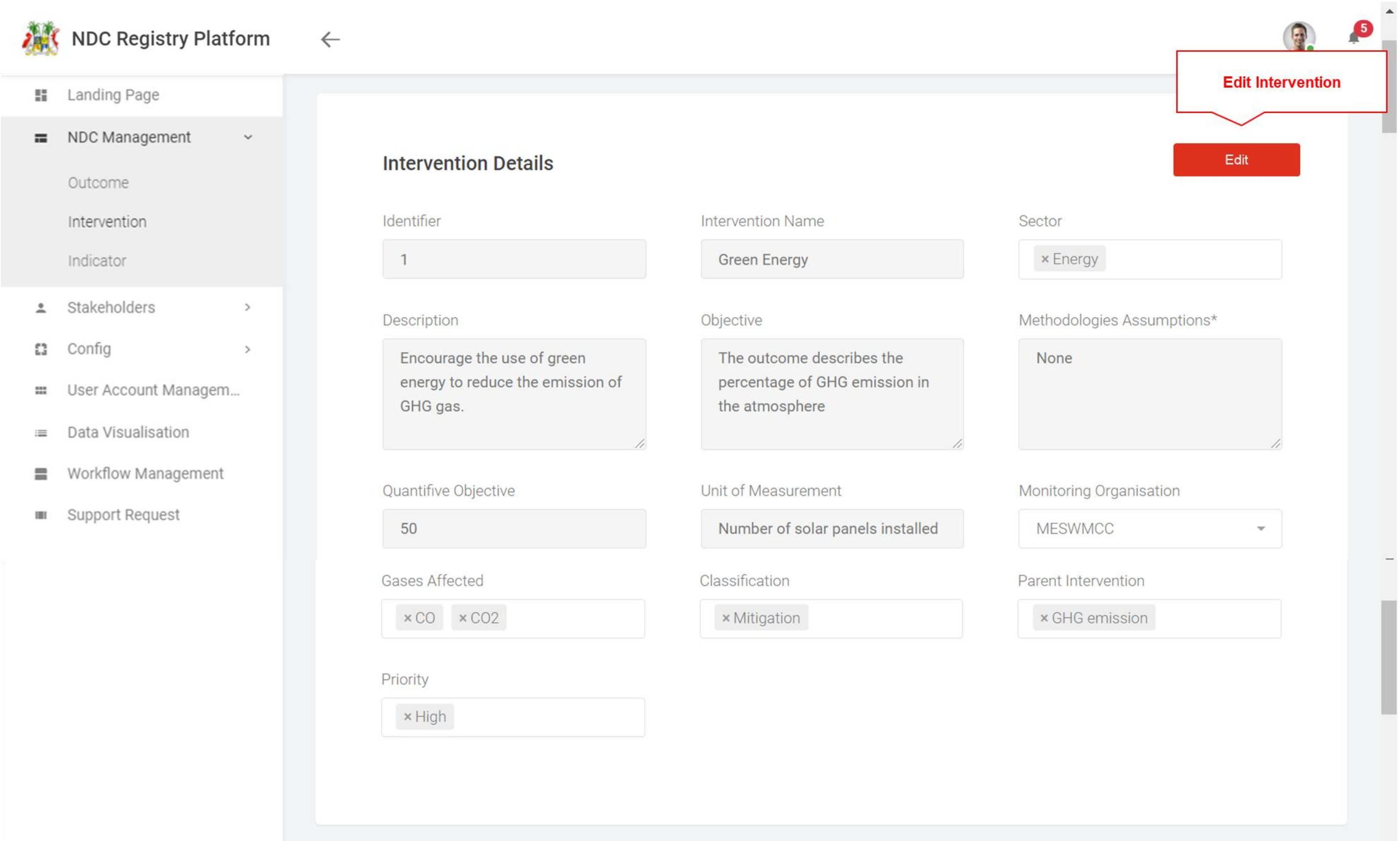


Figure 22: Intervention Details

Screen 3: Intervention Details (cont.)

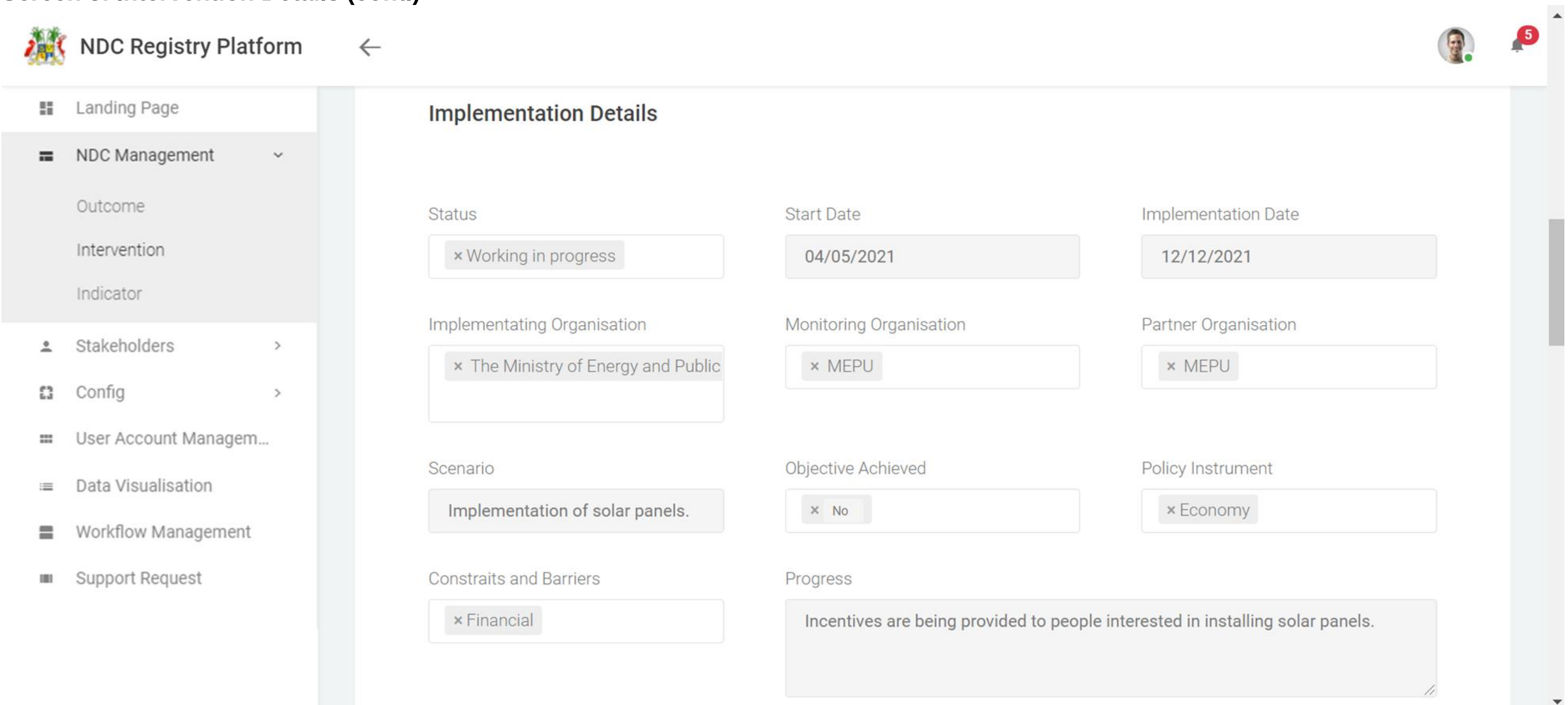


Figure 23: Intervention Implementation Details

Screen 3: Intervention Details (cont.)

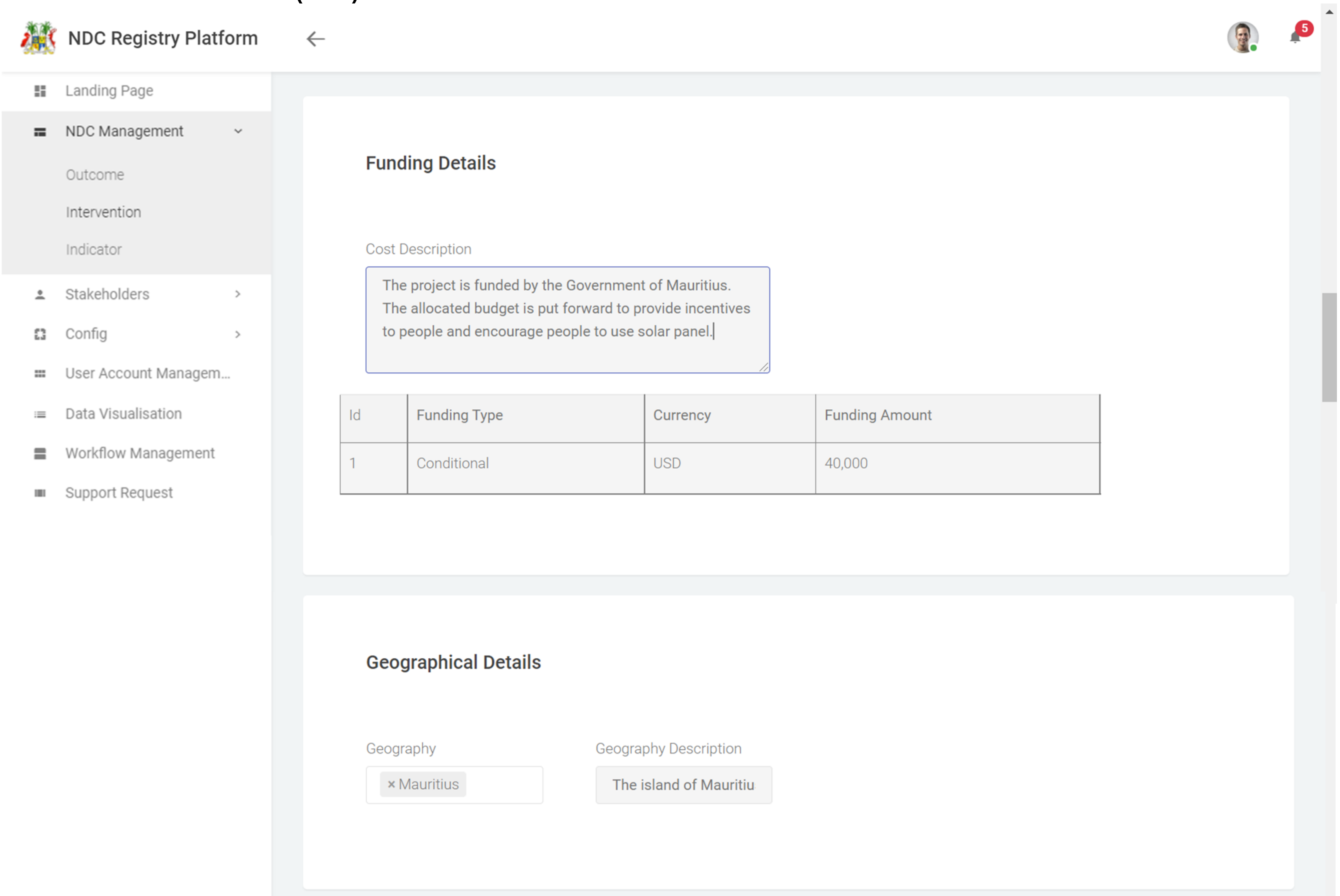


Figure 24: Intervention Funding and Geographical Details

Screen 3: Intervention Details (Cont.)

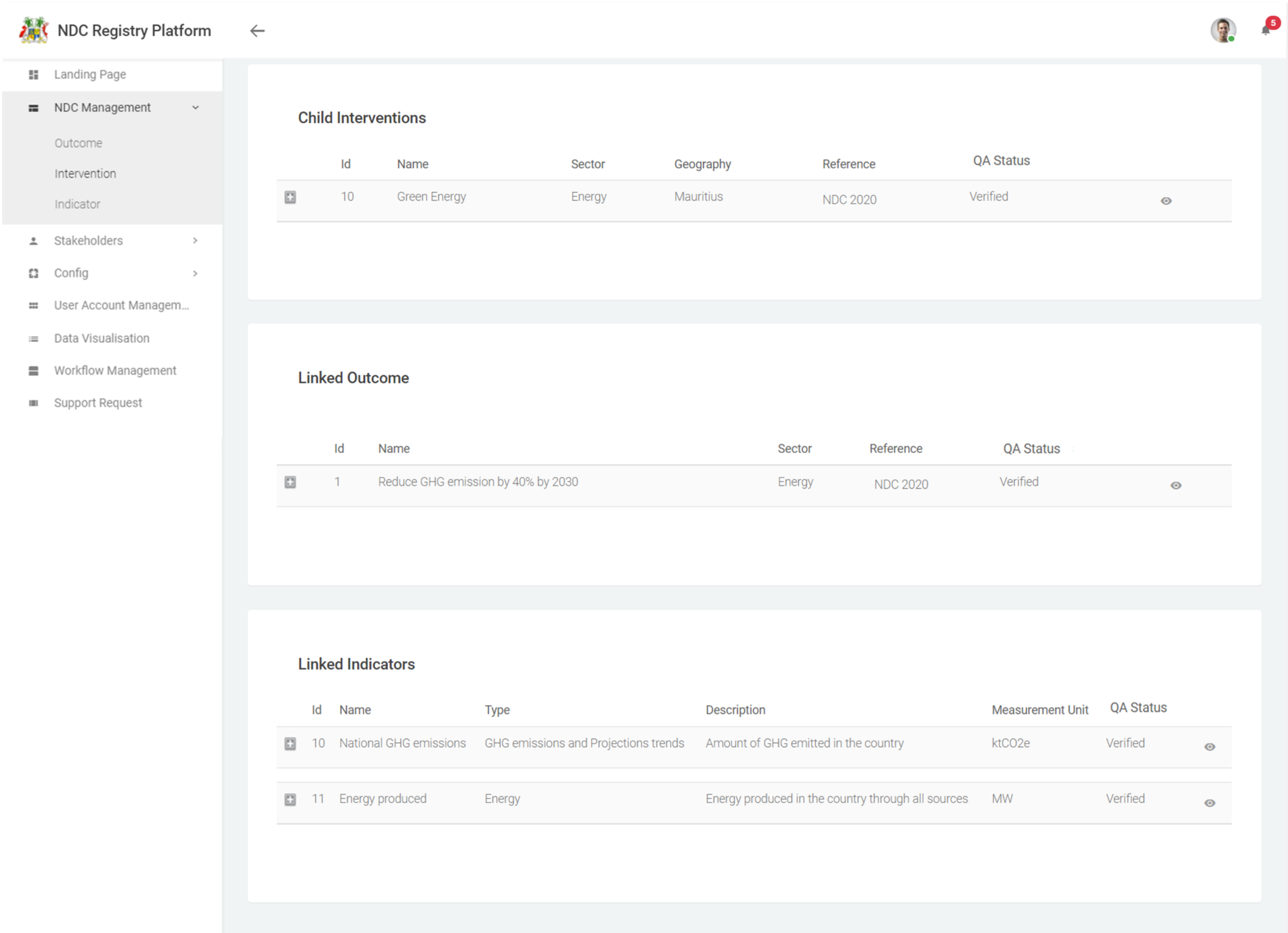


Figure 25: Intervention Details (continuation)

Screen 3: Intervention Details (cont.)

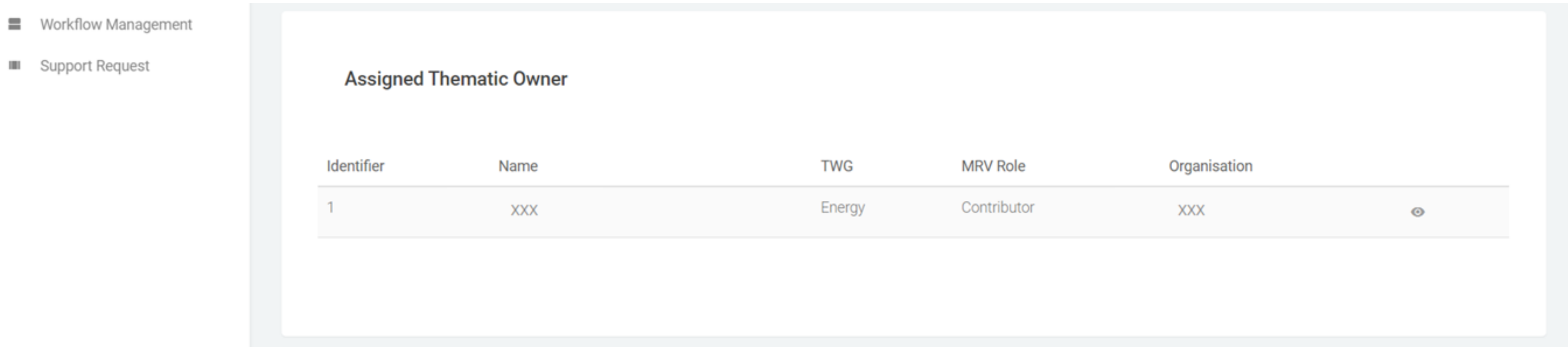


Figure 26: Assigned Thematic Owner for Interventions

Screen 4: Intervention Details (cont.)

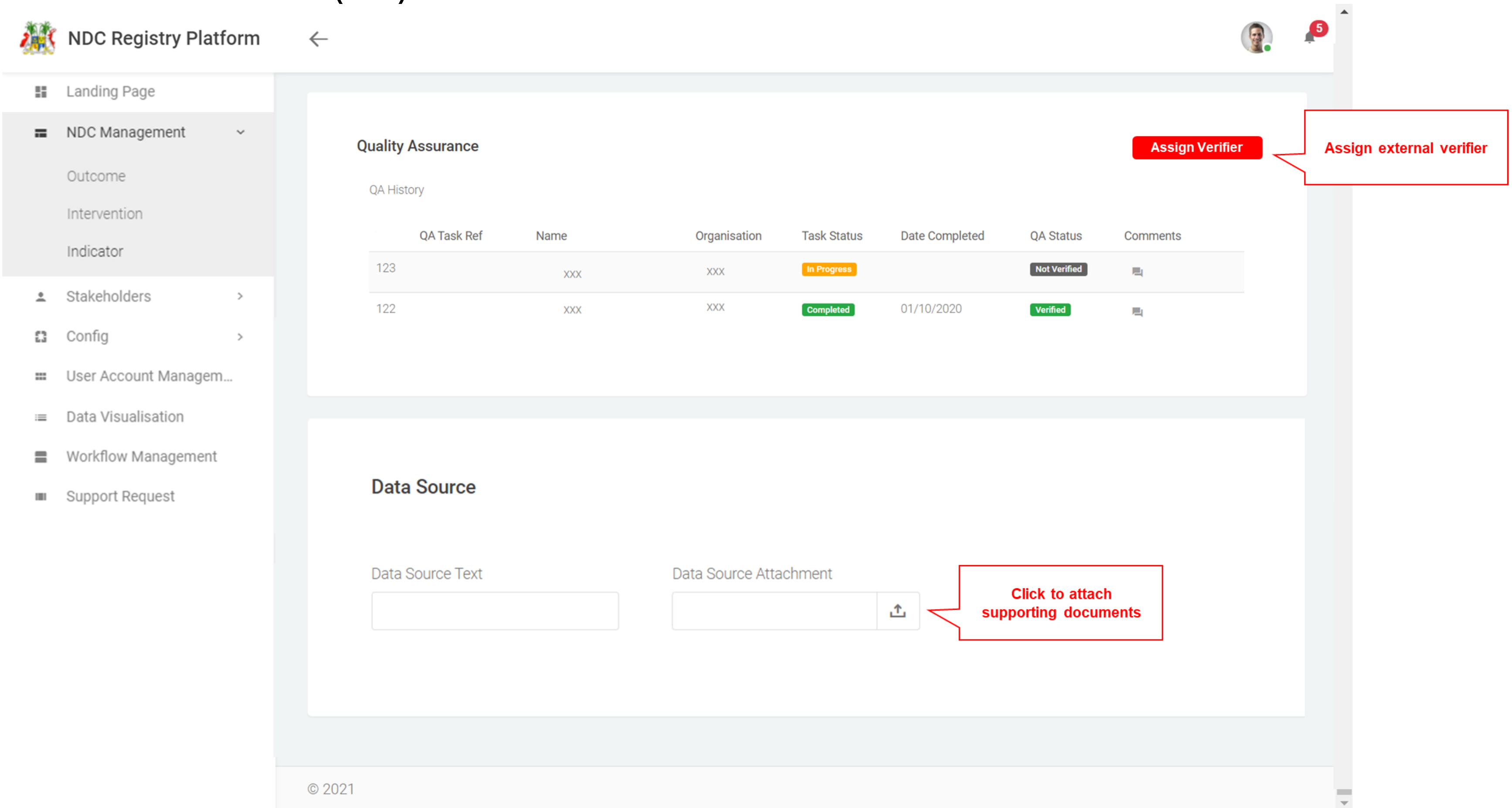


Figure 27: QA and Submission Date

The table below provides a description on fields shown on the screen.

Data Input

Title	Description	Data Type	Mandatory (Y/N)
Intervention Details			
Identifier	System generated unique identifier for each Intervention	Text	View only
Intervention Name	Name of Intervention	Text	Y
Sector	Sector of Intervention	Look up	Y
Description	Description of Intervention	Text	Y
Objective	Objective of the Intervention	Text	Y
Methodologies Assumptions	Methodologies and Assumptions underlying Intervention	Text	N
Quantified Objective	Objective of Intervention in number	Text	N
Unit of Measurement	Unit of Quantified Objective	Text	N
Monitoring Organisation	Organisation in charge of monitoring this Intervention.	Look up	N
Gases Affected	Gases affected by this Intervention, if any		N
Classification	Classification of Intervention e.g. mitigation		Y
Parent Intervention	Which higher level Interventions does this Intervention fall under.		N
Priority	Priority of implementation of Intervention		Y
Implementation Details			
Status	Status of implementation	Lookup	N
Start Date	Start date of implementation of Intervention	Date	N
Implementation Date	Date of implementation of Intervention	Date	N
Implementing Organisation	Organisation in charge of implementation of Intervention	Look up	N
Objective Achieved	Boolean: objective achieved for Intervention (Yes, No)	Lookup	N
Policy Instrument	Which policy instruments are used to achieve this Intervention	Multiselect	N
Constraints and Barriers	Which constraints and barriers are hindering implementation of this Intervention	Multiselect	N
Progress	Description of progress of implementation	Text	N

Title	Description	Data Type	Mandatory (Y/N)

Funding Details			
Cost Description	Description of cost and funding of Intervention	Text	N
Funding Type	Type of funding available	Lookup	N
Currency	Currency of funding	Lookup	N
Funding Amount	Amount of funding	number	N
Geography Details			
Geography	Which geographical area this Intervention is linked to	Multiselect	N
Geography Description	Description of the geographical area covered	Text	N
Assigned Thematic Owner			
Identifier	System generated unique identifier for thematic Owner	Text	N
TWG	Which technical working group the owner belongs to	Text	N
MRV Role	Which role the thematic Owner has	Text	N
Organisation	Which organisation the Owner belongs to	Text	N
Quality Assurance			
Verification Task Ref	Unique system generated reference for specific verification task	Text	View Only
Name	Name of verifier	Text	View Only
Organisation	Organisation of Verifier	Text	View Only
Task Status	Status of verification task (In Progress, Completed)	Text	View Only
Date Completed	Date Verification task completed	Text	View Only
QA Status	Quality assurance status: not verified, verified, need correction	Text	View Only
Data Source			
Data Source Text	Description of the data source	Text	N

Table 17: Data Input for Intervention Details

User Action	Description
Edit	Button used to unlock fields available for edit.
Comments	Button to view Comments added by verifier. Clicking button will open pop-up.
Assign Verifier	Button to allocate verifier to outcome.
Data Source Attachment	Supporting documents for data source.

iii. Indicators

Indicators will be used to provide information to track progress with outcomes and Interventions based on measured/monitored data (e.g., climate information, estimated data, GHG emissions and emission factors, national statistics and/or information on progress and ambition around specific Interventions or groups of Interventions).

Functional Requirement for Indicators Management and Updates

Func Req #	Requirement Description
B.2.15	**Indicator view/creation/edit** The system shall allow Coordinators to **create Indicators** through the Registry Management module by capturing information such as Name, Description, Indicator Type (quantitative and qualitative), Progress, QA/QC Status, Monitoring Organisation, Methodologies and Assumptions among others. Users will not be able to edit all Indicator details once the Indicator has been created. Fields which can be edited include: Description, Methodologies Assumptions, Progress Description, Notes.
B.2.16	The system to provide a web form for Indicator creation with the fields defined under the Indicator (which provides the metadata for the Indicator) and Indicator Data (which provides the qualitative or quantitative data associated with a specific timeframe) entities. The Indicator Entity is in essence a 'nested' data type, i.e., all data provided under Indicator Data is linked to a specific Indicator.
B.2.17	Coordinators shall have access to **deactivate an Indicator** if no longer applicable or relevant. All associated data is unaffected, i.e., linked Indicators remain on the platform for reference purposes.
B.2.18	The system should generate a list of all Indicators created and allow the user to edit an Indicator by clicking on it. Create and edit Indicators should be facilitated with a web form.
B.2.19	The system shall allow a user to **link Indicators** to one or more outcomes as well as link to one or more Interventions.
B.2.20	The system shall allow users to **view the list of Indicators** using filters such as dates, Type of Intervention, Sector, Subsector and monitoring organisation, classification etc. System shall allow users to export list of Indicators to an excel file.
B.2.21	**Allocation of Indicator to Thematic Working Groups (TWG)** • Contributor can allocate Indicators to TWG Contributors. • Once an Indicator has been allocated, the system should send a notification to the Thematic Owner and Thematic Contributor concerned. The notification should redirect the user to the data input tab.
B.2.22	The system must allow the Coordinator to set frequency of data submission and to set reminders for data submission.
B.2.23	**Indicator Data Submission** When allocating an Indicator to a contributor, a task will be created for each data submission required. For e.g., if data needs to be submitted monthly, 12 tasks will be created for the contributor for a year. Once data has been submitted for a contributor, the task will be set as complete.

Table 18: Indicator Management

Screen 1: List of Indicators

This screen displays the list of all Indicators in a tabular structure with key fields which can also be used as filter. Top level Indicators are displayed with an option to drill down and view child Indicators. User can create new Indicator through webform or by using Excel template which will generate a pop-up for template download and data upload.

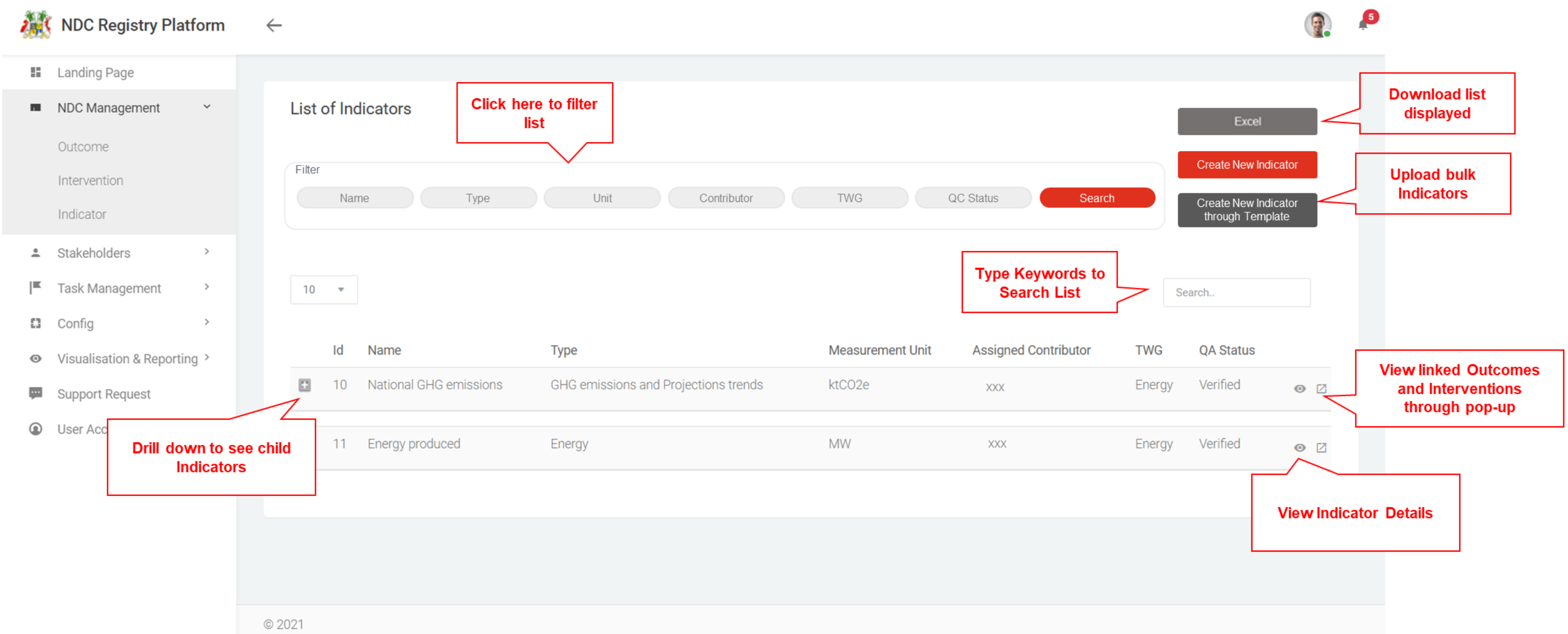


Figure 28: List of Indicators

Screen 2: Linked Outcomes/Indicators

The following is a pop-up that shows linked Interventions to the Indicator.

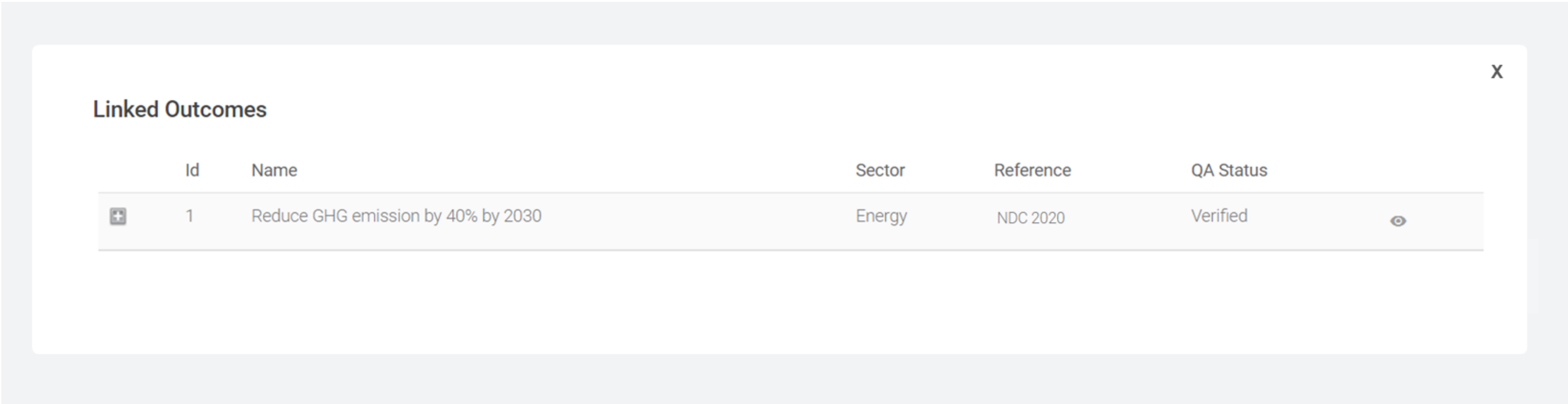


Figure 29: Indicator Pop-up

The table below provides a description on fields shown on the screen.

Data Input

Title	**Description**	**Data Type**	**Mandatory (Y/N)**
Filter	These fields can be used to filter the list of Indicators using the following: name, type, unit, QA/QC Status		
Id	System generated unique identifier for each Indicator	Text	View Only
Name	Name of Indicator	Text	View Only
Type	Type of Indicator	Text	View Only
Description	Description of Indicator	Text	View Only
Unit	Measurement Unit of Indicator	Text	View Only
QA Status	This refers to the status of QA of the Indicator which include, not verified, verified, needs correction	Text	View Only

Table 19: Data Input for List of Indicators

User Action	Description
	Button used to drill down into an Intervention to see child Interventions.
	Button used to view more details for a specific Intervention. Clicking will navigate to detailed Intervention view.
	Button used to open popup which displays linked Outcomes, Intervention and Indicators.
Excel	Button used to generate an excel document with information displayed for all Interventions.
Create New Indicator	Button used to create new Indicator.
Search..	Field used to search Intervention based on keywords.
Create New Indicator through Template	Button used to create new Indicator through Excel template.

Screen 3: Indicator Details

This screen displays details of a specific Indicator. If a user clicks on “edit”, fields will be unlocked for the user to edit changes. The screen also displays sub-Indicators/ child Indicators to the main Indicators as well as linked Indicators and linked Indicators. Finally, a user will be able to view Indicator data submitted by contributors as well as visualisations on data submitted. A similar screen will be used to create a new Indicator.

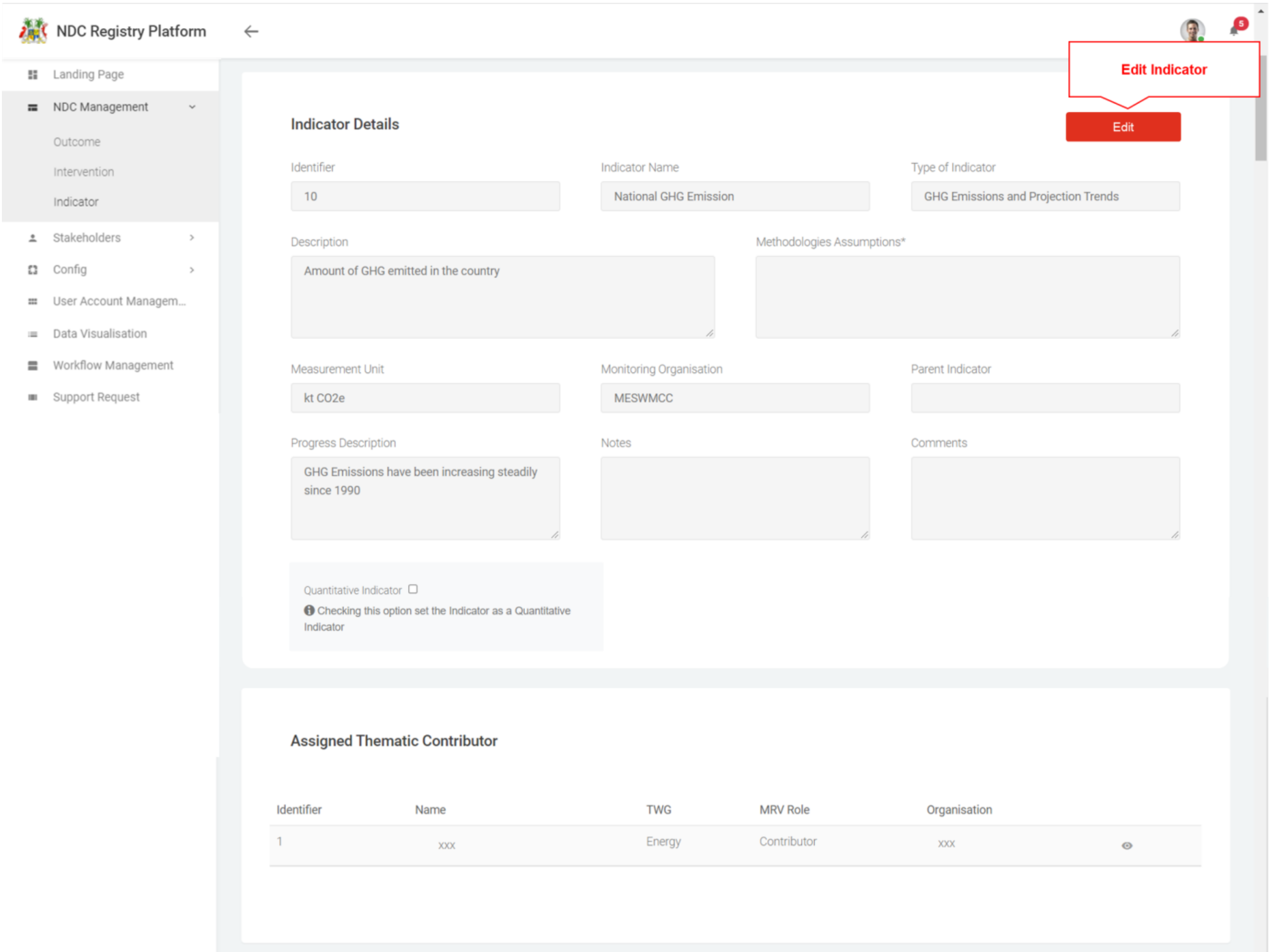


Figure 30: Indicator Details

Screen 3: Indicator details (cont.)

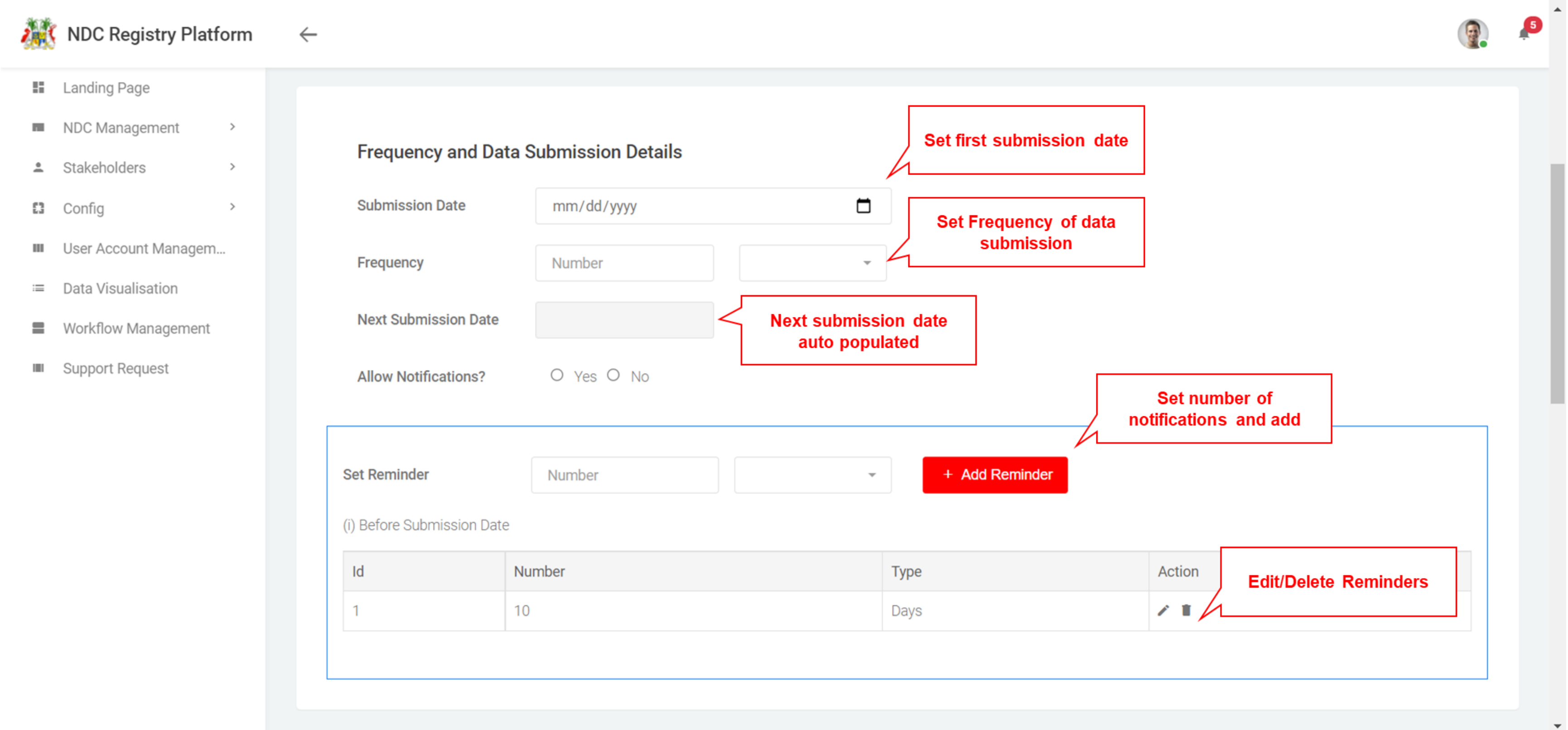


Figure 31: Frequency and Data Submission Details

Screen 3: Indicator Details (cont.)

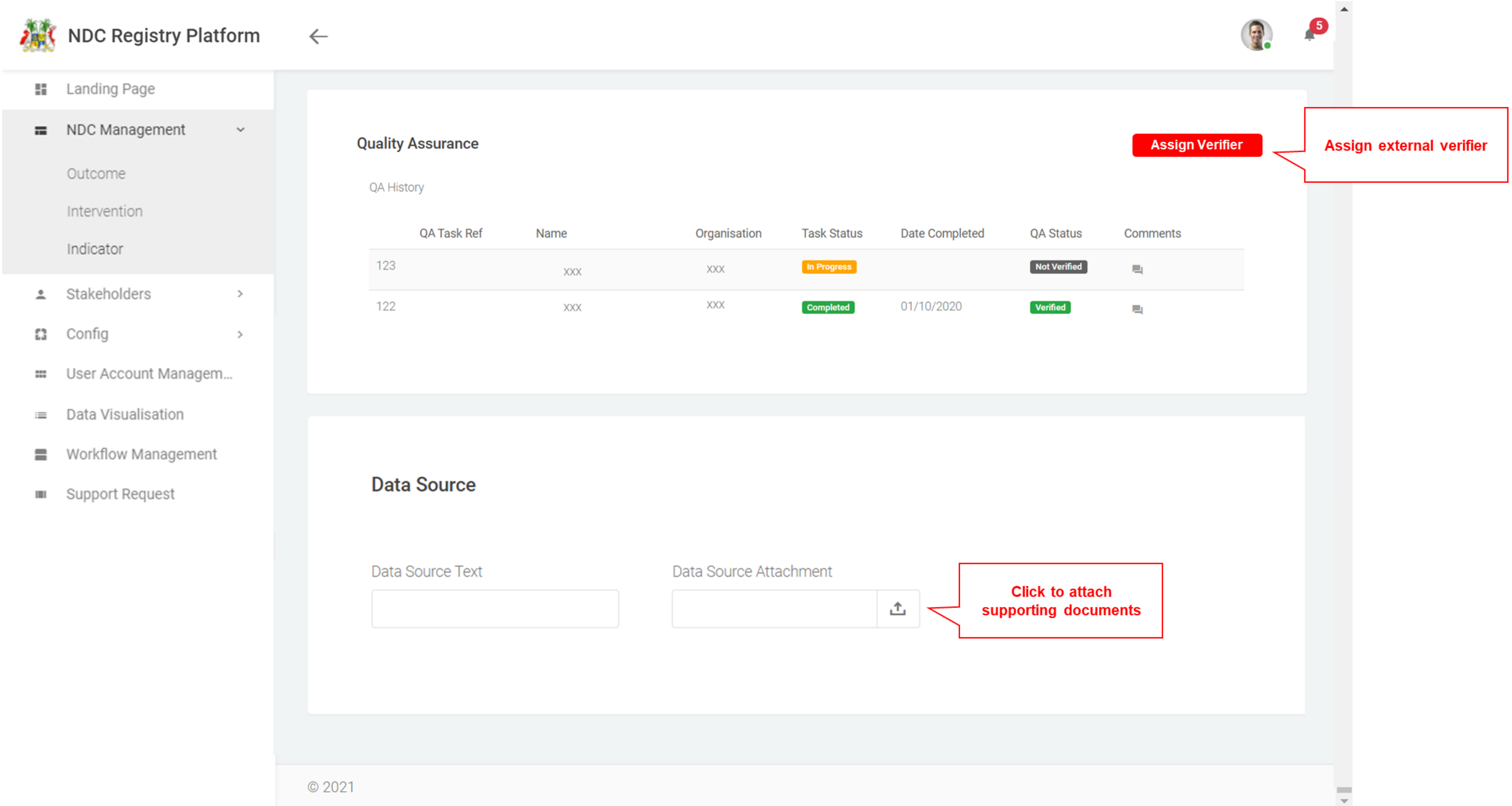


Figure 32: Indicator Details (End of Page)

Screen 3: Indicator Details (cont.)

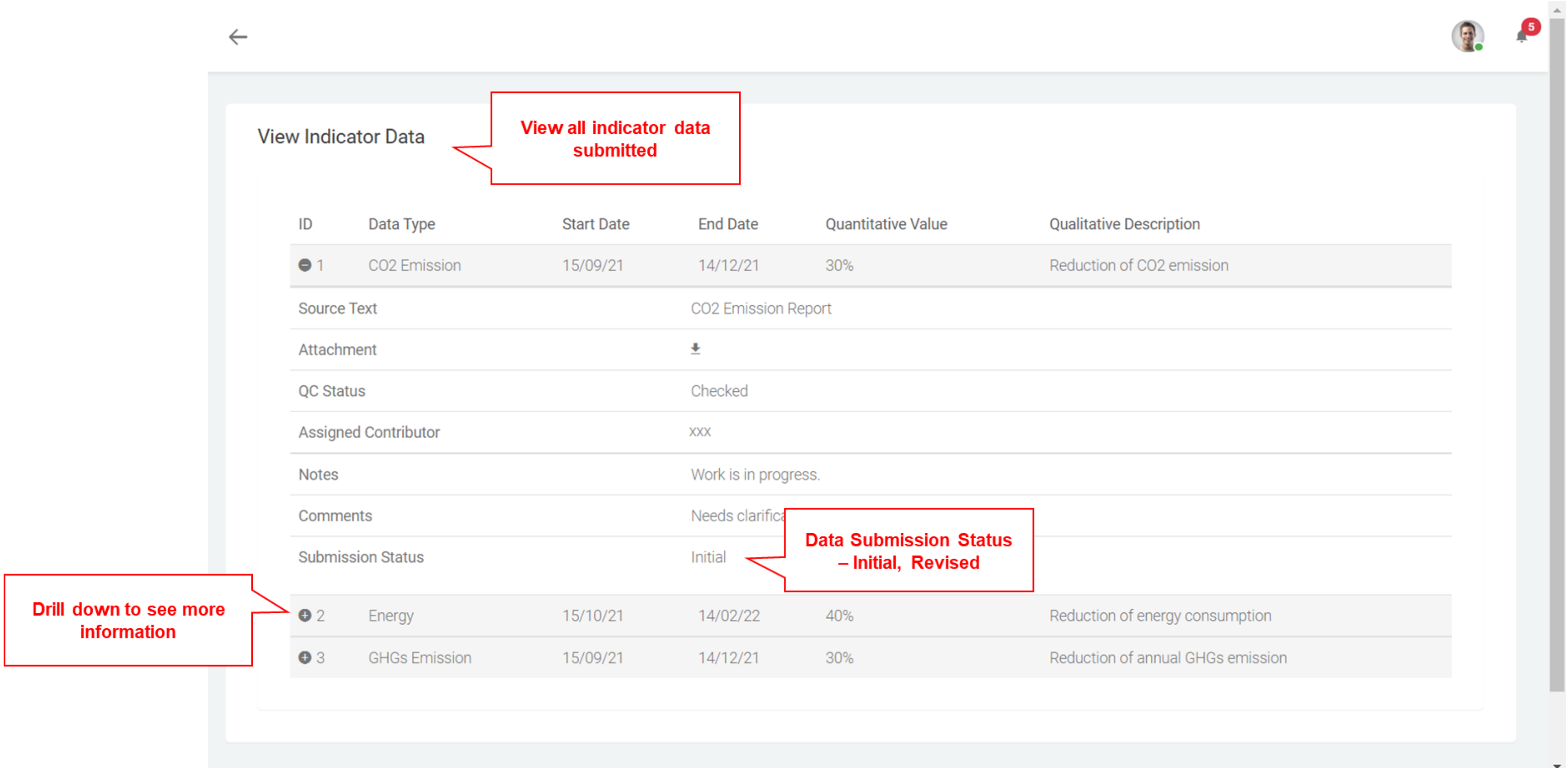


Figure 33: View Indicator Data page

Screen 3: Indicator Details (cont.)

Figure 34: Indicator Details Visualisation

The table below provides a description on fields shown on the screen.

Data Input

Title	Description	Data Type	Mandatory (Y/N)
Indicator Details			
Identifier	System generated unique identifier for each Indicator	Text	View Only
Name	Name of Indicator	Text	Y
Type of Indicator	Type of Indicator for e.g., progress Indicator/ GHG emission savings	Lookup	Y
Description	Description of Indicator	Text	Y
Methodologies and Assumptions	Which methodologies and assumption underlie this Indicator	Text	N
Measurement Unit	Which unit of measurement does this Indicator use if it is a quantitative Indicator	Text	N

Title	Description	Data Type	Mandatory (Y/N)
Indicator Details			
Monitoring Organisation	Organisation in charge of monitoring this Indicator	Lookup	N
Parent Indicator	Which higher level Indicators does this Indicator fall under.	Lookup	N
Progress Description	High level description of Indicator	Text	N
Notes	Notes to the Indicator	Text	N
Comments	Comments added to the Indicator	Text	N
Quantitative Indicator	Checking this box means the Indicator is quantitative and quantitative value is mandator		
Assigned Thematic Contributors			
Identifier	System generated unique identifier for each thematic contributor	Text	N
TWG	Which technical working group the contributor belongs to	Text	N
MRV Role	Which role the thematic contributor has	Text	N
Organisation	Which organisation the contributor belongs to	Text	N
Frequency and data submission details			
Submission Date	Date for first submission of data	Text	N
Frequency	Frequency of data submission (e.g. every 2 weeks)	Look up	N
Next Submission Date	System generated date for next submission of data based on frequency	Text	N
Allow Notifications?	Allow notifications for the contributor		N
Set reminder	Set reminders for the user to submit data (e.g. every week) User can add several reminders		N
Quality Assurance			
Verification Task Ref	Unique system generated reference for specific verification task	Text	View Only
Name	Name of verifier	Text	View Only
Organisation	Organisation of Verifier	Text	View Only
Task Status	Status of verification task (In Progress, Completed)	Text	View Only
Date Completed	Date Verification task completed	Text	View Only
QA Status	Quality assurance status: not verified, verified, need correction	Text	View Only
Comments	Button to view Comments added by verifier. Clicking button will open pop-up	Button	

Title	Description	Data Type	Mandatory (Y/N)
Data Source			
Data Source Text	Description of the data source	Text	N

Table 20: Data Input for Indicator Details

User Action	Description
Edit	Button used to unlock fields available for edit
Comments	Button to view Comments added by verifier. Clicking button will open pop-up
Assign Verifier	Button to allocate verifier to outcome
Data Source Attachment	Supporting documents for data source

B.3 Stakeholders Registry

The Stakeholders/organisation is used to gather, manage and link information on a broader set of key stakeholders for the national MRV system that may or may not have access to and/or use the platform as users. The Stakeholder entity is designed to track who is who in the provision of data, data analysis and users of data associated with the NDC registry. Coordinators can create access for external users from this module.

System must allow coordinators to create **Stakeholders** as follow:

1. Organisation
2. *Individual*

i. Organisations

Functional Requirement for Stakeholder Registry Management

Func Req #	Requirement Description
B.3.1	Coordinators will be able to **create/edit Organisations** on the system.
B.3.2	Coordinators shall have access to **deactivate an Organisation** if no longer applicable or relevant. All associated data is unaffected, i.e., linked entities remain on the platform for reference purposes.
B.3.3	The system should **generate a list of all Organisations** created and allow the user to edit an entity by clicking on it. The system shall allow Coordinators to **view the list of Organisations** using filters such as Thematic Area, Organisation Type.
B.3.4	System must allow Coordinators to link individuals to an Organisation.

Table 21: Stakeholder Registry Management - Organisations

Screen 1: List of Organisations

This screen displays the list of all Organisations in a tabular structure with key fields which can also be used as filter. Top level organisations are displayed with an option to drill down and view child organisations. User can create new organisations through webform or by using Excel template which will generate a pop-up for template download and data upload.

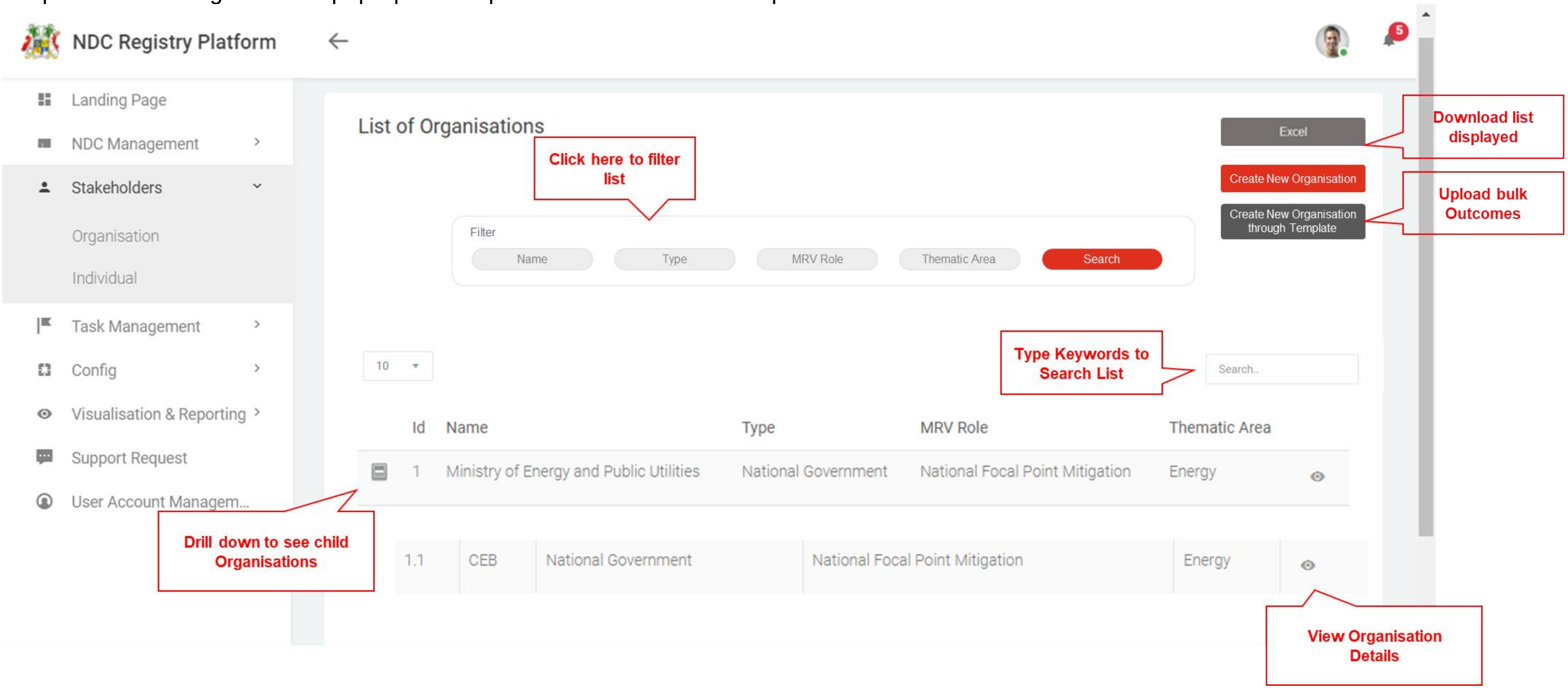


Figure 35: Organisations' list

The table below provides a description on fields shown on the screen.

Data Input

Title	Description	Data Type	Mandatory (Y/N)
Filter	These fields can be used to filter the list of Organisations using the following: name, type, MRV Role, Thematic Area		
Id	System generated unique identifier for each Organisation	Text	View Only
Name	Name of Organisation	Text	View Only
Type	Type of Organisation	Text	View Only
MRV Role	MRV Role	Text	View Only
Thematic Area	Which TWG organisation belongs to	Text	View Only

Table 22: Data Input for List of Organisations

User Action	Description
	Button used to drill down into an Intervention to see child Interventions.
	Button used to view more details for a specific Intervention. Clicking will navigate to detailed Intervention view.
	Button used to open popup which displays linked Outcomes, Intervention and Indicators.
Excel	Button used to generate an excel document with information displayed for all Interventions.
Create New Organisation	Button used to create new Organisation.
Search..	Field used to search Intervention based on keywords.
Create New Organisation through Template	Button used to add organisations through Excel template.

Screen 2: Organisation Details

This screen displays details of a specific organisation. If a user clicks on “edit”, fields will be unlocked for the user to edit changes. The screen also displays sub-Organisations/ child Organisations to the main Organisations as well as linked Individuals. A similar screen will be used to create a new organisation.

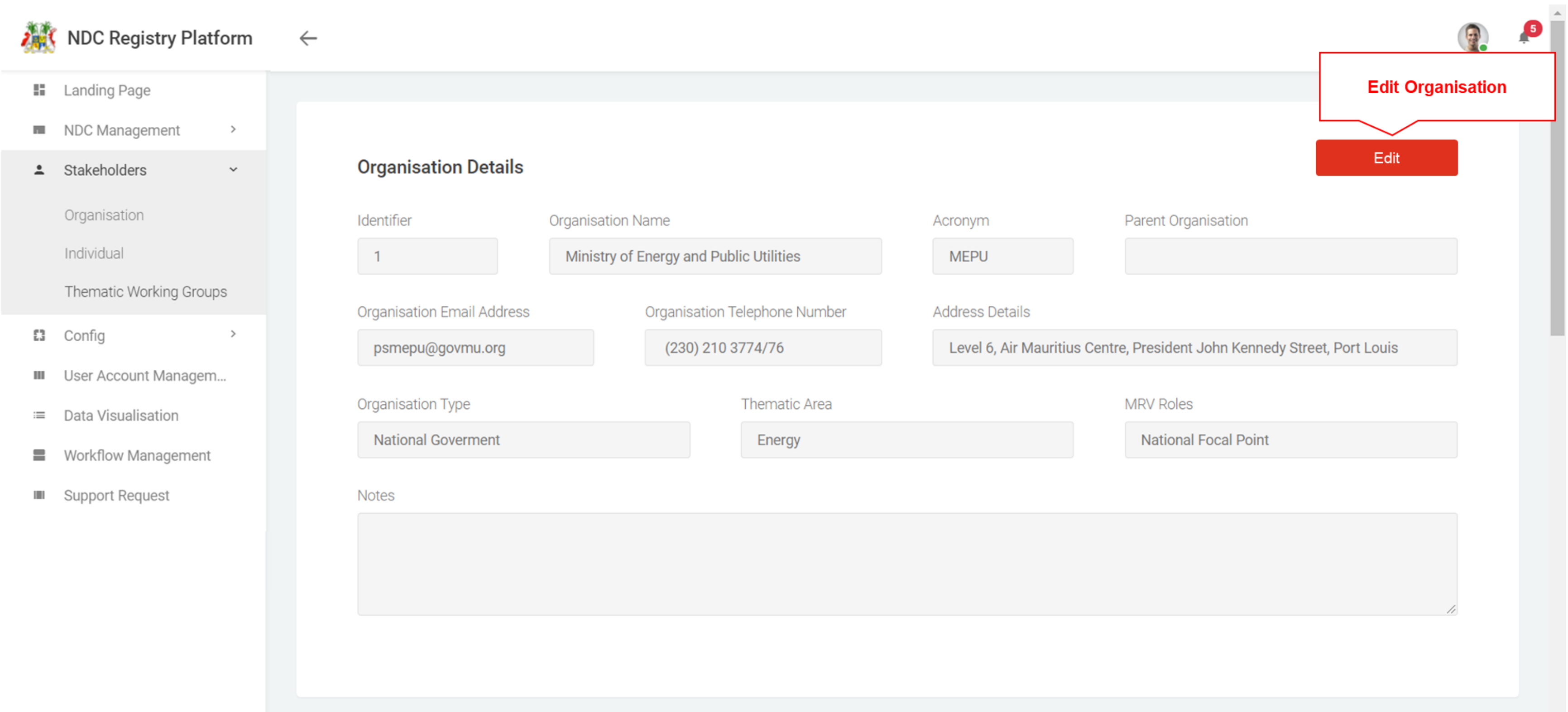


Figure 36: Organisation Details

Screen 2: Organisation Details (Cont.)

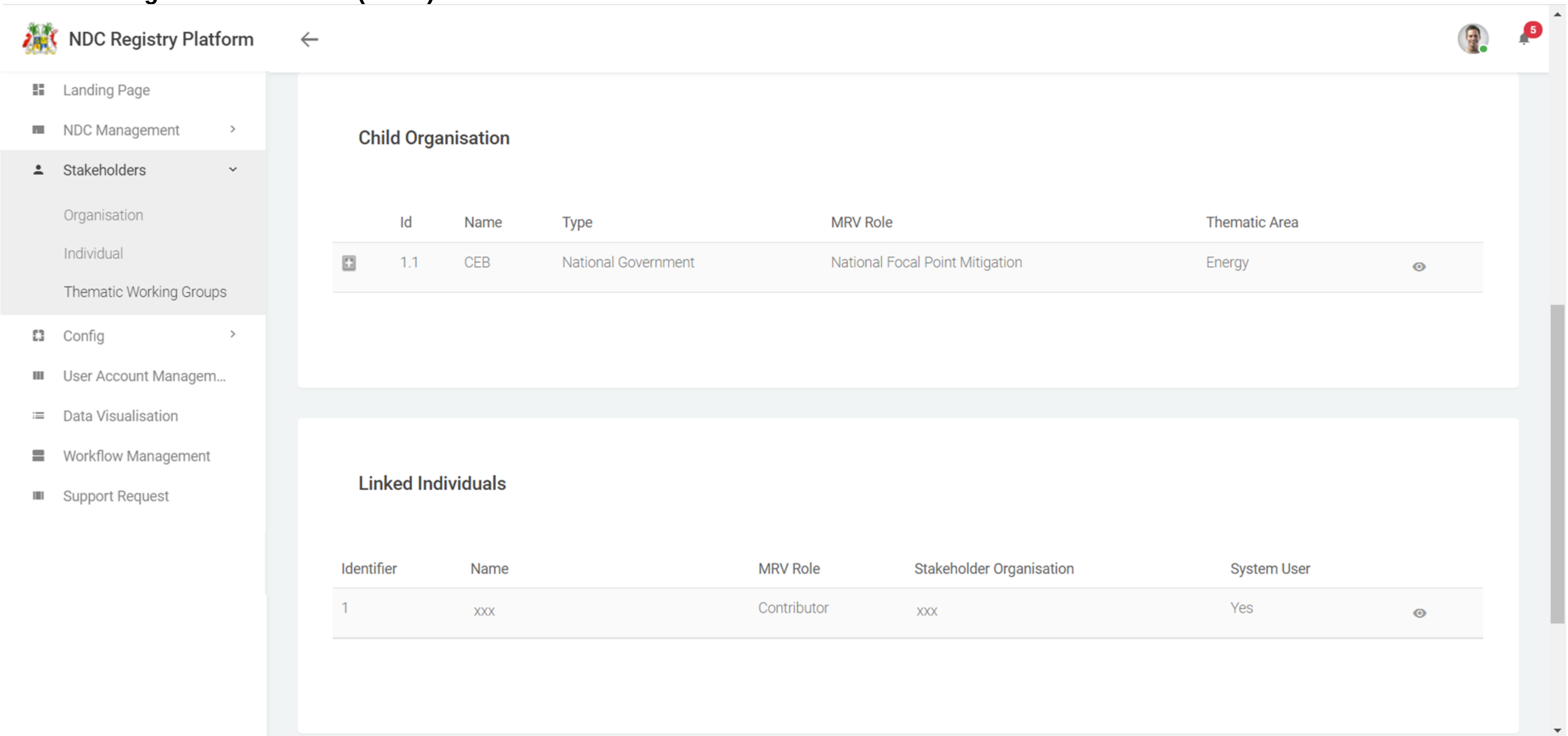


Figure 37: Organisation Details (End of Page)

The table below provides a description on fields shown on the screen.

Data Input

Title	Description	Data Type	Mandatory (Y/N)
Identifier	System generated unique identifier for each Organisation	Text	View Only
Organisation Name	Legal name of Organisation	Text	Y
Acronym	Acronym of Organisation	Text	Y
Parent Organisation	Name of parent organisation	Lookup	N
Email Address	Email Address of organisation	Text	Y
Telephone Number	Telephone number of Organisation	Text	Y
Address	Physical address of organisation	Text	Y
Organisation Type	Type of Organisation (e.g. governmental, NGO, etc.)	Lookup	Y
Thematic Area	TWG of Organisation	Multiselect	N
MRV Roles	Roles of Organisation	Multiselect	N
Notes	Notes to the Organisation	Text	N

Table 23: Data Input for Organisations Details

User Action	Description
Edit	Button used to unlock fields available for edit

ii. Individuals

Functional Requirement for Stakeholder Registry Management

Func Req #	Requirement Description
B.3.5	Coordinators will be able to **create/edit individuals** on the system. System must allow Coordinators to assign **permission groups** to Individuals including: 1. Thematic User 2. Verifiers Coordinators will need to allocate Thematic Users to a working group upon creation of the individual. Coordinator will need to assign role of Thematic Owner or Thematic Contributor to the user.
B.3.6	System must allow coordinator to create a system user from this page by selecting the option “system user”. Once registration is complete, the system sends a notification to the registered stakeholder on their email address with their logins and One Time Password (OTP). The user will be required to create a new password on first time login.
B.3.7	Coordinators shall have access to **deactivate an Individual** if no longer applicable or relevant. All associated data is unaffected, i.e., linked entities remain on the platform for reference purposes.
B.3.8	The system should **generate a list of all Individuals** created and allow the user to edit an entity by clicking on it. The system shall allow Coordinators to **view the list of Individuals** using filters such as Thematic Area, system user.
B.3.9	**Individual User Roles** 1. Thematic Owners Thematic owners are responsible for all data to be submitted as part of their Thematic Working Group (TWG). They have the following roles: • View Thematic Contributors in their TWG • View tasks assigned and status • View data submitted by their TWG • View visualisations applicable to the TWG. • Edit profile information • Update QC Status • Edit Interventions • Create and assign indicators 2. Thematic Contributors Thematic Contributors will do data input on the platform. They will have the following roles:

Func Req #	Requirement Description
	• View list of tasks assigned and update status of task • Input data on system based on tasks assigned • View data submitted • Edit profile 3. Verifiers Verifiers will be independent persons responsible for conducting quality assurance on data submitted. They will have the following roles: • View list of tasks assigned and update status of task • View data submitted by TWG and conduct QA • Update QA Status

Table 24: Stakeholder Registry Management - Individual

Screen 1: List of Individuals

This screen displays the list of all Individuals in a tabular structure with key fields which can also be used as filter. User can create new individuals through webform or by using Excel template which will generate a pop-up for template download and data upload.

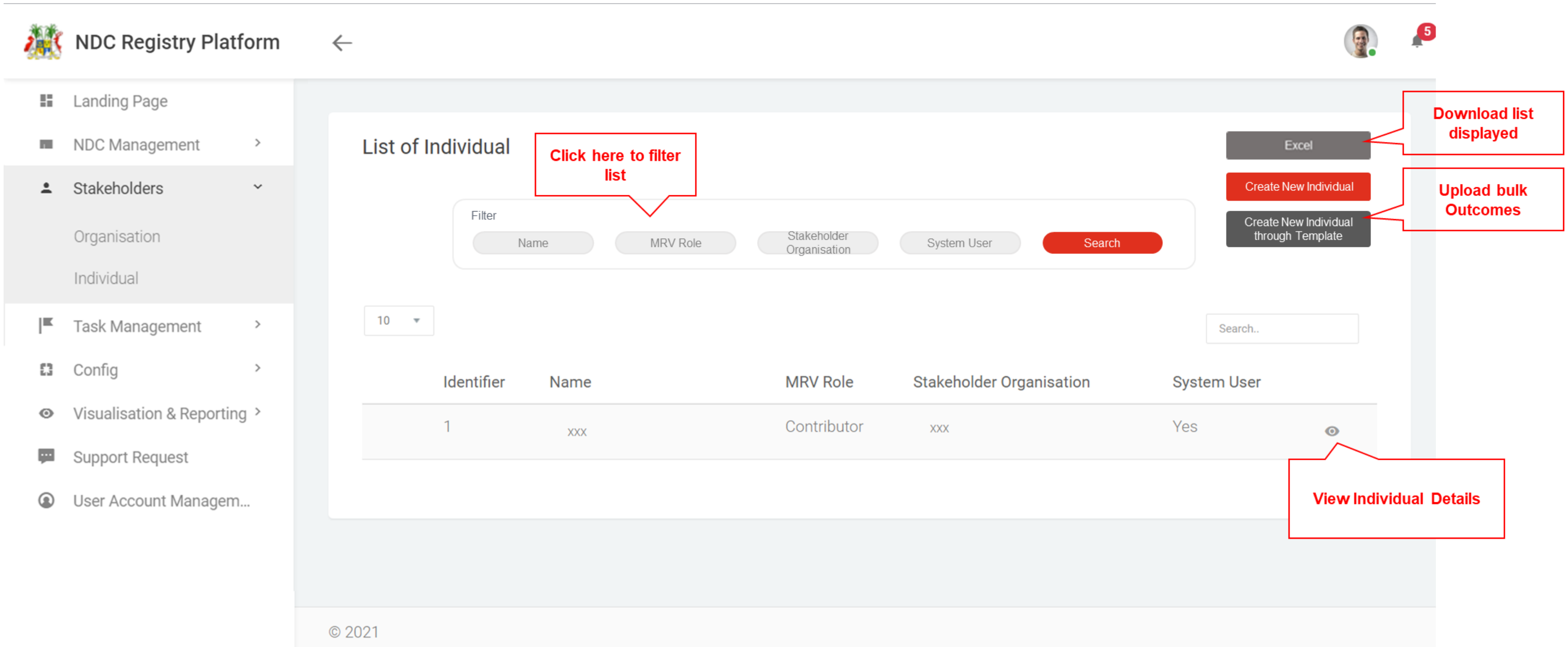


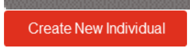
Figure 38: List of Individuals

The table below provides a description on fields shown on the screen.

Data Input

Title	Description	Data Type	Mandatory (Y/N)
Filter	These fields can be used to filter the list of Individuals using the following: name, MRV Role, Stakeholder Individual, System User		
Id	System generated unique identifier	Text	View Only
Name	Name of Individual	Text	View Only
Stakeholder Organisation	Organisation this stakeholder belongs to	Text	View Only
System User	Does the Stakeholder have access to the system?	Text	View Only

Table 25: Data Input for List of Individuals

User Action	Description
	Button used to view more details for a specific Individual. Clicking will navigate to detailed Individual view.
	Button used to generate an excel document with information displayed for all Individuals.
	Button used to create new Individual on the system.
	Field used to search Individual based on keywords.
	Button used to create new Individual through Excel template.

Screen 2: Individual Details

This screen displays details of a specific Individual. If a user clicks on “edit”, fields will be unlocked for the user to edit changes. The screen also displays linked Organisations. A similar screen will be used to create a new individual.

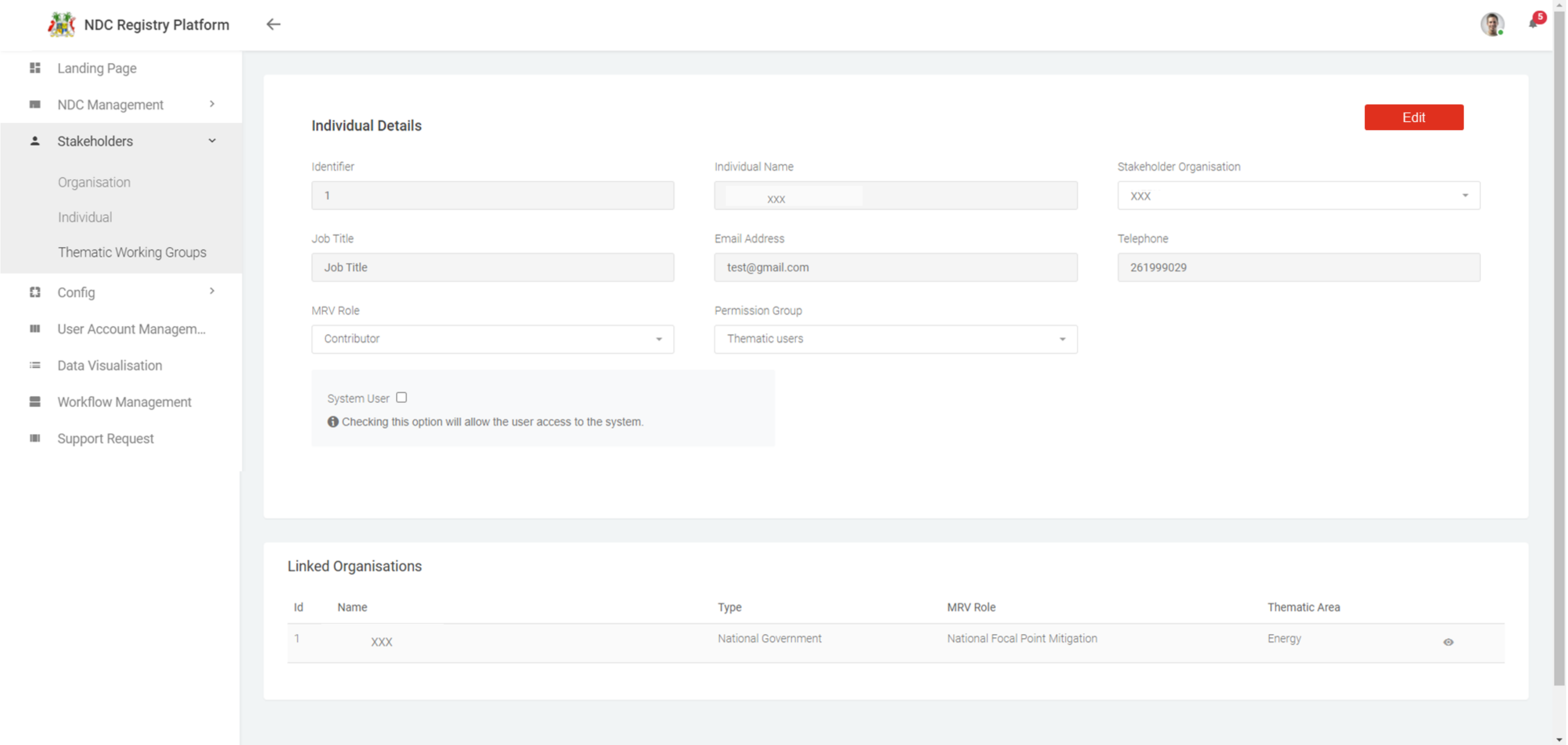


Figure 39: Individual details

The table below provides a description on fields shown on the screen.

Data Input

Title	Description	Data Type	Mandatory (Y/N)
Identifier	System generated unique identifier	Text	View Only
Individual Name	Legal name of Individual	Text	Y
Stakeholder Organisation	Organisation this stakeholder belongs to	Text	Y
Job Title	Title of the Individual	Lookup	Y
Email Address	Email Address of Individual	Text	Y
Telephone Number	Telephone number of Individual	Text	Y
MRV Roles	Roles of Organisation	Multiselect	N
Permission Group	If user is a system user, what permission group they fall into: Thematic user, Verifier	Lookup	N
System User	Checking this will provide system access to the individual. System will automatically generate the username and password.	Button	N

Table 26: Data Input for Individual Details

User Action	Description
Edit	Button used to unlock fields available for edit.

B.4 Task Management

This module will allow Coordinators to create and assign tasks to System Users including Contributors and Verifiers.

Func Req #	Requirement Description
B.4.1	The system must allow the Coordinator to create the following tasks and allocate to system users: 1. Indicator Data Submission – Thematic Coordinator 2. Quality Assurance – Independent Verifier The system must also allow a thematic owner to create the following task: 1. Make correction to Indicator data – Thematic Contributor
B.4.2	The system must provide a list for Coordinators to view all tasks assigned. List must provide status of task: Pending, Delay, Submitted.
B.4.3	System must also allow Coordinator to create new tasks for system users. Coordinator to create tasks through the following ways: 1. Create task and allocate through task Management tab 2. Create task and allocate directly on Outcome, Intervention or Indicator page
B.4.4	**Indicator Data Submission** When allocating an Indicator to a contributor, a task will be created for each data submission required. For e.g., if data needs to be submitted monthly, 12 tasks will be created for the contributor for a year. Once data has been submitted for a contributor, the task will be set as complete.
B.4.5	**Quality Assurance** System must allow Coordinators to create QA tasks and assign to independent verifiers. QA tasks will be created from task management module and Coordinator will be able to select Outcomes, Interventions and Indicators to be verified. When a specific outcome is selected to be verified, all child outcomes, linked Interventions and linked Indicators will be automatically populated in list to be verified. When a specific Intervention is selected to be verified, all child Interventions and linked Indicators will be automatically populated in list to be verified. Each Outcome, Intervention and Indicator page must display a QA History with all QA tasks completed and in progress.

Table 27: Task Management

Screen 1: View Task Status (Indicator Data)

The following screen will allow a coordinator to view a list of all tasks assigned to TWG for Indicator data submission. The Coordinator will be able to create a new task from this page.

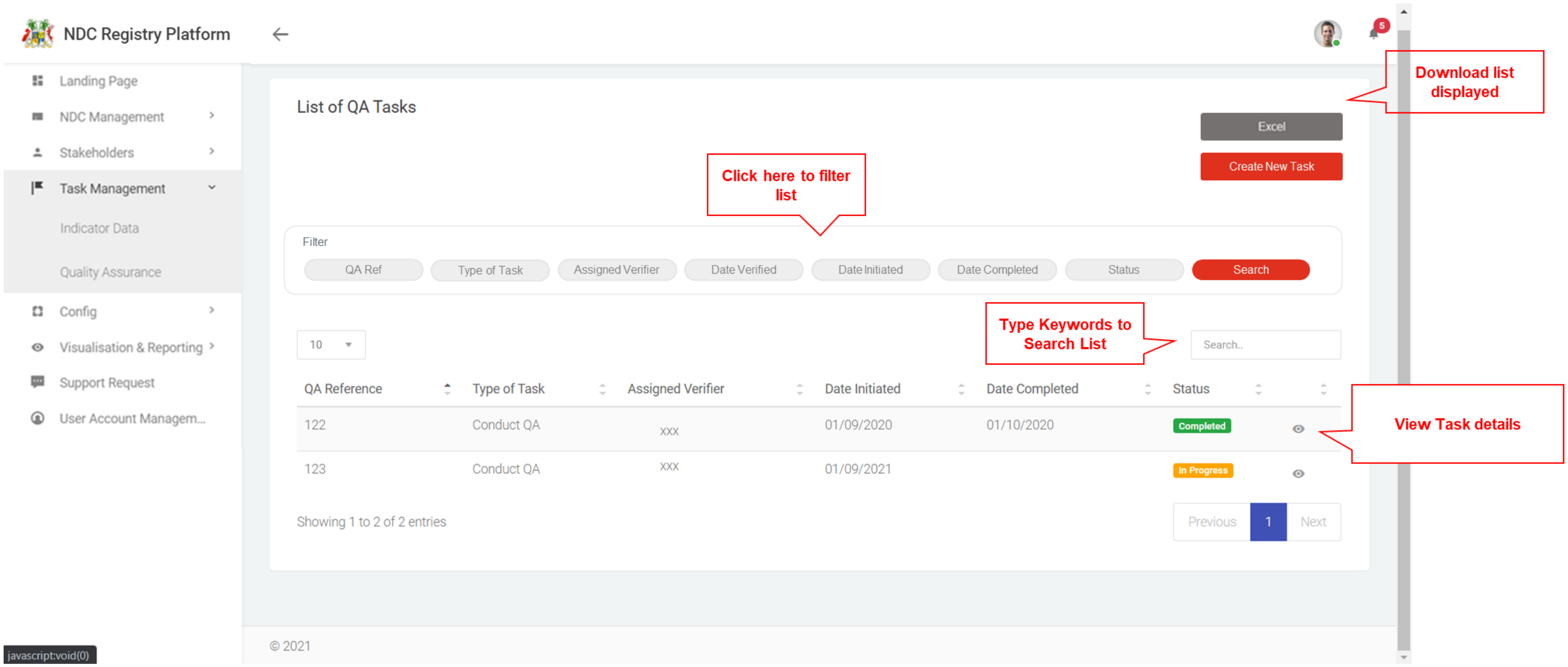


Figure 40: Status of Indicators Data

The table below provides a description on fields shown on the screen.

Data Input

Title	Description	Data Type	Mandatory (Y/N)
Filter	These fields can be used to filter the list of tasks assigned using the following: Task Type, Name, Submission Date, Assigned to, TWG, Status, QC Status		
Id	System generated unique identifier for each task	Text	View Only
Task Type	Type of task assigned: Submit Indicator data, correct Indicator data	Text	View Only
Name of Indicator	Name of Indicator for data submission	Text	View Only
Submission Date	Deadline for submission	Text	View Only
Assigned to	Contributor assigned to Indicator	Text	View Only
TWG	TWG of Contributor		
Status	Status of task: pending, delayed, submitted	Text	View Only

Table 28: Data Input for List of Submission Tasks

User Action	Description
	Button used to view more details for a specific System User. Clicking will navigate to detailed System User view.
	Field used to search task based on keywords.

Screen 2: Create/Edit Task

The following screen displays details of a specific task. If a user clicks on "edit", fields will be unlocked for the user to edit changes or deactivate Indicator. A similar screen can be used to create a new task which will allow the coordinator to assign one specific Indicator to a Thematic Contributor and select the frequency and reminders for data submission. The screen is similar to B.2 – Indicators.

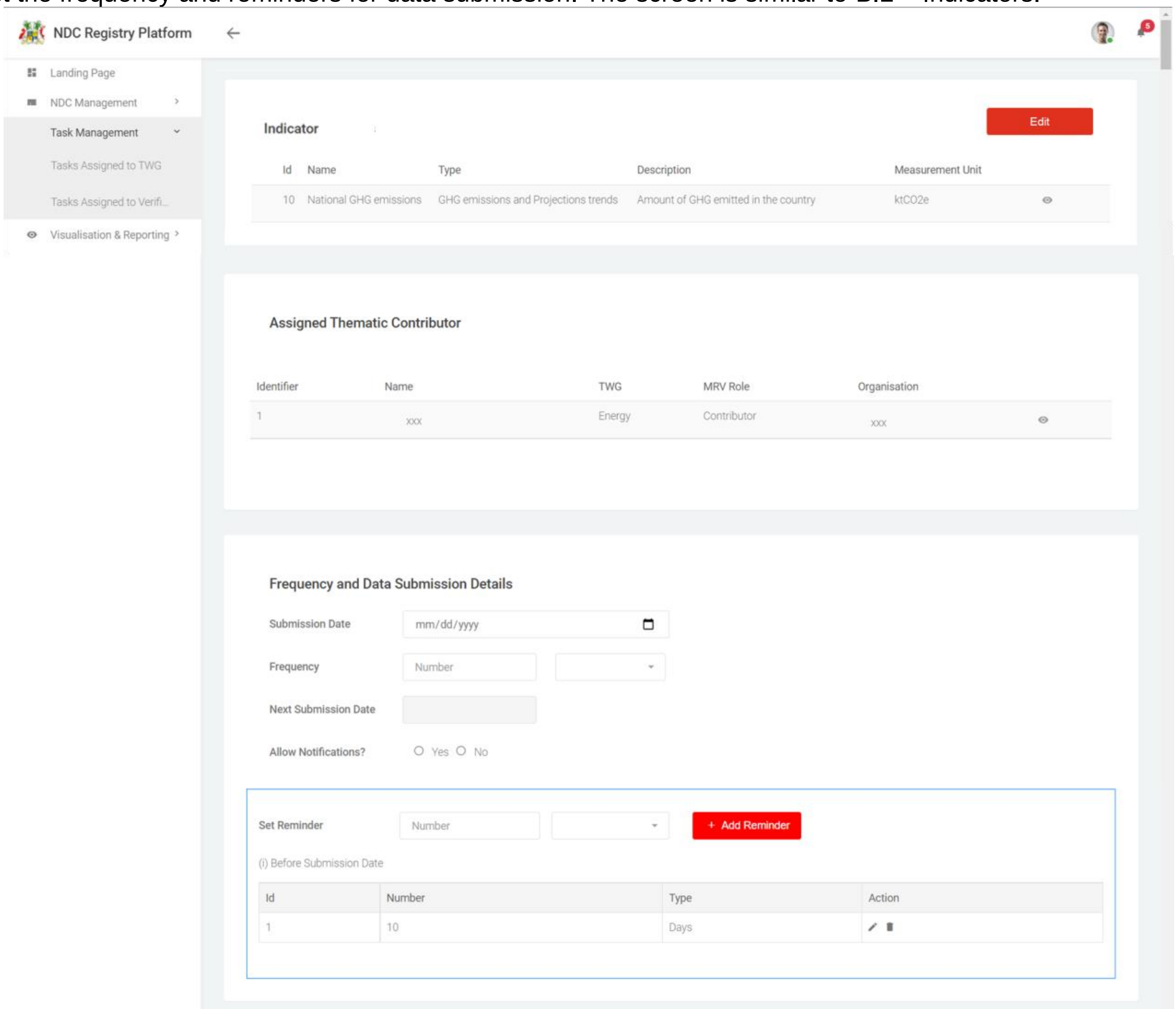


Figure 41: Data Submission Details

The table below provides a description on fields shown on the screen.

Title	Description	Data Type	Mandatory (Y/N)
Indicator Details			
Identifier	System generated unique identifier for each Indicator	Text	View Only
Name	Name of Indicator	Text	Y
Type of Indicator	Type of Indicator for e.g. progress Indicator/ GHG emission savings	Lookup	Y
Description	Description of Indicator	Text	Y
Measurement Unit	Which unit of measurement does this Indicator use, if it is a quantitative Indicator	Text	N
Quantitative Indicator	Checking this box means the Indicator is quantitative and quantitative value is mandator		
Assigned Thematic Contributors			
Identifier	System generated unique identifier for each thematic contributor	Text	N
TWG	Which technical working group the contributor belongs to	Text	N
MRV Role	Which role the thematic contributor has	Text	N
Organisation	Which organisation the contributor belongs to	Text	N
Frequency and data submission details			
Submission Date	Date for first submission of data	Text	N
Frequency	Frequency of data submission (e.g. every 2 weeks)	Look up	N
Next Submission Date	System generated date for next submission of data based on frequency	Text	N
Allow Notifications?	Allow notifications for the contributor		N
Set reminder	Set reminders for the user to submit data (e.g. every week) User can add several reminders		N

Table 29: Data Input for Create Submission Task

User Action	**Description**
	Button used to unlock fields available for edit.

Screen 3: View Task Status (QA)

The following screen will allow a coordinator to view a list of all tasks assigned to Verifiers for QA. The Coordinator will be able to create a new task from this page.

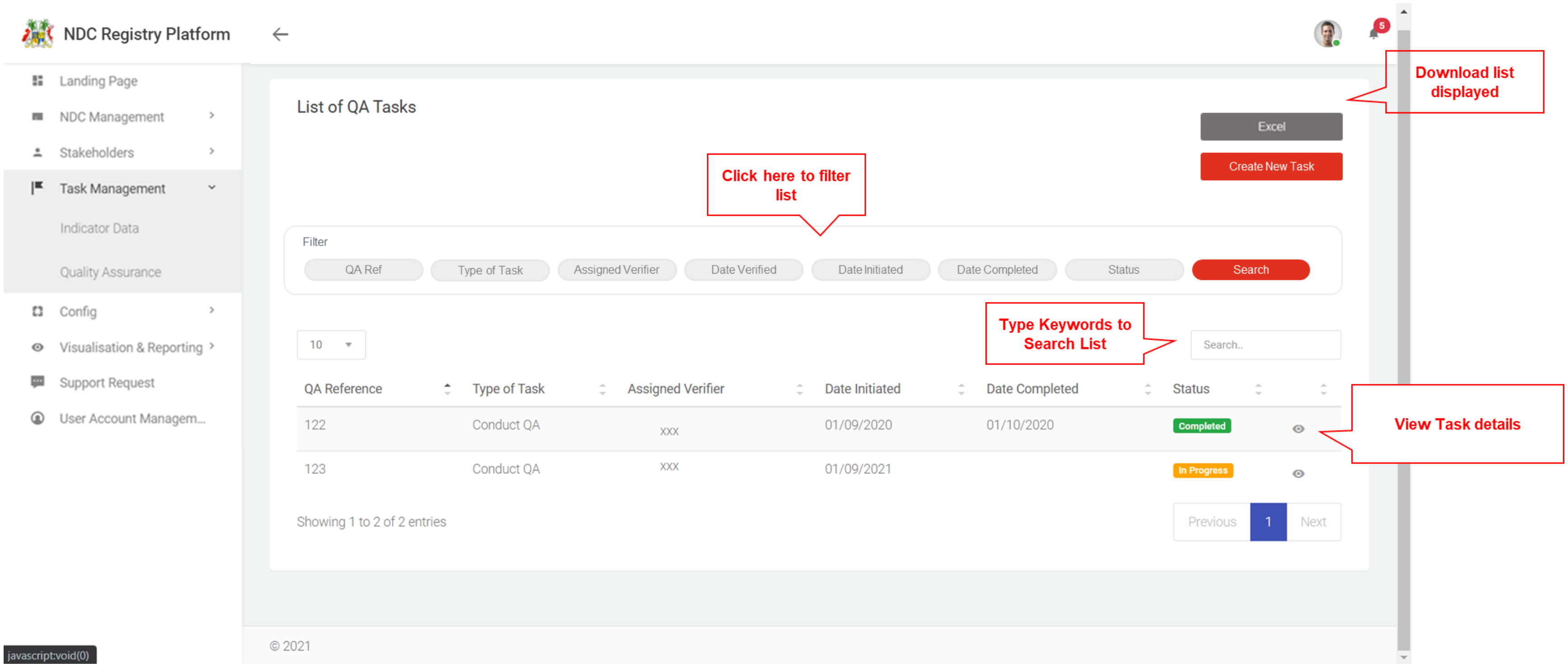


Figure 42: List of QA Tasks

The table below provides a description on fields shown on the screen.

Data Input

Title	Description	Data Type	Mandatory (Y/N)
Filter	These fields can be used to filter the list of tasks assigned using the following: QA Ref, Task Type, Assigned Verifier, Date Initiated, Date Completed, Status		
QA Reference	System generated unique identifier for each task	Text	View Only
Task Type	Type of task assigned: Conduct QA	Text	View Only
Assigned Verifier	Verifier assigned to QA Task	Text	View Only
Date Initiated	Date QA Initiated	Text	View Only
Date Completed	Date QA Task Completed	Text	View Only
Status	Status of task: In Progress, Completed	Text	View Only

Table 30: Data Input for List of QA Tasks

User Action	Description
	Button used to view more details for a specific System User. Clicking will navigate to detailed System User view.
	Field used to search task based on keywords

Screen 4: Create/Edit QA Task Details

The following screen will allow a coordinator to create/edit a QA task and assign to a verifier. The coordinator will also be able to assign specific outcomes, Indicators and Interventions to the QA task. Coordinator will be able to search for specific Items and add to QA list through Filter or free text search.

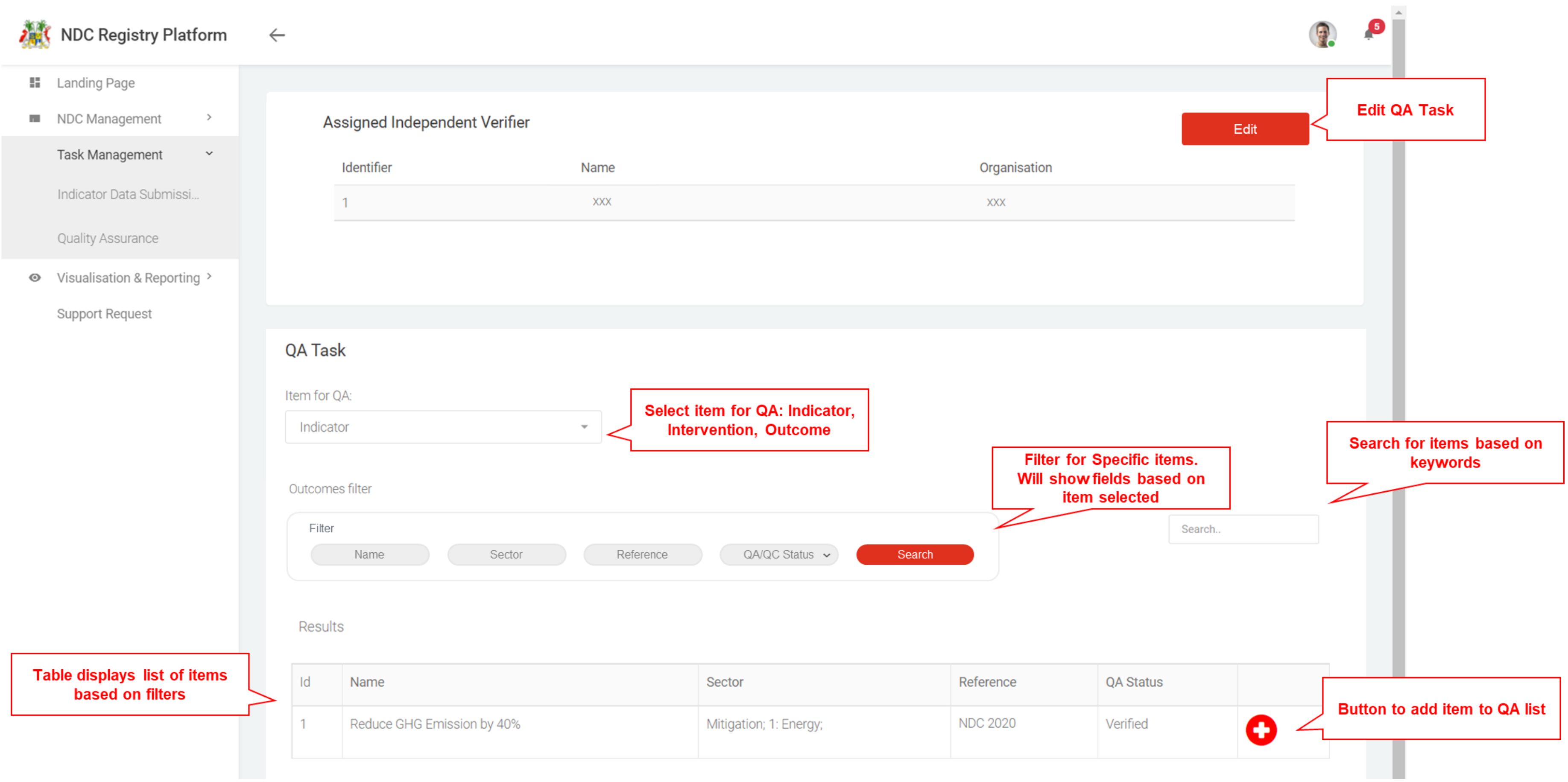


Figure 43: QA Task Details

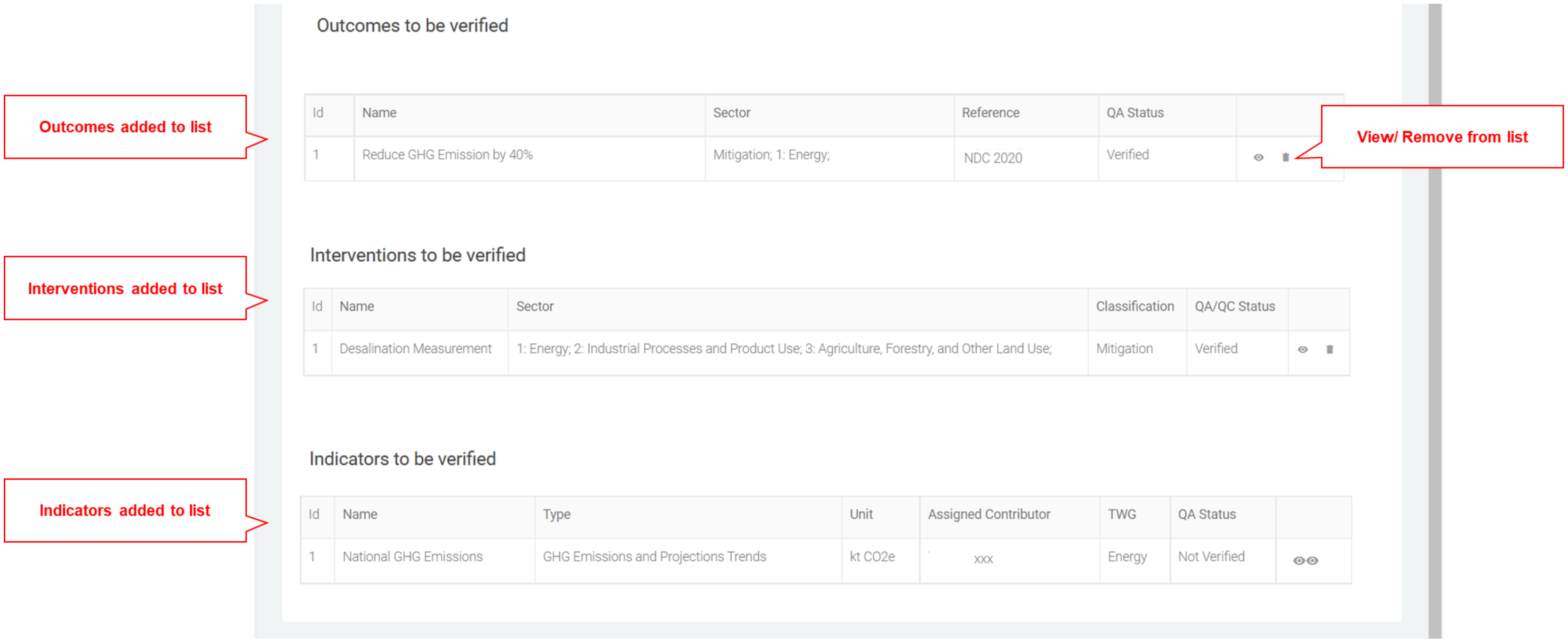


Figure 44:QA Tasks Details (continued)

Data Input

Title	Description	Data Type	Mandatory (Y/N)
Item for QA	Which item to search for QA: Outcome, Intervention, Indicator	Lookup	
Filter	Filter used to generate list of outcomes, Interventions, Indicators to add to QA		

Table 31: Data Input for QA Task Creation

User Actions	Description
	Button to add Indicator, Intervention, outcome to list of QA.

B.5 Configuration

Coordinators will access the configuration module to perform the following tasks

i. Manage Thematic Working Group
ii. Create/Deactivate Lookup Vocabularies

i. Manage Thematic Working Group

The system will allow coordinators to manage the thematic working groups.

Func Req #	Requirement Description
B.5.1	The system shall allow Coordinators to **create/edit thematic working groups.**
B.5.2	Coordinators shall have access to **deactivate a TWG** if no longer applicable or relevant. All associated data is unaffected, i.e., linked entities remain on the platform for reference purposes.
B.5.3	The system should **generate a list of all TWG** created and allow the user to edit an entity by clicking on it. The system shall allow Coordinator to **view the list of TWG** using filters such as Sector.
B.5.4	System must allow coordinators to **add Thematic users to one or more TWG**. Note to the above: A user can have both owner and contributor role for example, Owner in TWG A and Contributor in TWG B. However, a user cannot be both owner and contributor in the same TWG

Table 32: TWG

Screen 1: List of TWG

This screen displays the list of all TWG in a tabular structure with key fields which can also be used as filter.

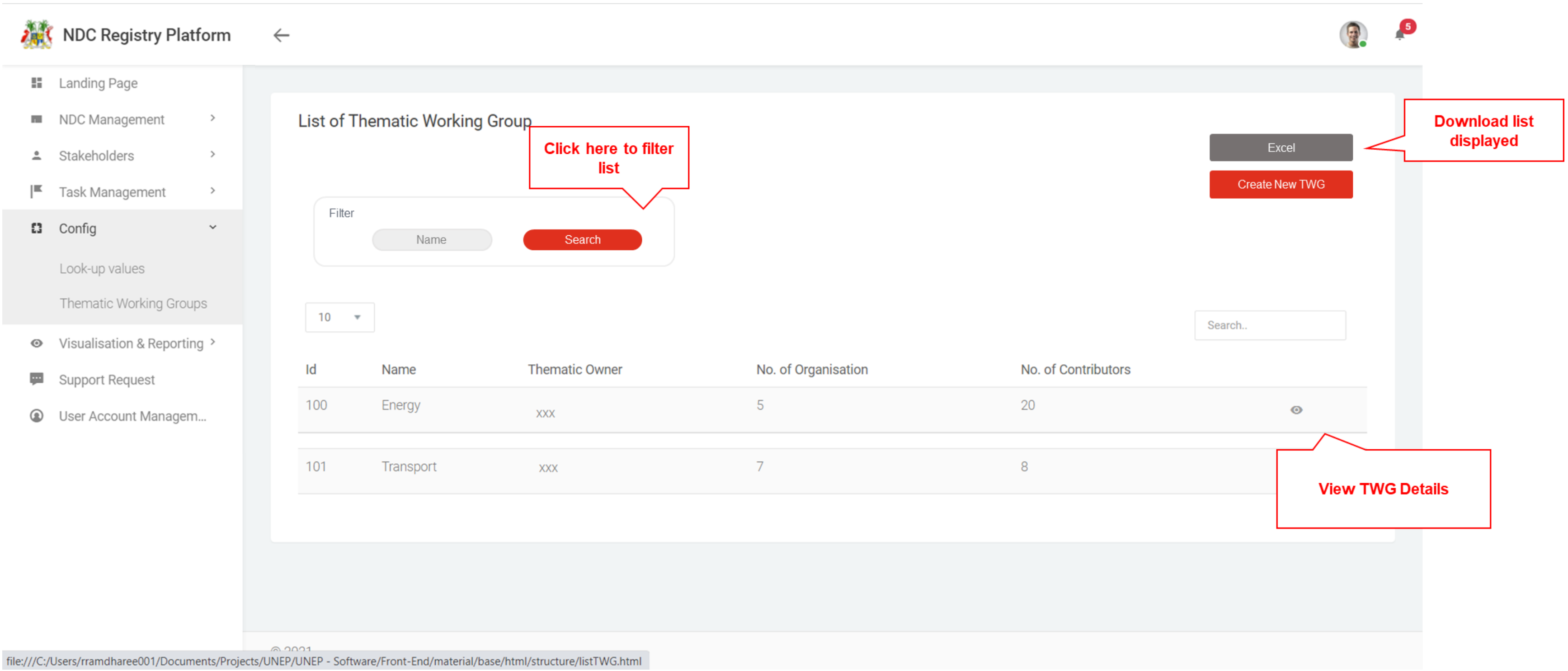


Figure 45: List of TWG

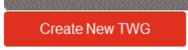
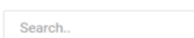
The table below provides a description on fields shown on the screen.

Data Input

Title	Description	Data Type	Mandatory (Y/N)
Filter	These fields can be used to filter the list of TWG using the following: Name		
Id	System generated unique identifier for each TWG	Text	View Only

Title	Description	Data Type	Mandatory (Y/N)
Name	Name of TWG	Text	View Only
No. Organisations	Number of organisations in TWG (System generated)	Text	View Only
No. Contributors	Number of Contributors in TWG (System Generated)	Text	View Only

Table 33: Data Input for TWG List

User Action	Description
	Button used to drill down into an Intervention to see child Interventions.
	Button used to view more details for a specific Intervention. Clicking will navigate to detailed Intervention view.
	Button used to generate an excel document with information displayed for all Interventions.
	Button used to create new TWG.
	Field used to search TWG based on keywords.

Screen 2: TWG Details

This screen displays details of a specific TWG. If a user clicks on “edit”, fields will be unlocked for the user to edit changes. User can link organisations and add Thematic Owner and Contributors. A similar screen will be used to create a new TWG.

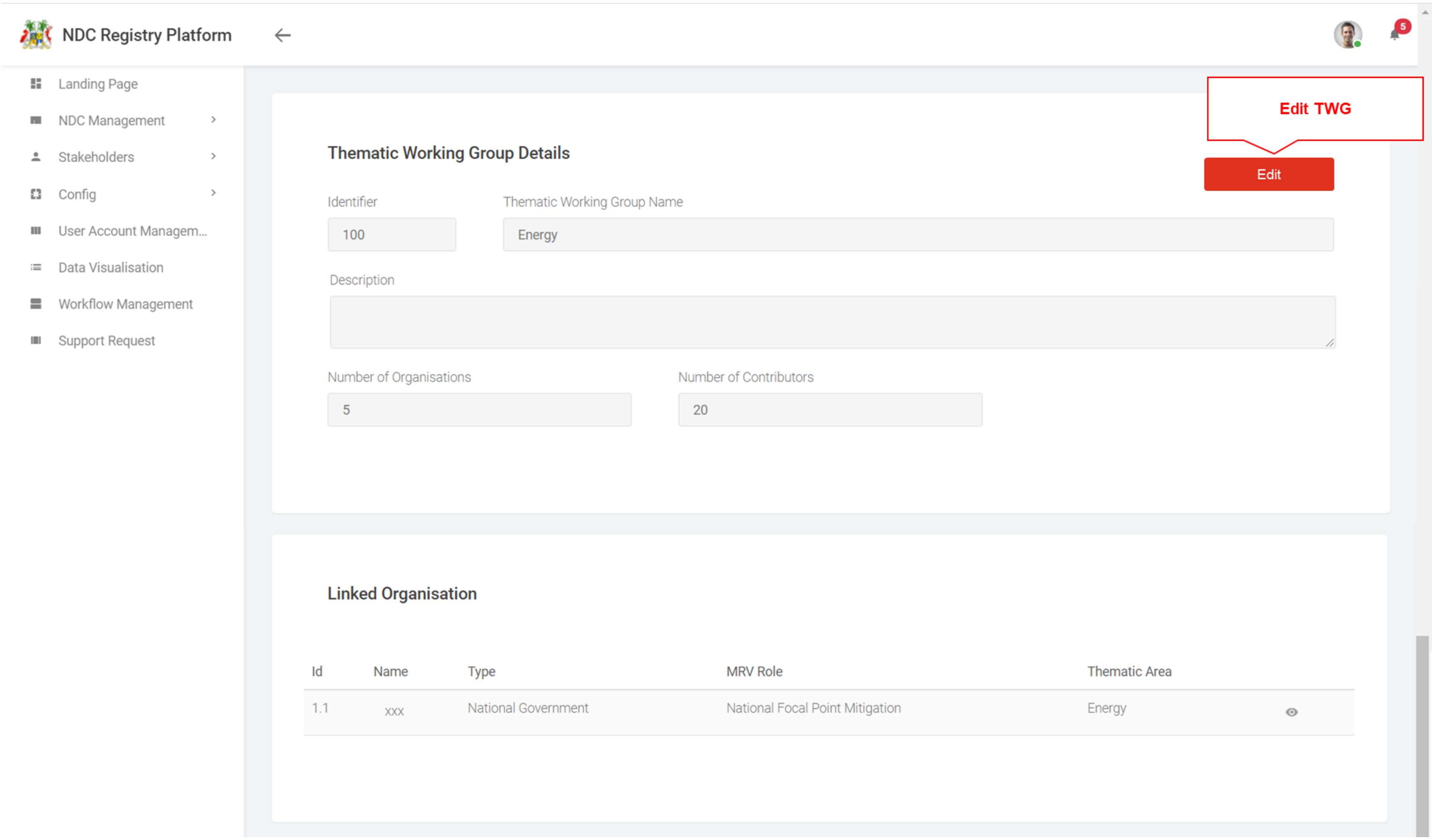


Figure 46: TWG Details

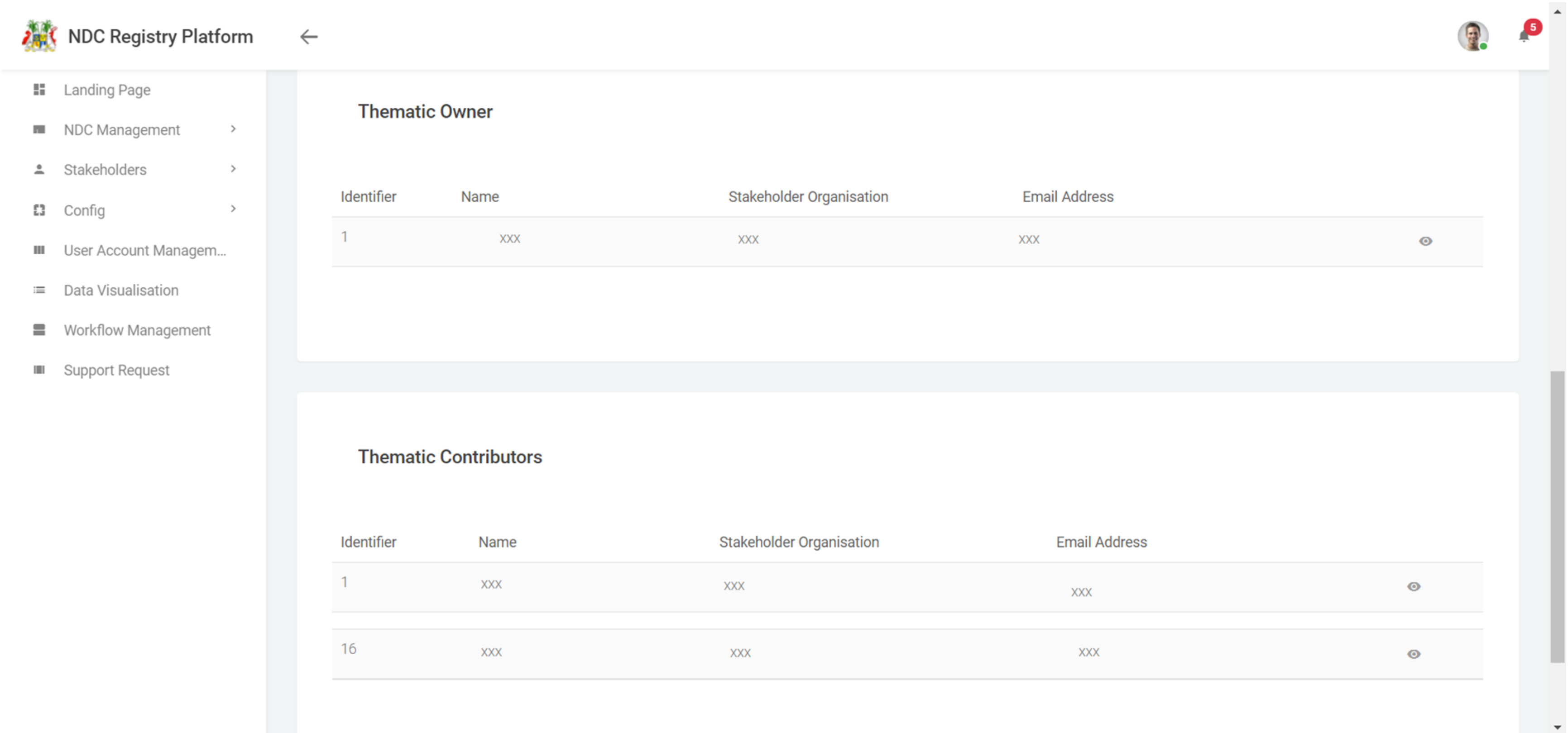


Figure 47: TWG Details (end of page)

The table below provides a description on fields shown on the screen.

Title	Description	Data Type	Mandatory (Y/N)
TWG Details			
Identifier	System generated unique identifier for each TWG	Text	View Only
TWG Name	Name of TWG	Text	Y
Number of Organisations (System generated)	Number of Organisations in TWG	Text	View Only

Number of Contributors (System Generated)	Number of Contributors in TWG	Text	View Only
Description	Description of TWG	Text	Y
Linked Organisations			
ID	Unique ID for organisation		Y
Name	Name of Organisation in TWG		Y
Type	Type of Organisation in TWG		Y
MRV Role	Role of Organisation		Y
Thematic Owner			
ID	ID of Owner		Y
Name	Name of Owner		Y
Stakeholder Organisation	Organisation of Owner		Y
Email	Email Address of Owner		Y
Thematic Owner			
ID	ID of Contributor		Y
Name	Name of Contributor		Y
Stakeholder Organisation	Organisation of Contributor		Y
Email	Email Address of Contributor		Y

Table 34: Data Input for TWG Details

User Action	Description
Edit	Button used to unlock fields available for edit.

ii. Lookup Vocabulary (Create/Deactivate)

The system will allow coordinators to update lookup values.

Func Req #	Requirement Description
B.5.5	The system shall allow Coordinators to **create lookup values** through the System Administration module. The vocabulary information will include details such as an identifier, a label, a definition/description. Example vocabularies include Sector (e.g., Energy, Waste), GHG Inventory transport data compiler), data types (e.g., baseline, ex-post, ex-ante, outcome), status values (e.g., planned, in progress, implemented, archived), gases (e.g., CO2, CH4, NO2) among others. *Refer to Appendix C for sample lookup* vocabularies.
B.5.6	Coordinators shall have access to **deactivate a lookup value** if no longer applicable or relevant. When terms are deactivated, associated data is unaffected e.g., Intervention entities that reference these lookup values remain on the platform.
B.5.7	The system shall allow users to **view, filter and sort a list of lookup values.**
B.5.8	User can export views of the lookup table vocabularies to Excel/Word tables.

Table 35: Lookup Vocabulary

Screen 1: List of Lookup Values

This screen will allow a user to view list of all lookup vocabularies and create new if needed.

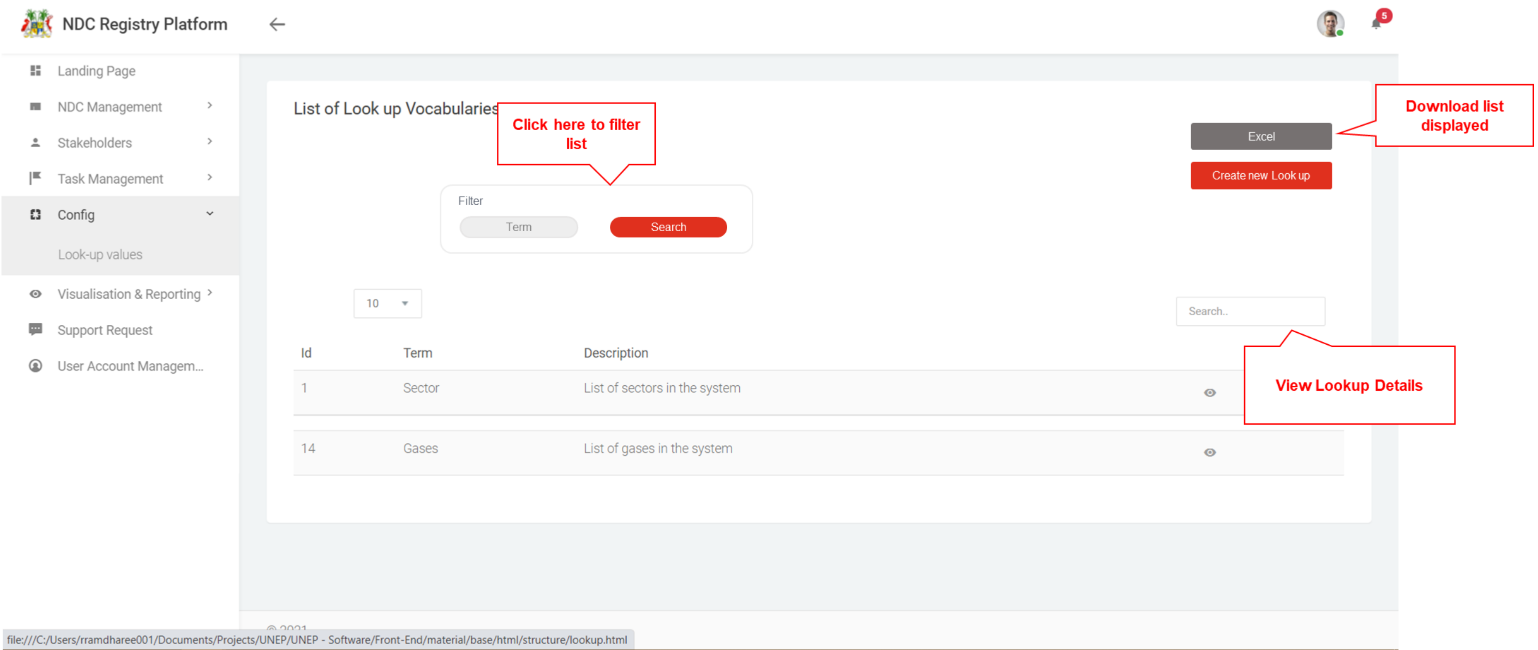


Figure 48: List of Lookup Values

The table below provides a description on fields shown on the screen.

Data Input

Title	Description	Data/ Action Type	Mandatory (Y/N)
Filter	These fields can be used to filter the list of Indicators using the following: Term		
Id	System generated unique identifier for each lookup vocabulary	Text	View Only
Term	Lookup Term	Text	View Only
Description	Description of Lookup term	Text	View Only

Table 36: Data Input for List of Lookup Values

User Action	Description
	Button used to view more details for a specific Indicator. Clicking will navigate to detailed Indicator view.
	Button used to generate an excel document with information displayed for all Indicators
	Button used to create new Lookup
	Field used to search Indicator based on keywords

Screen 2: Lookup Vocabulary Details

This screen will allow a user to view all lookup values and edit list of needed.

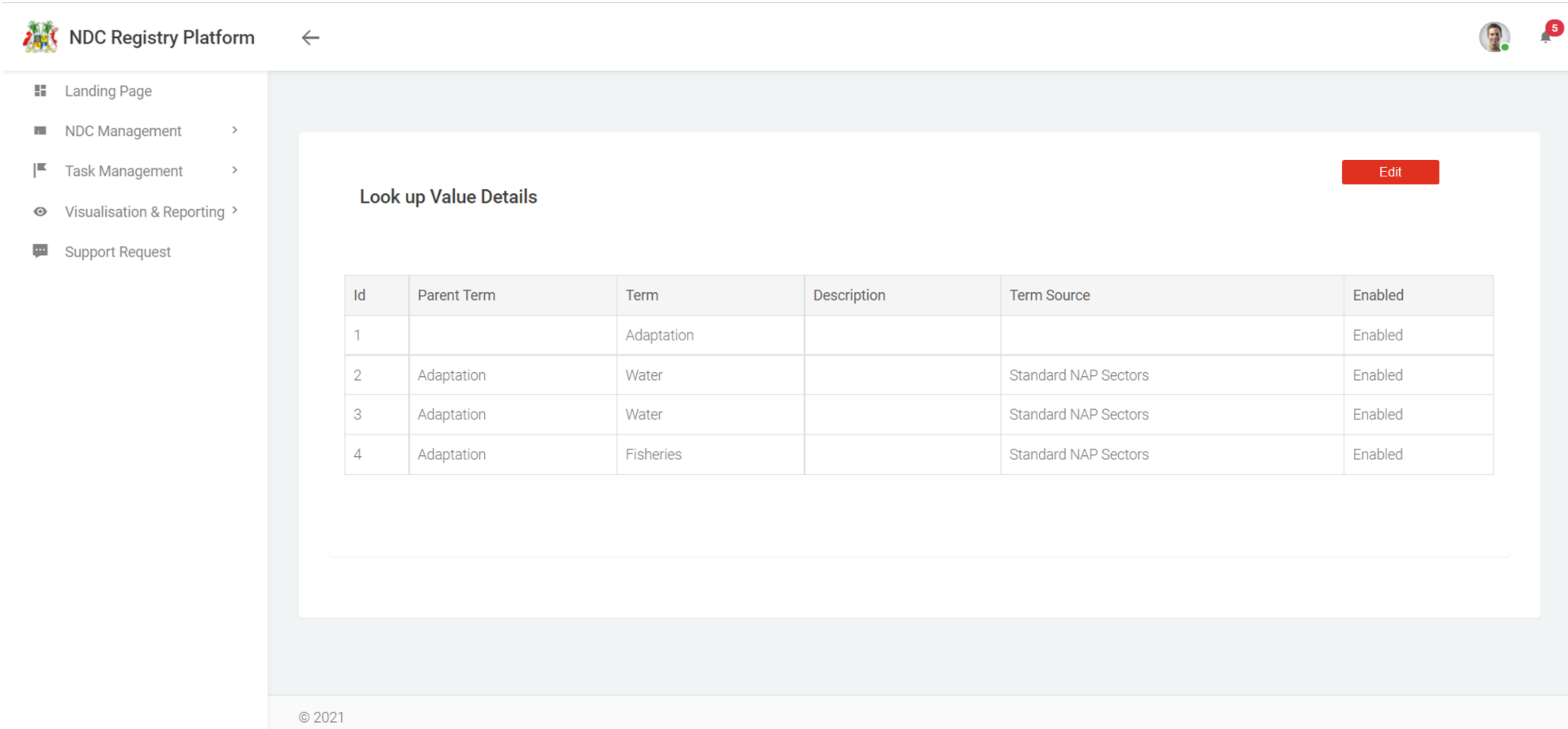


Figure 49: Lookup Vocab Details

The table below provides a description on fields shown on the screen.

Data Input

Title	Description	Data/ Action Type	Mandatory (Y/N)
Id	System generated unique identifier for each lookup vocabulary item	Text	View Only
Parent Term	Parent Term (informational only)	Text	View Only
Term	Lookup Term	Text	View Only
Description	Description of lookup term (Informational Only)	Text	View Only
Term Source	Source of Term (Informational Only)	Text	View Only

Enabled	Term enabled or disabled on system	Text	View Only

Table 37: Data Input for Lookup Values Details

User Action	**Description**
Edit	Edit button to unlock page

B.6 Data Visualisation and Reporting

Data will be visualised with simplified data tables and data visualisations. Users with access to the Data Visualisation Menu will be able to view data captured on each outcome, Interventions, Indicators by selecting filters such as geography, sector, subsector, status.

The table below illustrates the functional requirements for data visualisation and reporting.

Func Req #	Requirement Description
B.6.1	System must allow data to be visualised for quantitative Indicators through a time series chart. The user must be able to choose an Indicator and filter for the time period needed.
B.6.2	A dashboard can be set-up which will show live data as and when the database is being updated.
B.6.3	System must allow users to generate reports for outcomes, Interventions and Indicators. Users must be able to use filters to find specific reports required.

Table 38: Data Visualisation and Reporting

i. Dashboard and Visualisations

Screen 1: Indicator Visualisations

The following screen will allow users to visualise quantitative Indicators over time.

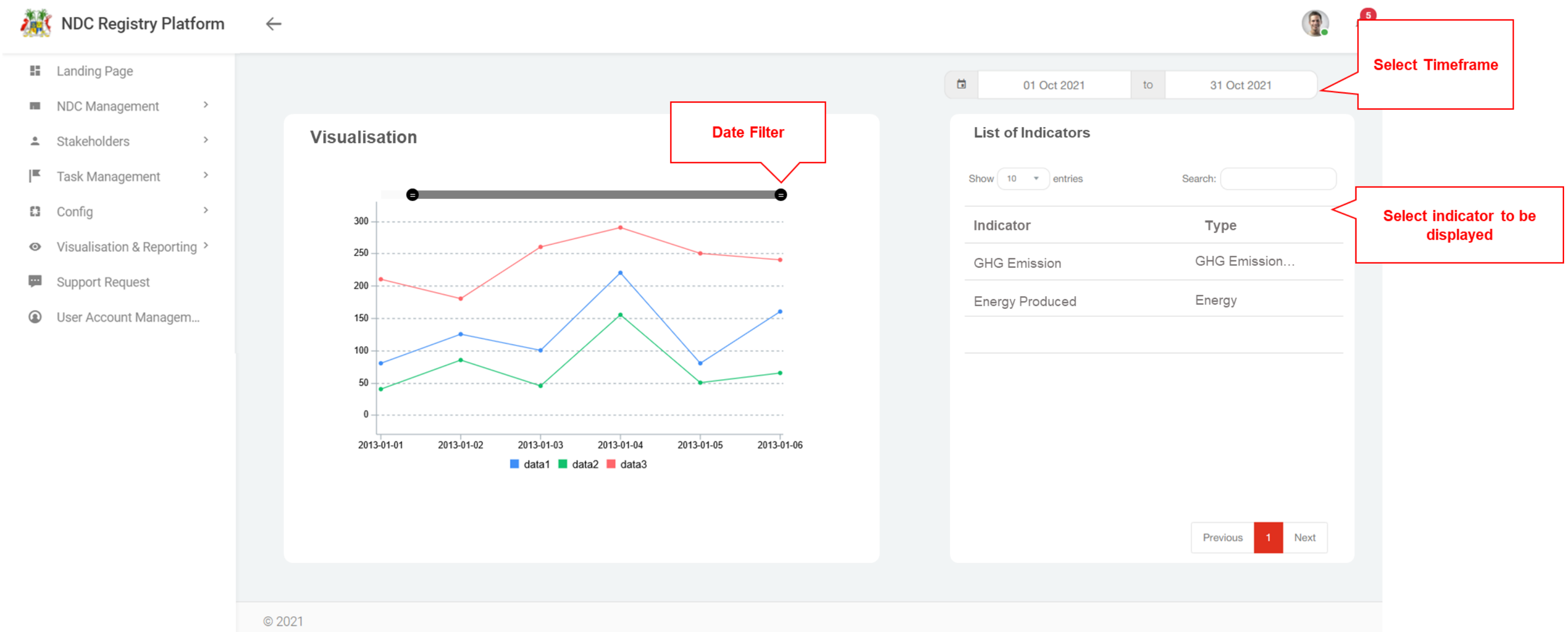


Figure 50: Indicator Visualisation

The table below provides a description on fields shown on the screen.

Title	Description
Date Filter	Filter used to select date for time series data.
Indicator	List of Indicators which can be visualised.

Table 39: Data Input for Visualisations

Screen 2: Task Management Overview Dashboard

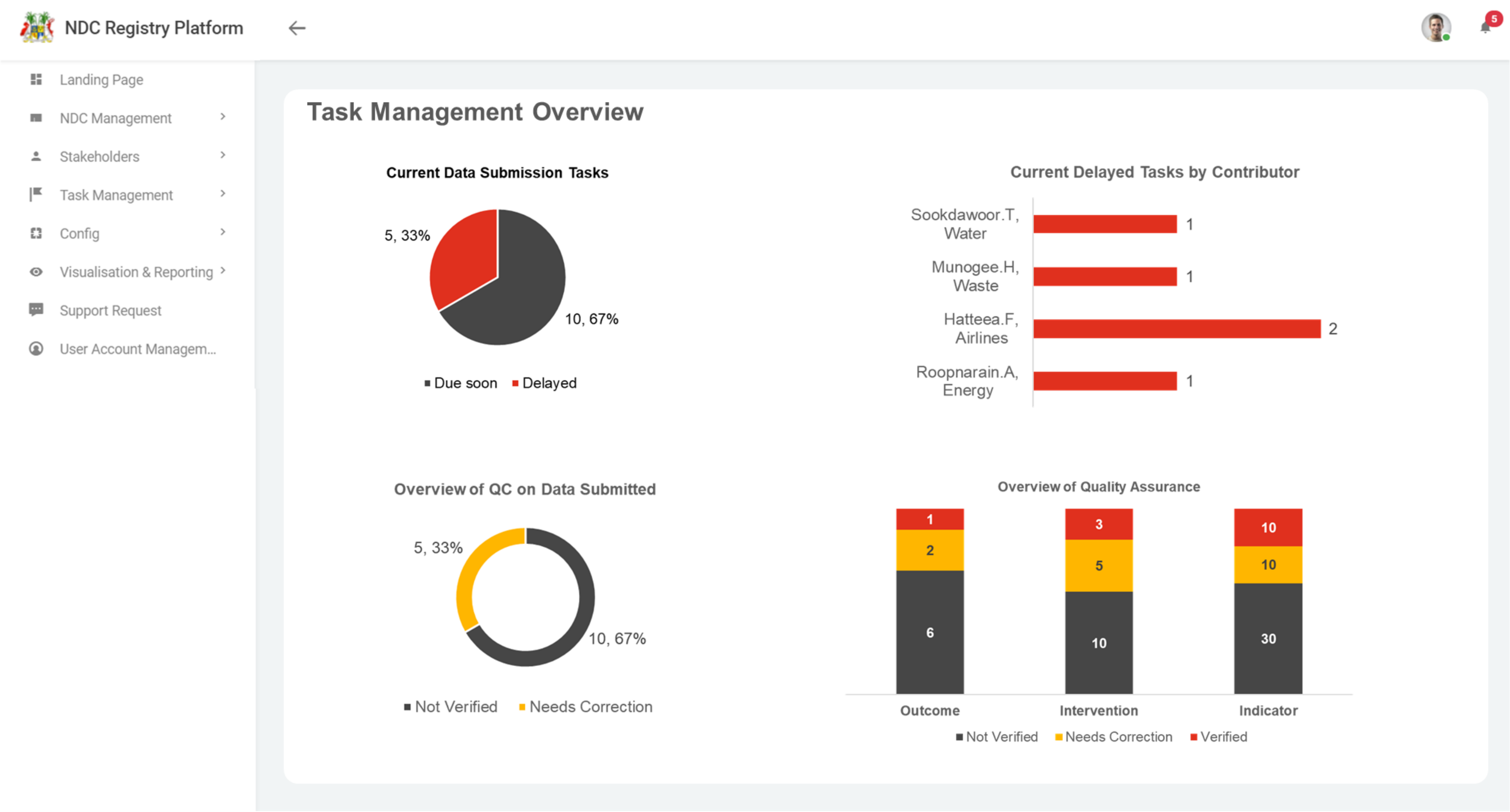


Figure 51: Task Management Overview Dashboard

Screen 3: Mitigation Overview Dashboard

Figure 52: Mitigation Overview Dashboard

Screen 3: Adaptation Overview Dashboard

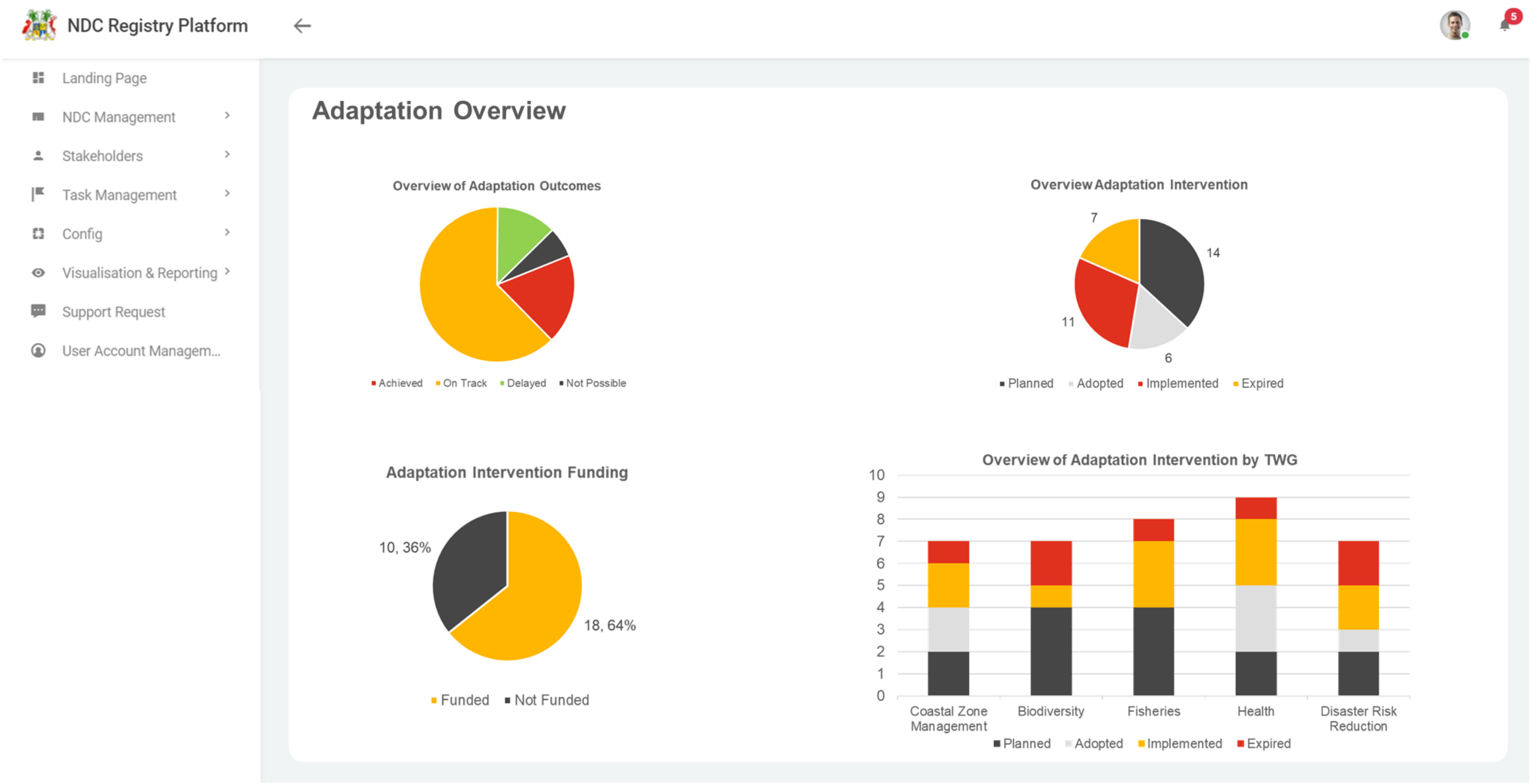


Figure 53: Adaptation Overview Dashboard

ii. Reporting

The following screen will allow users to generate reports by selecting Outcomes, Interventions and Indicators. Depending on user selection, the filters be applied.

Screen 1: Generate reports (Outcome type selected)

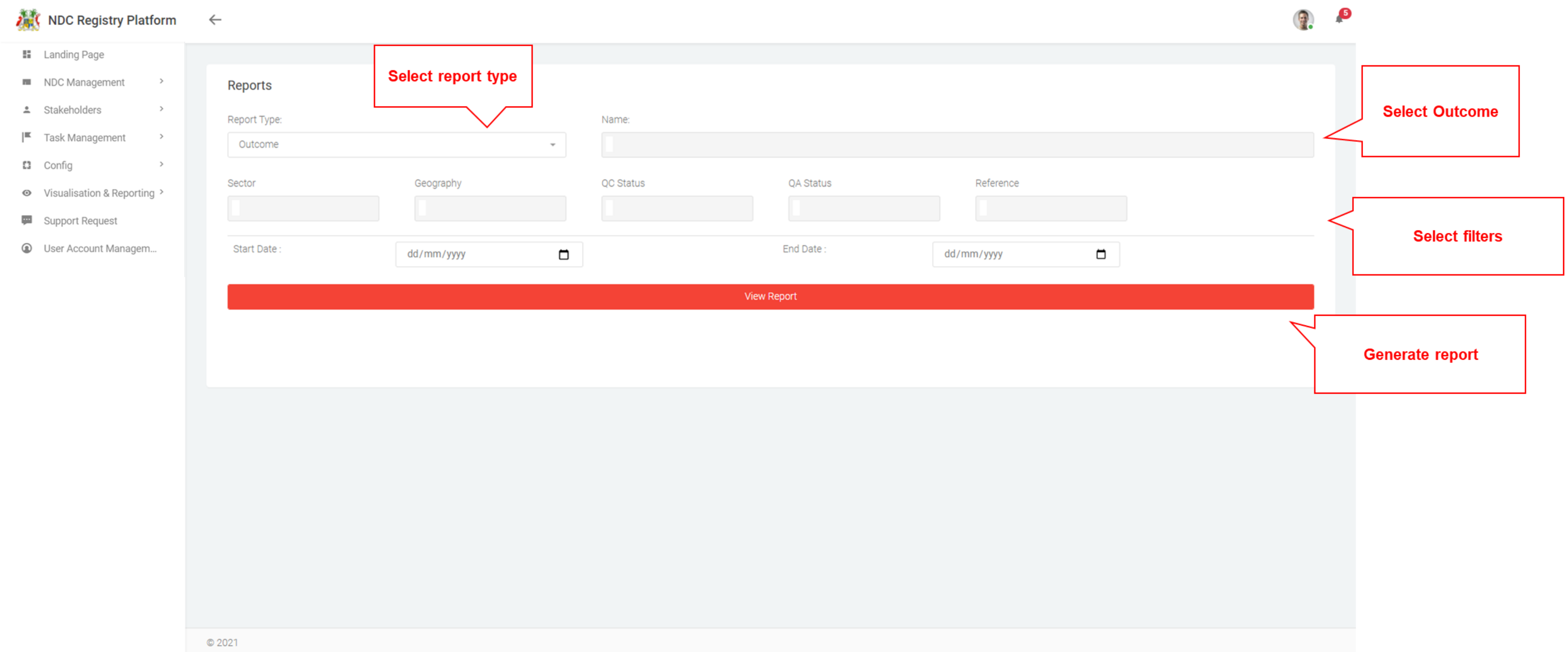


Figure 54: Generate report for Outcome

Screen 2: Generate reports (Intervention type selected)

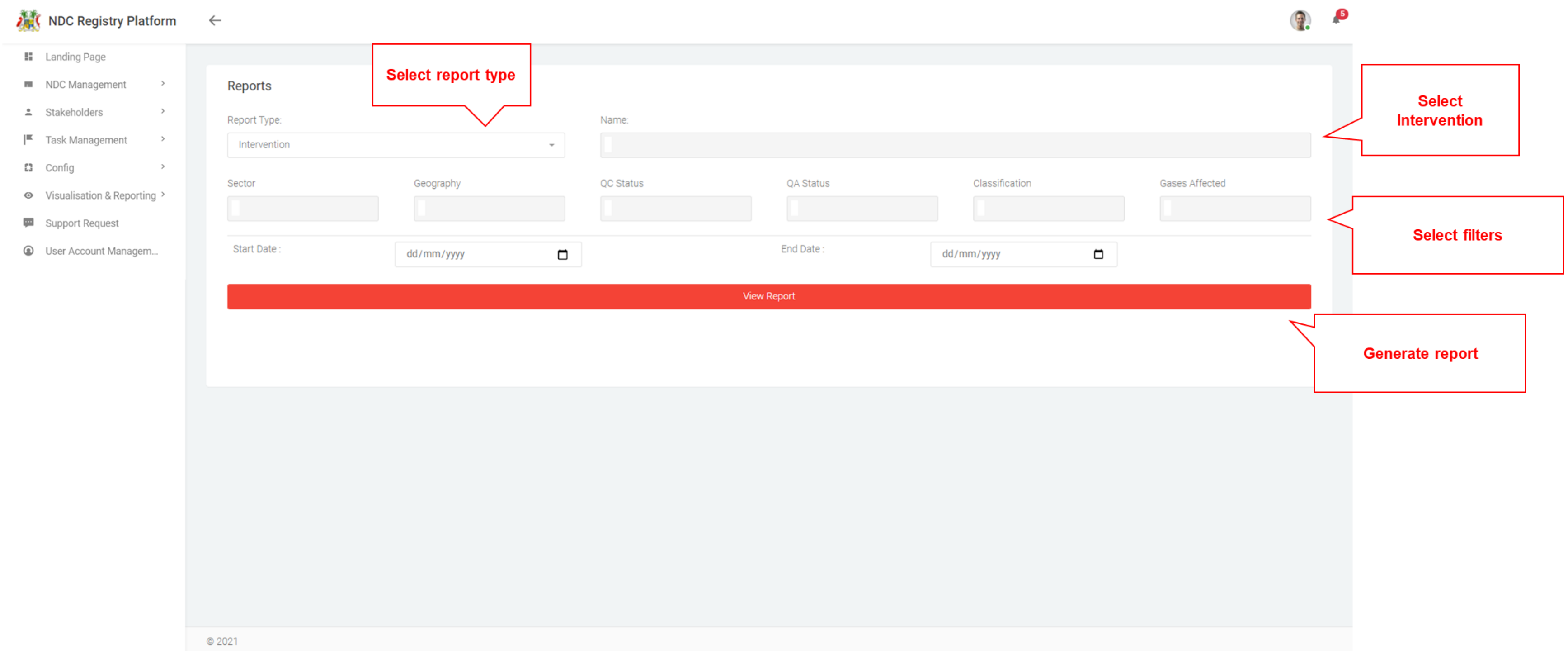


Figure 55: Generate Report for Intervention

Screen 3: Generate reports (Indicator type selected)

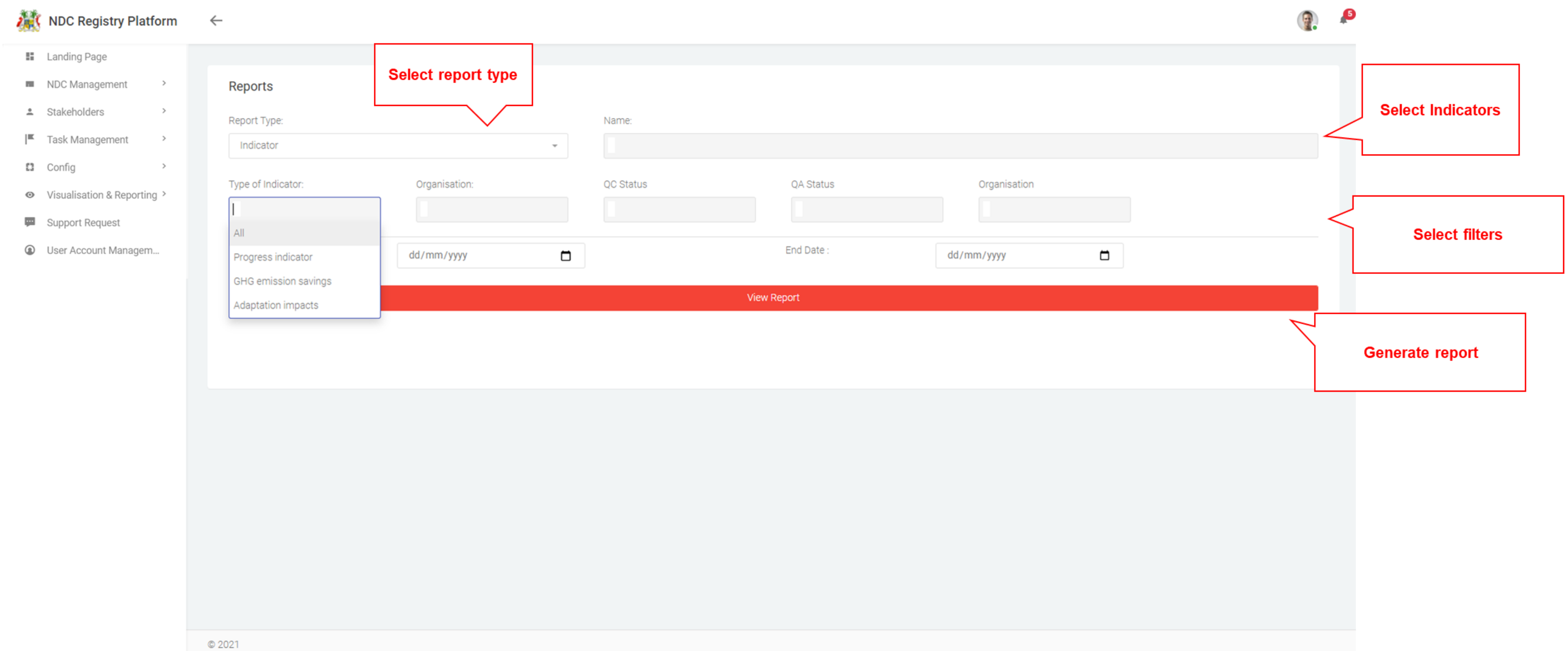


Figure 56: Generate Report for Indicators

The table below provides a description on fields shown on the screen.

Title	Description	Data Type
Report Type	Type of report to be generated: Outcome, Intervention, Indicator	Lookup
Name	Name of Outcome, Intervention, Indicator to be included in report. Users can select multiple items to be included in a report.	Multiselect
Filters	Filters can be used to find specific information. These filters will be specific to Outcome, Intervention and Indicator.	

Table 40: Data Input for Reporting

B.7 Support Request

Users can request for support in case they face any issues or if they have any queries to the Coordinator through the Support Request Module.

Functional Requirement for Support Request

Func Req #	Requirement Description
1.8.1	The system shall allow external users to request for support from coordinators. Users will navigate to support request and log their request by capturing the following: - Title of request - Description of request - Priority - Attach documents Once the user submits the request, the system should notify coordinator by email and in application. Coordinators must be able to respond to the request and re-notify the initiator.

Table 41: Support Request

Screen 1: List of Support Requests

This screen displays the list of all Support Requests in a tabular structure with key fields which can also be used as filter.

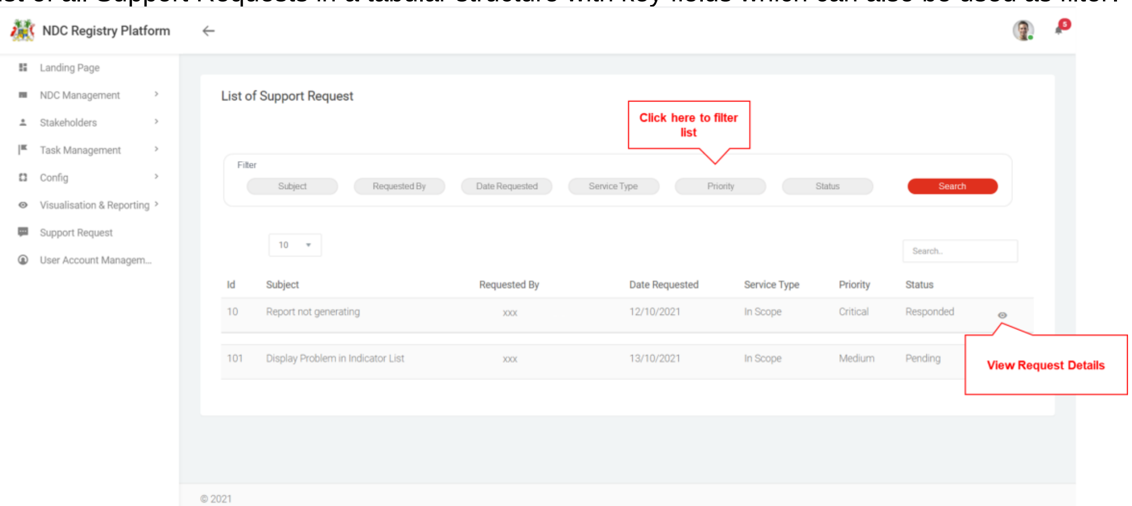


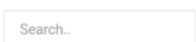
Figure 57:List of Support Requests

The table below provides a description on fields shown on the screen.

Data Input

Title	Description	Data Type	Mandatory (Y/N)
Filter	These fields can be used to filter the list of support requests using the following: Subject, Requested By, date requested, service type, priority, status		
Id	System generated unique identifier for each support request	Text	View Only
Subject	Subject of support request	Text	View Only
Requested By	Which system user originated the support request	Text	View Only
Date Requested	Date Request was raised	Text	View Only
Service Type	Type of request	Text	View Only
Priority	Priority of request	Text	View Only
Status	Status of request: pending, responded	Text	View Only

Table 42: Data Input for Support Request List

User Action	Description
	Button used to view more details for a specific System User. Clicking will navigate to detailed System User view.
	Field used to search Requests based on keywords

Screen 2: Support Request Details

The following screen will be used to raise a request for support by a system user. A Coordinator will then be able to view the request raised and add comments on the same screen. Once the support is complete, the Coordinator will be able to close the ticket.

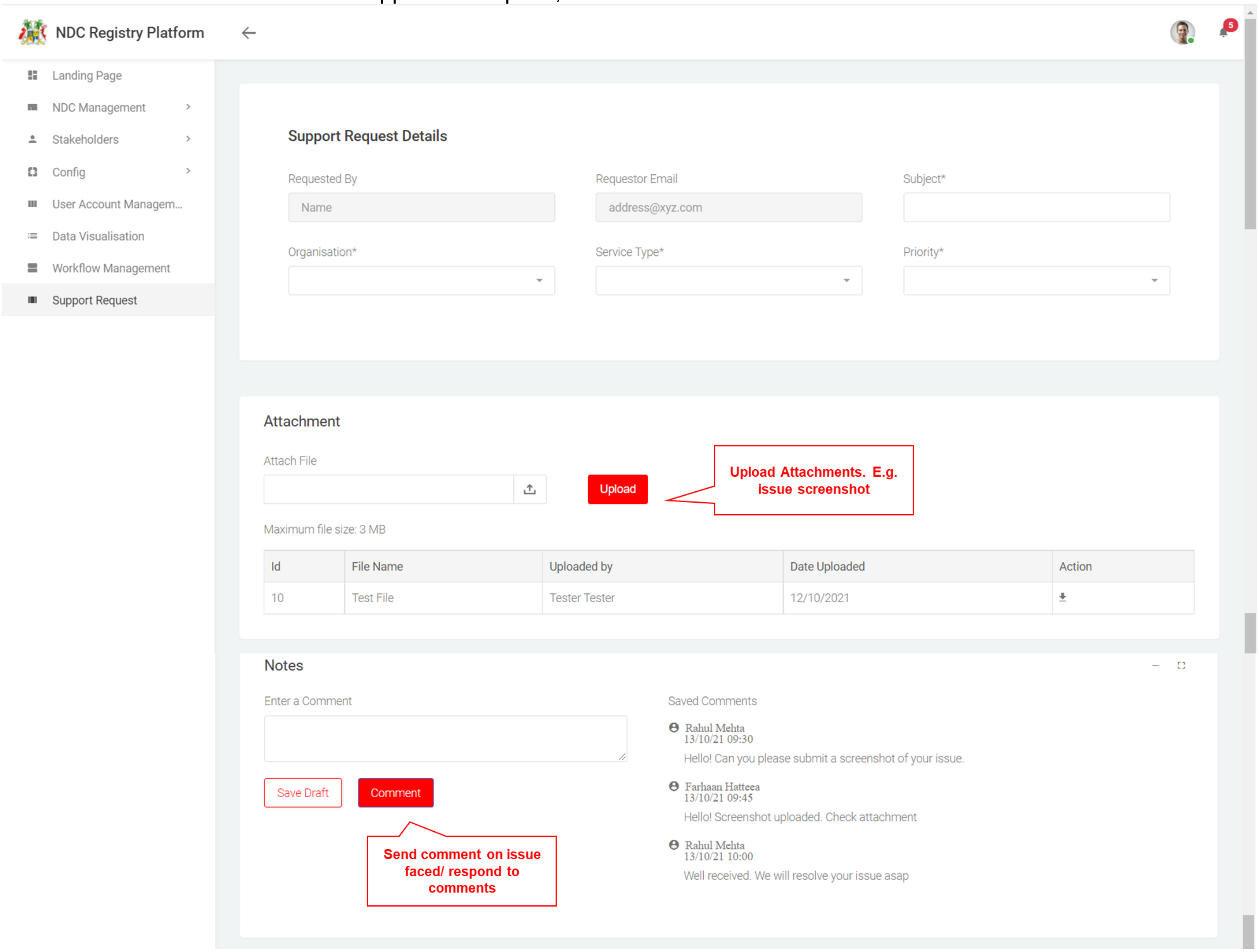


Figure 58: Support Request Details

The table below provides a description on fields shown on the screen.

Data Input

Title	Description	Data Type	Mandatory (Y/N)
Support Request Details			
Requested By	System User who requested Support (System Generated)	Text	View Only
Requestor Email	Email Address of originator	Text	View Only
Organisation	Organisation of Originator	Text	View Only
Service Type	Type of Support Requested	Lookup	Y
Priority	Priority of Request	Look up	Y
Notes			
Enter Comment	User can enter their comments	Text	Y
Request Status	User can set status to "Complete" once request completed	Lookup	Y

Table 43: Data Input for Support Request Details

User Action	Description
Comment	Submit Comment
Save Draft	Save Comment as Draft

The Coordinator will be able to close the request by setting the status to complete.

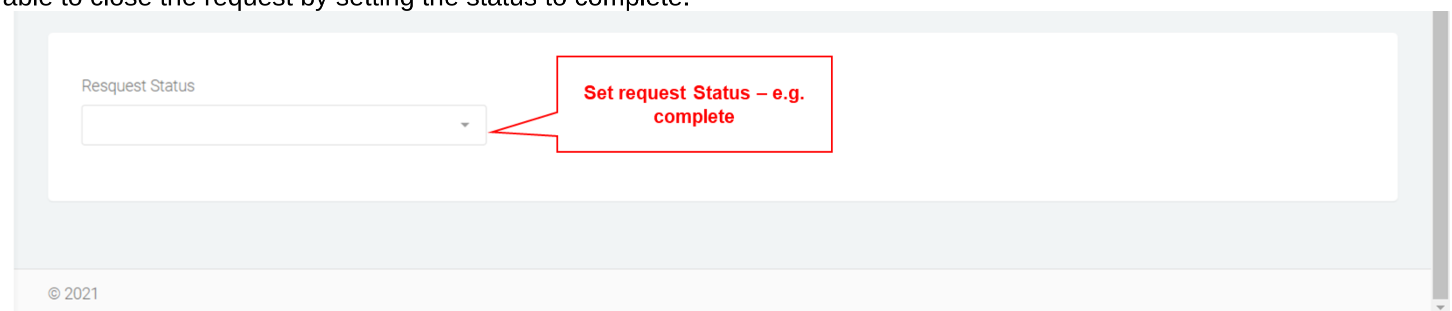


Figure 59: Set Request Status

C. Contributors Portal

The Contributors Portal will be accessed mainly by Thematic Contributors, Thematic Owners and Verifiers.

Key features of the portal are as follows:
C.1 Landing Page
C.2 Indicator Data Submission
C.3 Quality Assurance
C.4 Data Visualisation
C.5 Support Request

The detailed requirements for each above function are described in the table below.

C.1. Landing Page

Func Req #	Requirement Description
C.1.1	Thematic Owner, Contributor and Verifier landing page to contain the following: 1. Notifications 2. List of all Tasks assigned
C.1.2	Thematic Owner, Contributor and Verifier landing page to contain navigation pane which is static throughout the system. Navigation pane should allow the coordinator to navigate to any module including: 1. Landing Page 2. NDC Management 3. Data Visualisation and Reporting 4. Task Management 5. Support Requests
C.1.3	Users must be able to click on the listing and drill down to view/edit/submit detailed information for example on click of Intervention the system redirects to the detailed Intervention form. System allows user to search and filter on information displayed on the screen.

Table 44: External Landing Page

Screen 1: Thematic Owner Landing Page

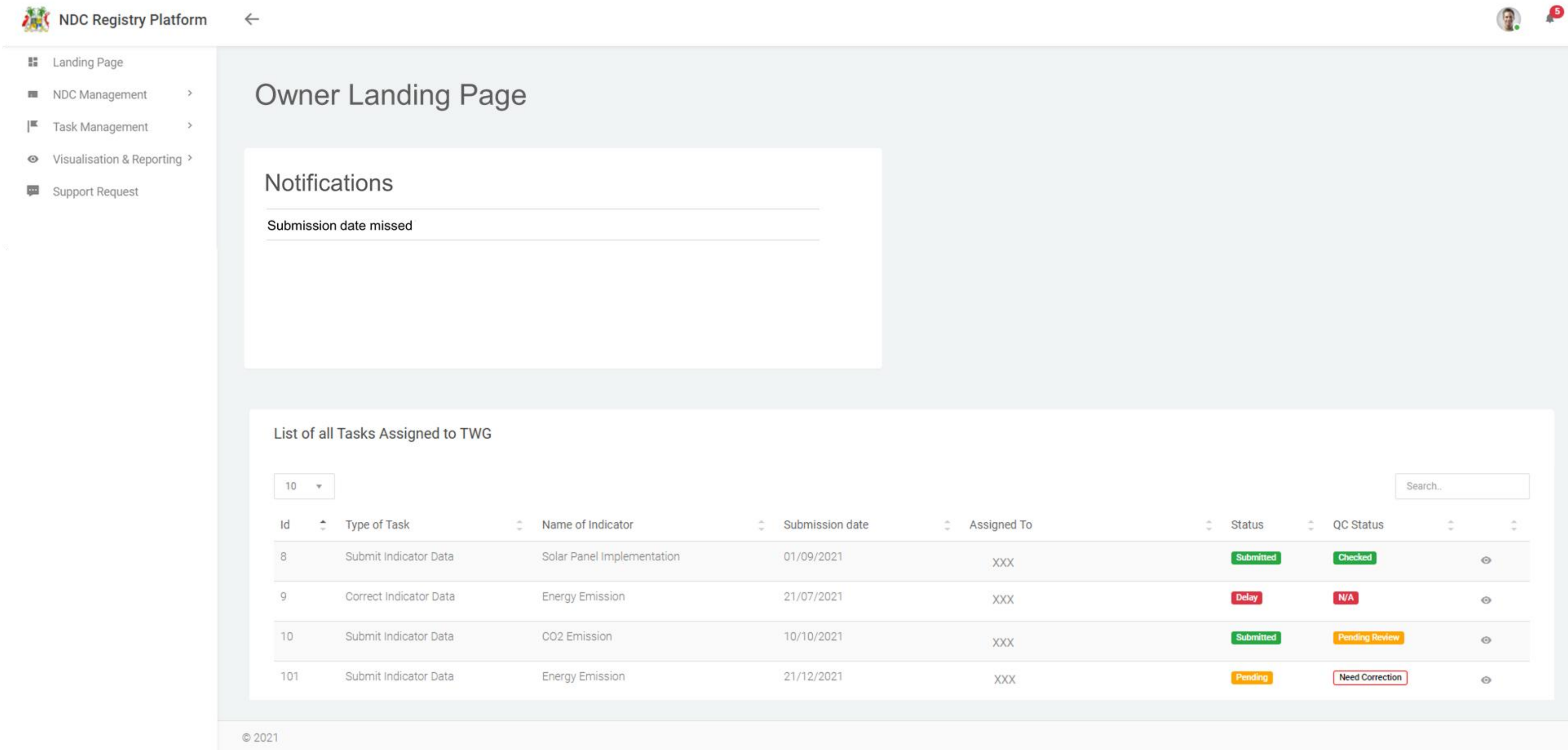


Figure 60: Thematic Owner Landing Page

Screen 2: Contributor Landing Page

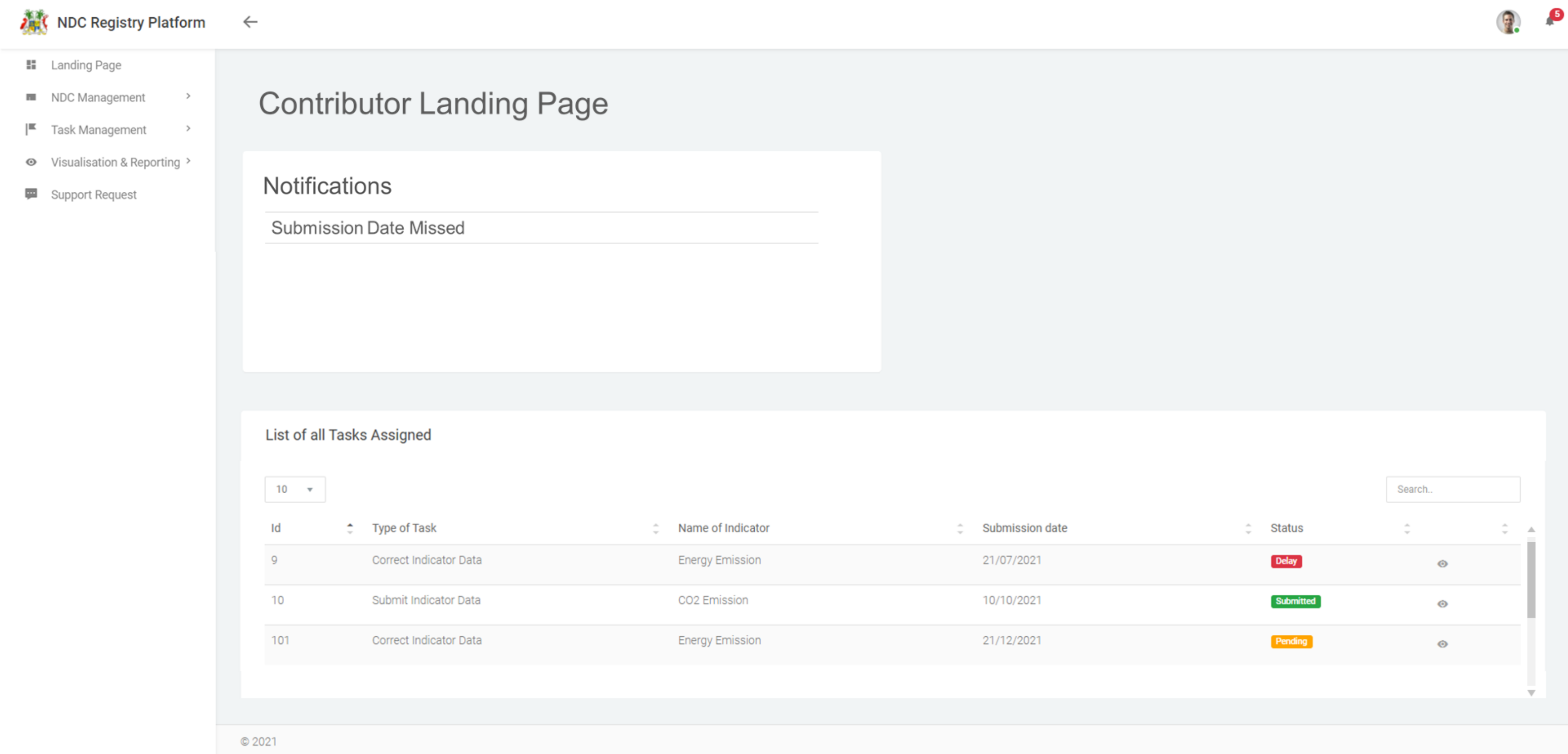


Figure 61: Contributor Landing Page

C.2 Indicator Data Submission

Contributors will be able to submit Indicator data and owners will be able to conduct QC on data submitted through this functionality.

Func Req #	Requirement Description
C.2.1	System to provide access for thematic contributors and owners for data input based on tasks allocated by Coordinator. Coordinator will be able to view all tasks allocated as well as submission due dates.
C.2.2	Thematic Contributors can input data by clicking on tasks from list of tasks assigned. This will redirect them to Indicator pages where data input is required.
C.2.3	System must allow Thematic Contributor and Owner to see assigned Indicators and corresponding links such as outcome and Intervention and previous data submitted on that Indicator. information related to the specific Indicators including linked outcomes and Interventions.
C.2.4	Thematic Owners can edit all Interventions assigned to them. Owners can also create Indicators and assign to contributors.
C.2.5	**Data Input** Data input can be performed through the following ways: **Web forms** The system shall allow thematic contributors to input data directly on the portal. User must capture mandatory fields. **Excel file upload** • The system shall allow thematic contributors to generate an Excel with a predefined structure file on the platform. • System allows the user to upload filled excel templates. • Once upload is complete, system validates the data/information as per data validation rules. Refer to below. • In case of error: System display error message and the contributor must correct the file before re-uploading. • Else system displays the uploaded data set on the screen and the user must click on confirm to submit the data set.
C.2.6	**Data Validation** The system will validate data input as a first level of Quality Control. The following validations will be performed on both data input methods that is web forms and Excel upload. 1. Data Type – The correct data type must be entered (e.g., data, number, text, no special characters, email address, geography etc.). 2. If validation fails, form cannot be submitted but all other data is saved temporarily in case of disconnection and error fields are highlighted with correction guidance. 3. Mandatory fields – all mandatory fields must be filled in for the form to be successfully submitted. If validation fails, form cannot be submitted. 4. For excel uploads: The system shall read the file and check if the format is correct. The system will also validate each line items against the rules e.g., values that can't be found in the lookup tables, or wrong data type.

Func Req #	Requirement Description
C.2.7	**Data Submission** When an Indicator is allocated to a contributor or a correction is required, a task will appear on the portal with which will show “Pending” status. Thematic contributors can save data uploaded onto the system if they wish to continue updating later. Once the data is finalised, the contributor can submit the data. Once data has been submitted, the task changes to “Submitted” System sets QC Status by default to “Not Reviewed” upon submission.
C.2.8	**Quality Control** Thematic owners will have visibility on all activities of their TWG/thematic contributors. The system will provide thematic owner with the following privileges: 1. View list of tasks, due date and status (Pending, delayed, completed). 2. View data submitted by contributors. 3. Capture QC Status on completed tasks. 4. Capture comment if any **Case 1: QC Status = Checked (QC)** Notification to Coordinators that data has been submitted and reviewed by QC. **Case 2: QC Status = Needs correction** System notifies the assigned thematic contributor to edit data captured/uploaded. Resubmit web form to Thematic Owner. It is the duty of the thematic owner to ensure contributors are submitting their information on time and to ensure the information submitted is accurate.
C.2.9	**Indicator data edit** Contributors will be able to edit Indicator data submitted in the past through the Indicator page. When data is initially submitted, a field for submission status is recorded as “initial”. When a contributor makes any subsequent change, the status is changed to “revised” to allow for tracking.

Table 45: Indicator Data Submission

Screen 1: List of tasks assigned to Contributor

This screen displays the list of all tasks assigned to a contributor in a tabular structure with key fields which can also be used as filter.

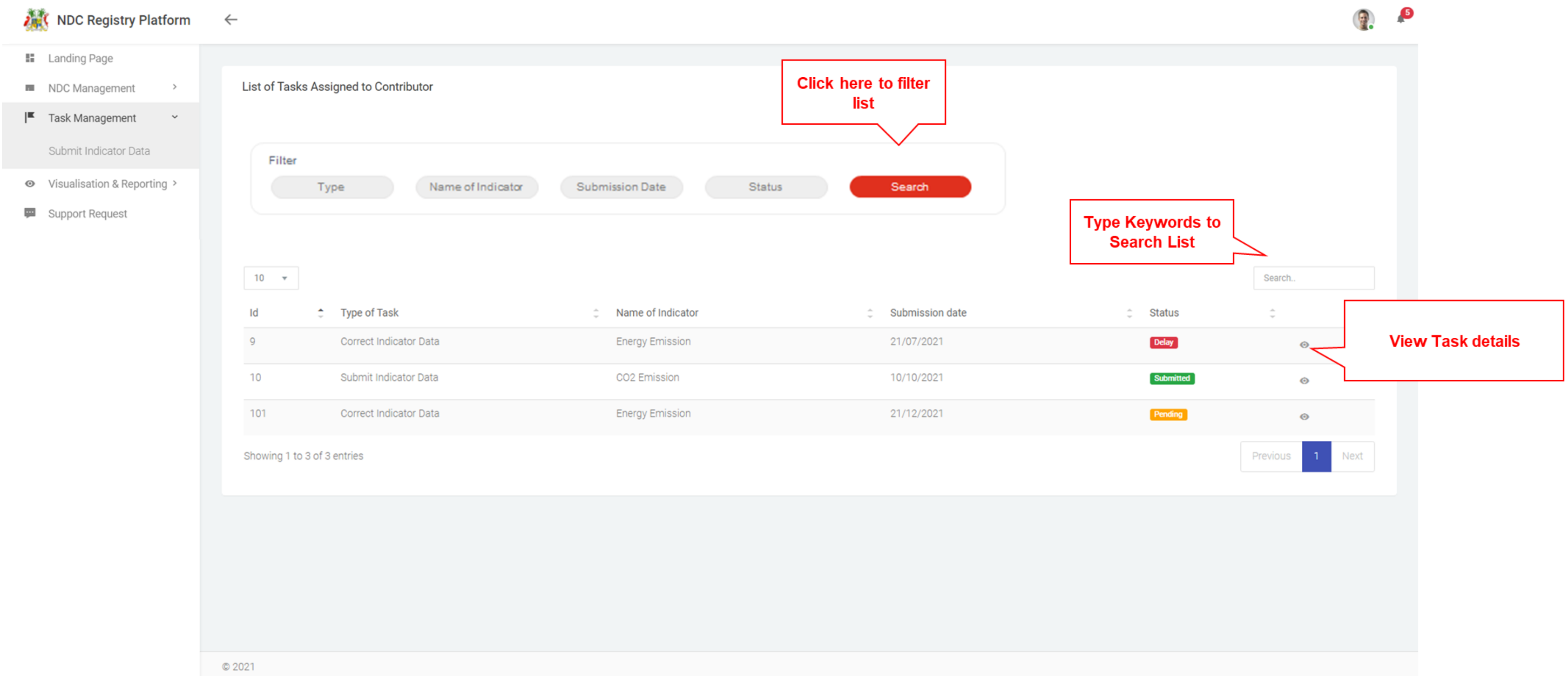


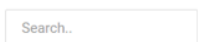
Figure 62: List of tasks assigned to Contributor

The table below provides a description on fields shown on the screen.

Data Input

Title	Description	Data Type	Mandatory (Y/N)
Filter	These fields can be used to filter the list of tasks assigned using the following: Task Type, Name, Submission Date, Status		
Id	System generated unique identifier for each task	Text	View Only
Task Type	Type of task assigned: Submit Indicator data, correct Indicator data	Text	View Only
Name of Indicator	Name of Indicator for data submission	Text	View Only
Submission Date	Deadline for submission	Text	View Only
Status	Status of task: pending, delayed, submitted	Text	View Only

Table 46: Data Input for Contributors Tasks

User Action	Description
	Button used to view more details for a specific System User. Clicking will navigate to detailed System User view.
	Field used to search task based on keywords

Screen 2: Submit Indicator data by Contributor

The screen below will allow a contributor to submit Indicator data based on Indicator assigned. Contributor can submit data in quantitative form, qualitative form and attach documents. Contributor can also generate Excel template to fill the data and then upload on the system.

If the Indicator is of quantitative type, the user must fill the quantitative value for each entry.

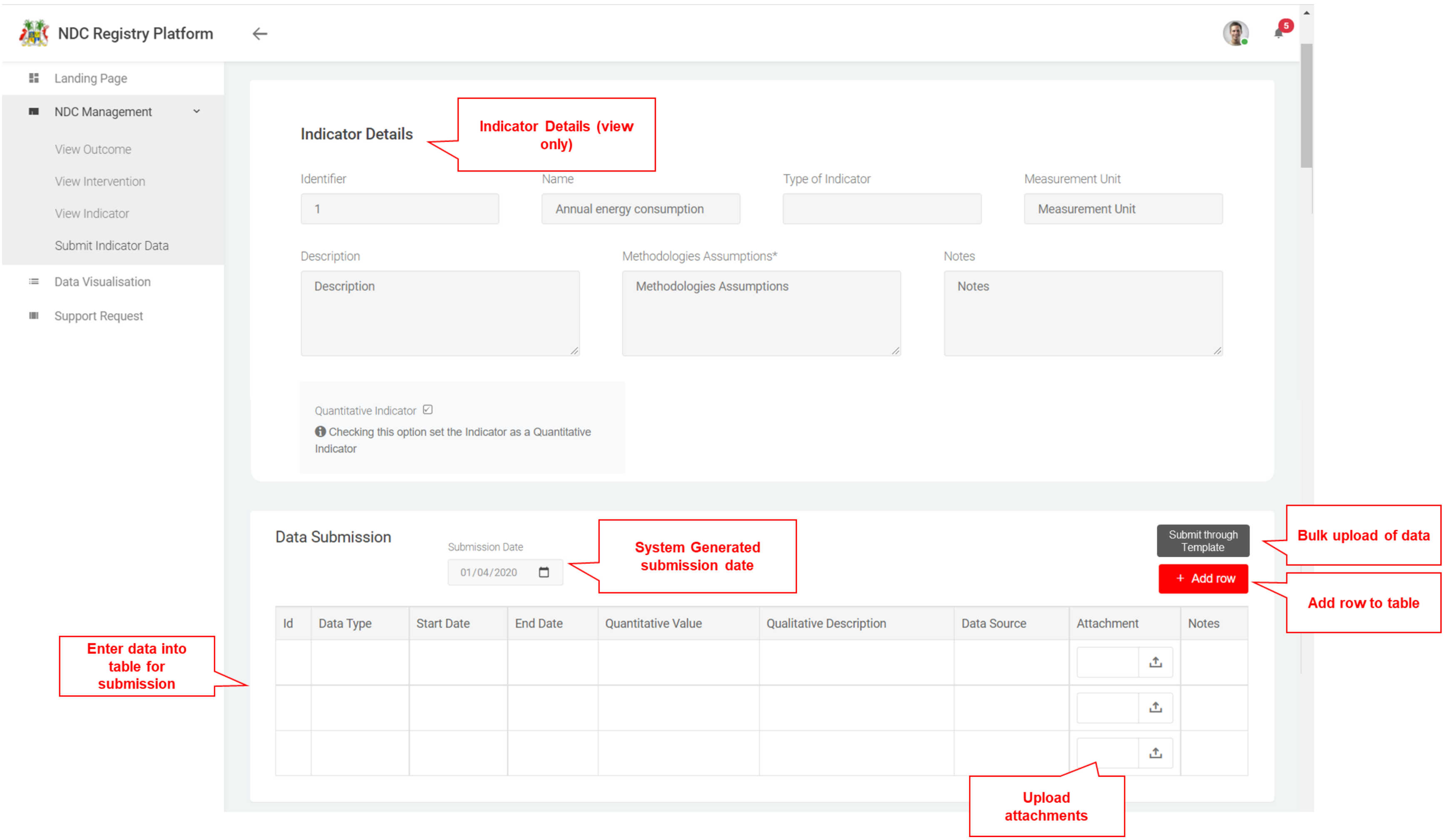


Figure 63: Submission of Indicator Data by Contributor

The table below provides a description on fields shown on the screen.

Data Input

Title	Description	Data Type	Mandatory (Y/N)	UI Layer Validation Rule
Indicator Details				
Identifier	System generated unique identifier for each Indicator	Text	View Only	
Name	Name of Indicator	Text	Y	
Type of Indicator	Type of Indicator for e.g. progress Indicator/ GHG emission savings	Lookup	Y	
Description	Description of Indicator	Text	Y	
Methodologies and Assumptions	Which methodologies and assumption underlie this Indicator	Text	N	
Measurement Unit	Which unit of measurement does this Indicator use, if it is a quantitative Indicator	Text	N	
Notes	Notes to the Indicator	Text	N	
Quantitative Indicator	Checking this box means the Indicator is quantitative and quantitative value is mandator			
Data Submission				
Submission Date	Date set for Indicator data submission	Text	Read Only	
ID	System Generated ID for entry	Text	View Only	
Data Type	Type of data submitted, i.e. ex-poste, ex-ante, baseline	Lookup	Y	
Start Date End Date	Start and End Dates of the data submitted	Date	N	
Quantitative value	Value of Indicator data submitted	Number	Y, if quantitative Indicator	Need to be number format
Qualitative Description	Qualitative data submission	Text	Y, if Not quantitative Indicator	
Data Source	Description of source of data	Text	N	
Notes	Notes to the data to be submitted	Text	N	

User Action	Description
Data Submission	
+ Add row	Add extra row for data submission
Submit through Template	Generate Excel to upload data
Attachment	Any related attachment

Table 47: Data Input for Data Submission

Screen 3: Edit Indicator Data

A contributor will be able to click on the edit sign to make a change to any data submitted in the past. Clicking this will open a window which will allow the user to make a change data previously submitted.

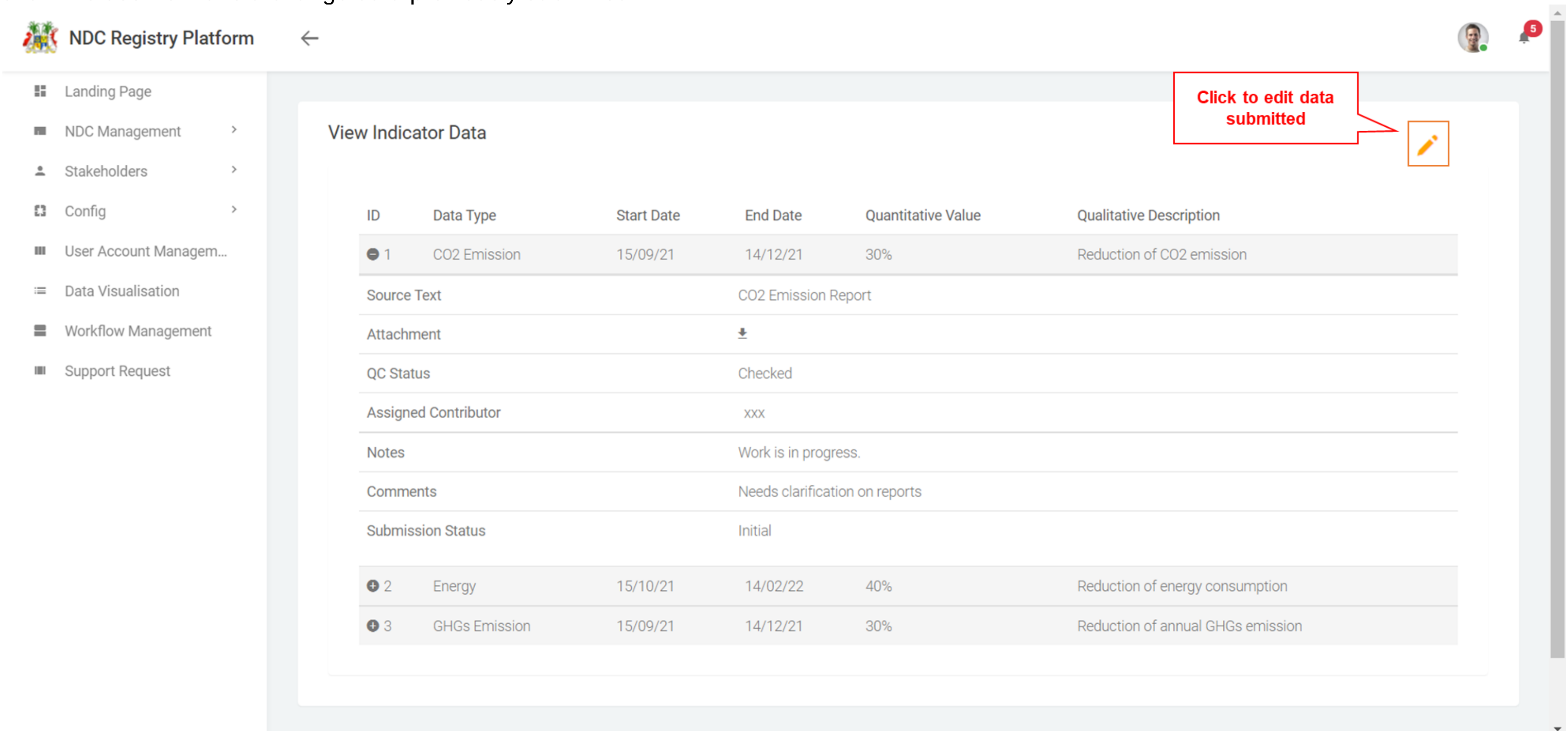
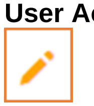


Figure 64: Edit Indicator Data

User Action	**Description**
	Button used to edit data submitted in the past

Screen 4: Edit Indicator Data – submit data

This screen will be used by contributors to edit data submitted in the past. Once data has been edited, submission status will change to "Revised".

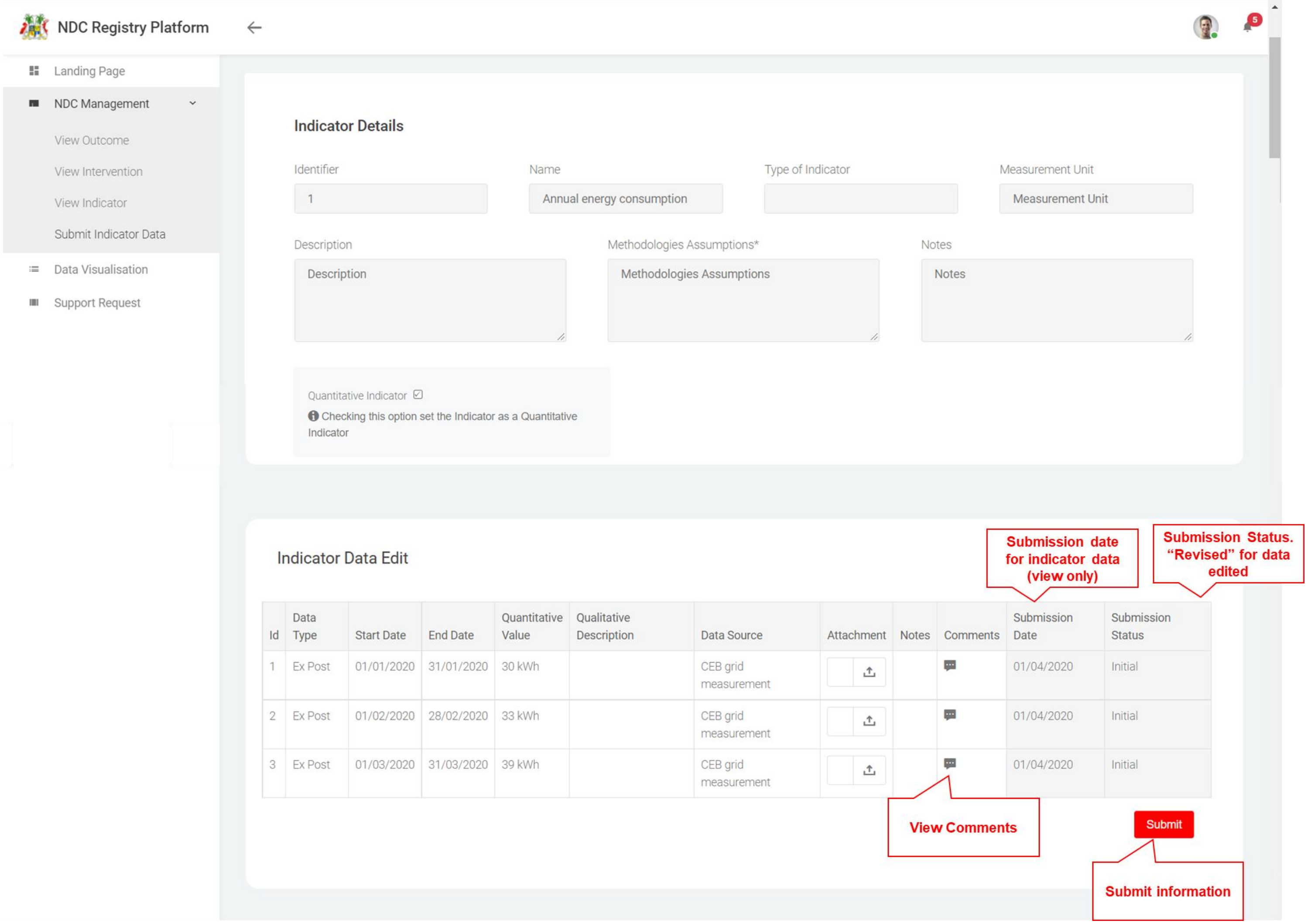


Figure 65: Edit Indicator Data – Data Submission

Screen 5: List of Tasks assigned to TWG (Owner View)

The following screen will be viewed by the Thematic Owner to provide a full view of all tasks assigned to TWG. Owner will also be able to see QC Status and perform QC for those pending review.

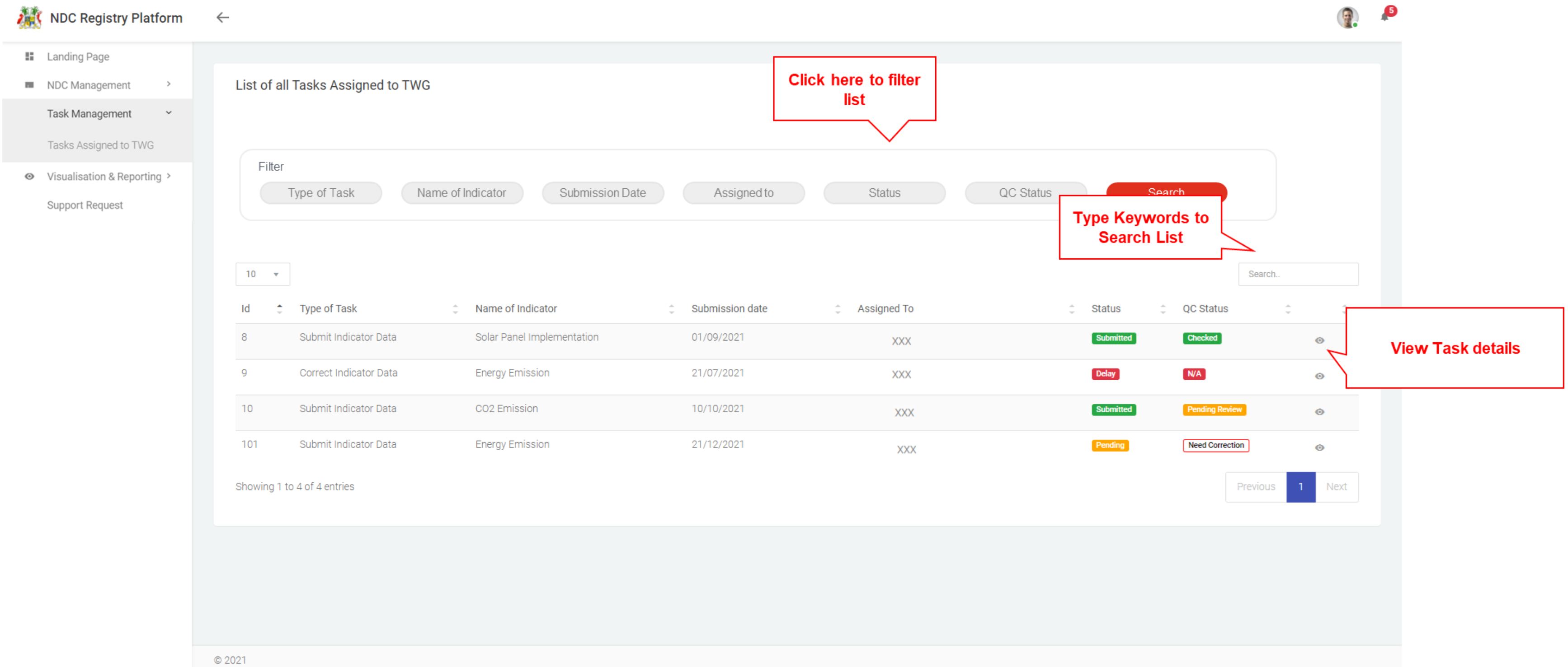


Figure 66: Owner's View of Tasks Assigned

The table below provides a description on fields shown on the screen.

Data Input

Title	Description	Data/ Action Type	Mandatory (Y/N)
Filter	These fields can be used to filter the list of tasks assigned using the following: Task Type, Name, Submission Date, Assigned to, Status, QC Status		
Id	System generated unique identifier for each task	Text	View Only
Task Type	Type of task assigned: Submit Indicator data, correct Indicator data	Text	View Only
Name of Indicator	Name of Indicator for data submission	Text	View Only
Submission Date	Deadline for submission	Text	View Only
Assigned to	Coordinator assigned to task	Text	View Only
Status	Status of task: pending, delayed, submitted	Text	View Only
QC Status	Status of QC: Pending Review, Checked, Needs Correction	Text	View Only

Table 48: Data Input for List of TWG Tasks

User Actions

Action	Description
	Button used to view more details for a specific System User. Clicking will navigate to detailed System User view.
	Field used to search task based on keywords

Screen 6: Conduct QC (Owner View)

The following screen will be accessible to the owner to conduct QC. The owner can verify the data and update QC Status and add comments, if any.

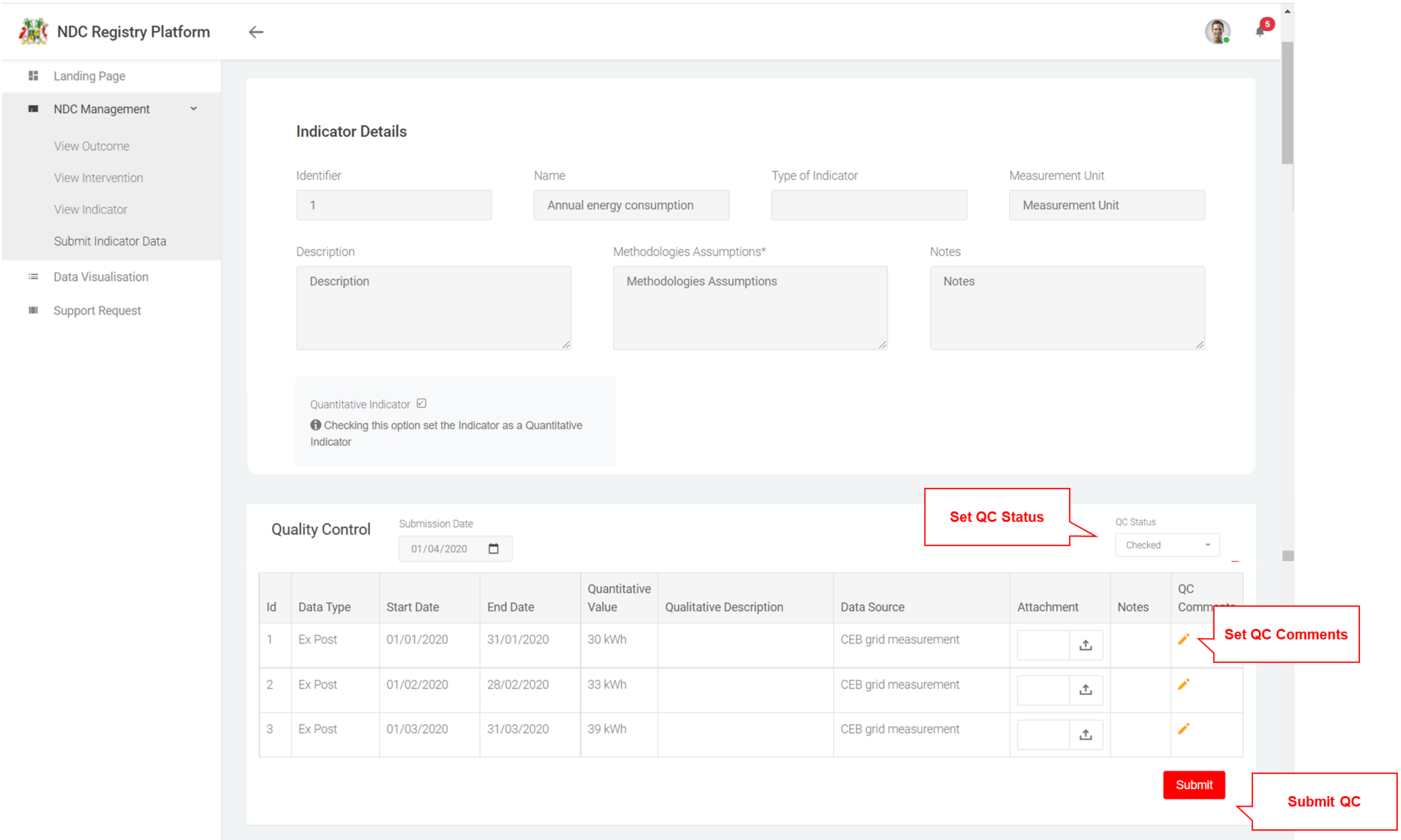


Figure 67: Owner's view (QC)

The table below provides a description on fields shown on the screen.

Data Input

Title	Description	Data Type	Mandatory (Y/N)
Quality Control			
QC Status	Owner to set status for QC: Checked, Needs Correction	Text	View Only
QC Comments	Owner to set comments if required	Text	Y

Table 49: Data Input for QC

C.3 Quality Assurance

Independent verifiers will be able to conduct QA on Outcome, Interventions and Indicators assigned through this functionality.

Func Req #	Requirement Description
C.3.1	• The system shall allow verifiers to conduct Quality Assurance on data, as allocated by Coordinators. • Verifiers will have a view only access to Outcomes with linked Interventions and Indicator data. • Verifiers to conduct QA and update QA Status on system and submit comments if any. • Verifiers to submit a report to MoESWMCC on findings and any changes required. MoESWMCC to communicate with TWG for any changes or make changes directly on platform.
C.3.2	**QA Task** System must allow verifiers to view all outcomes, Interventions and Indicators assigned to them for QA. System will display an admin's log which includes a list of all changes made to the specific item. Verifiers must be able to set QA status as follow: **Case 1: QA Status = Verified (QA)** Notification to Coordinators that data has been submitted and reviewed by QA. Once status has been set to verified (QA) no further edit or QC can be done on the data. **Case 2: QC Status = Need's correction** System notifies the assigned Coordinator/ thematic contributor to edit data captured/uploaded.

Table 50: Quality Assurance

Page Layout

Screen 1: List of QA Tasks Assigned

The following screen allows a verifier to view all tasks assigned to them.

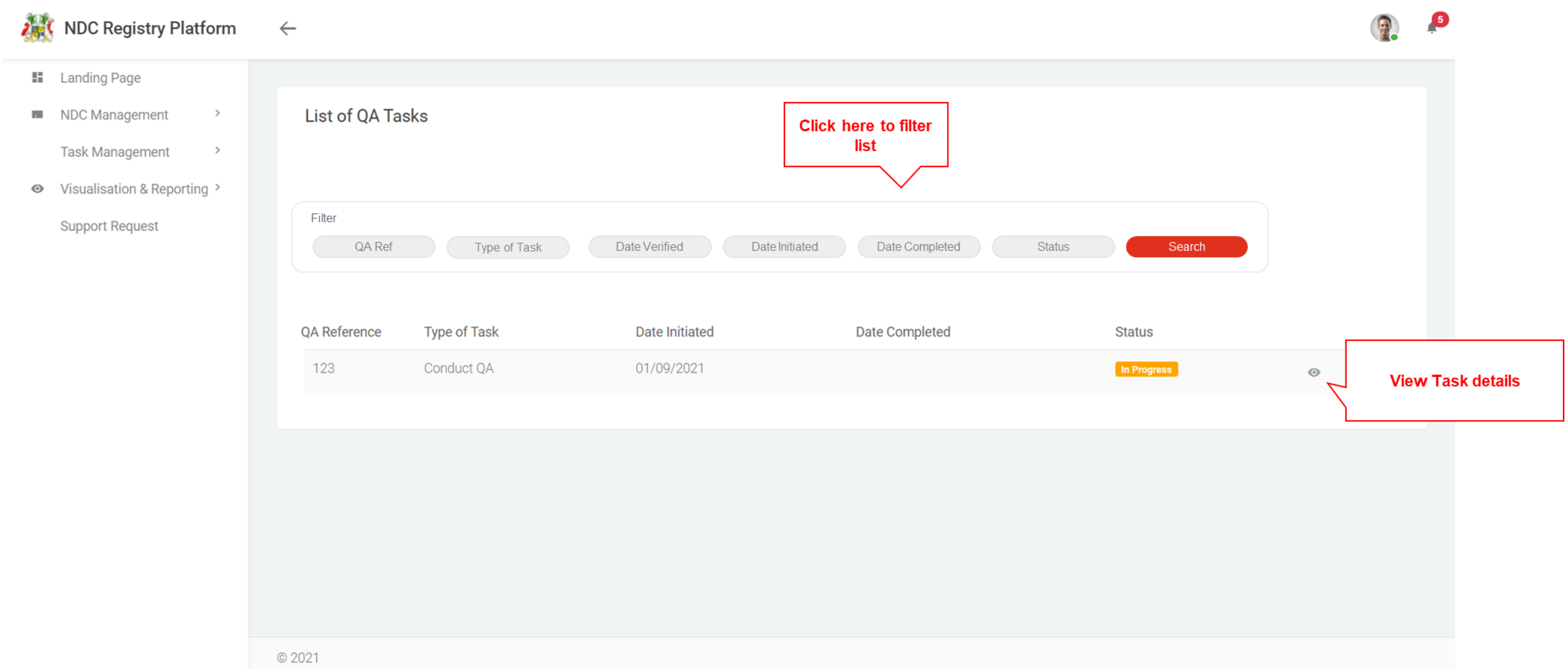


Figure 68: List of QA Tasks

The table below provides a description on fields shown on the screen.

Data Input

Title	Description	Data/ Action Type	Mandatory (Y/N)
Filter	These fields can be used to filter the list of tasks assigned using the following: QA Ref, Task Type, Date Initiated, Date Completed, Status		
QA Reference	System generated unique identifier for each task	Text	View Only
Task Type	Type of task assigned: Conduct QA	Text	View Only
Date Initiated	Date QA Initiated	Text	View Only
Date Completed	Date QA Task Completed	Text	View Only
Status	Status of task: In Progress, Completed	Text	View Only

Table 51: Data Input for list of QA Tasks

User Actions

Action	Description
	Button used to view more details for a specific System User. Clicking will navigate to detailed System User view.
	Field used to search task based on keywords

Screen 2: QA Task Details

This screen will allow the verifier to view all items to be verified. The verifier will also be able to set the QA task as complete when finished.

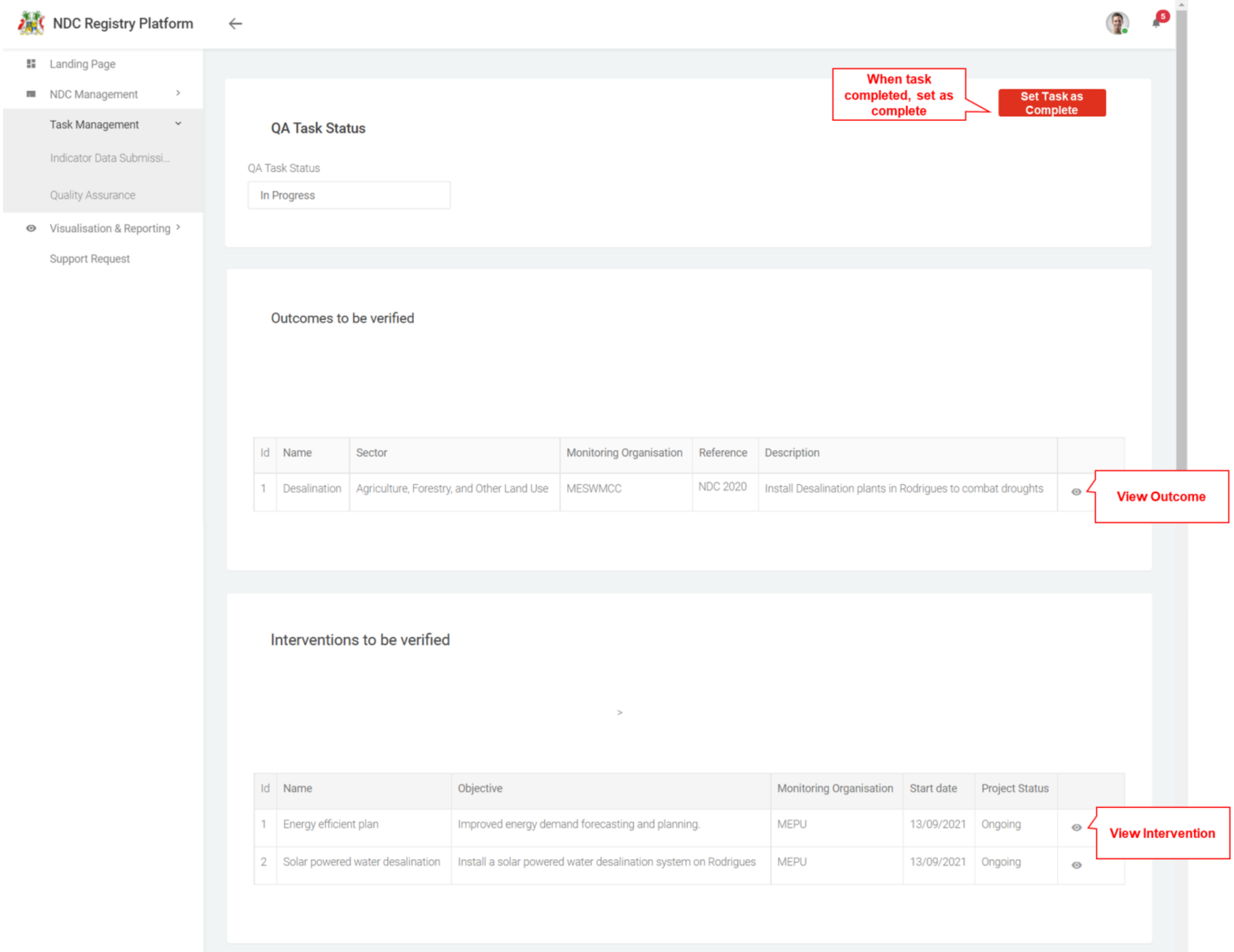


Figure 69: QA Task Details

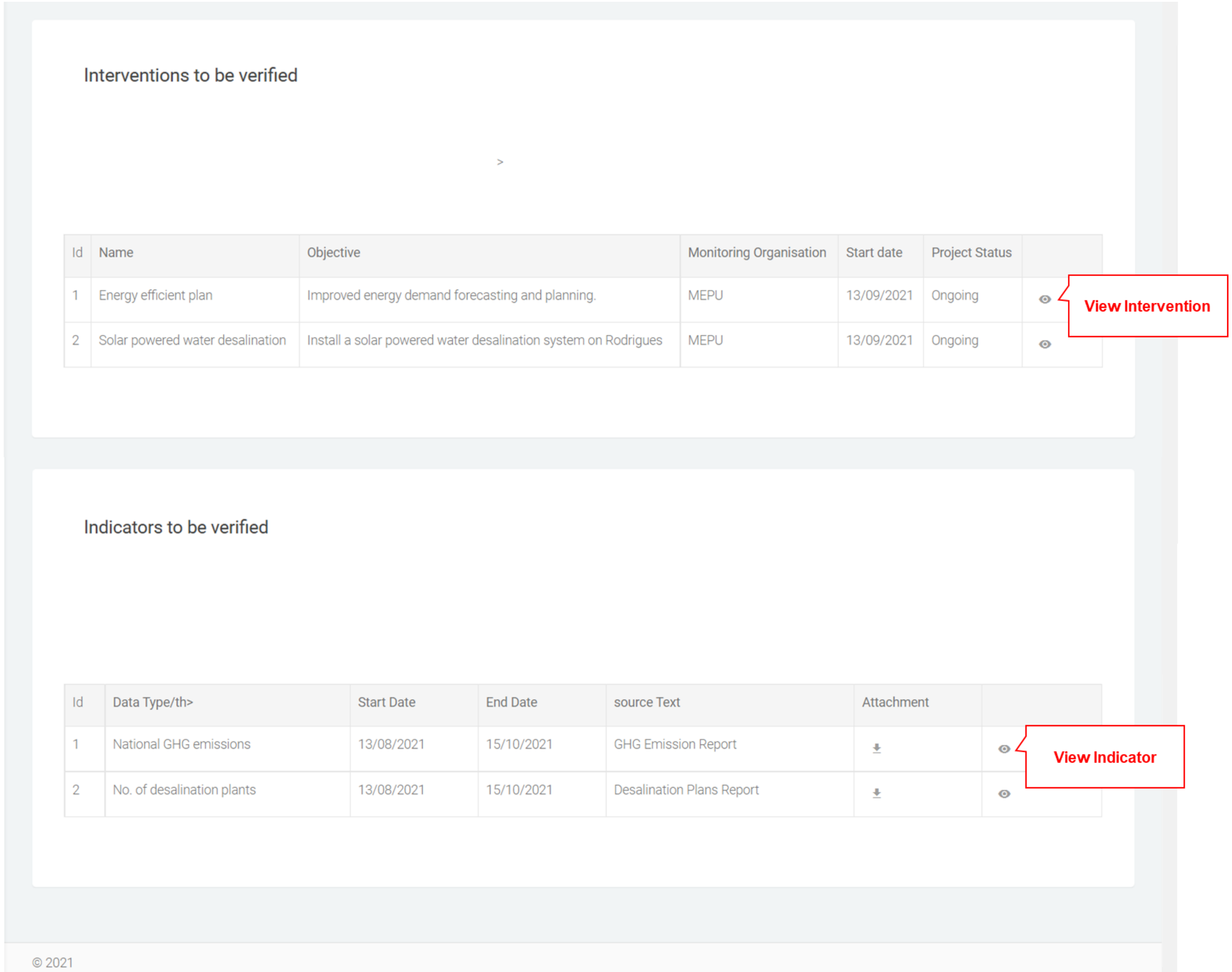


Figure 70: QA Tasks Details (End of page)

Screen 3: QA Status

The following screen will allow a verifier to set the QA status of a specific Outcome, Intervention and Indicator and include comments. Verifier can only set QA history for tasks still in progress.

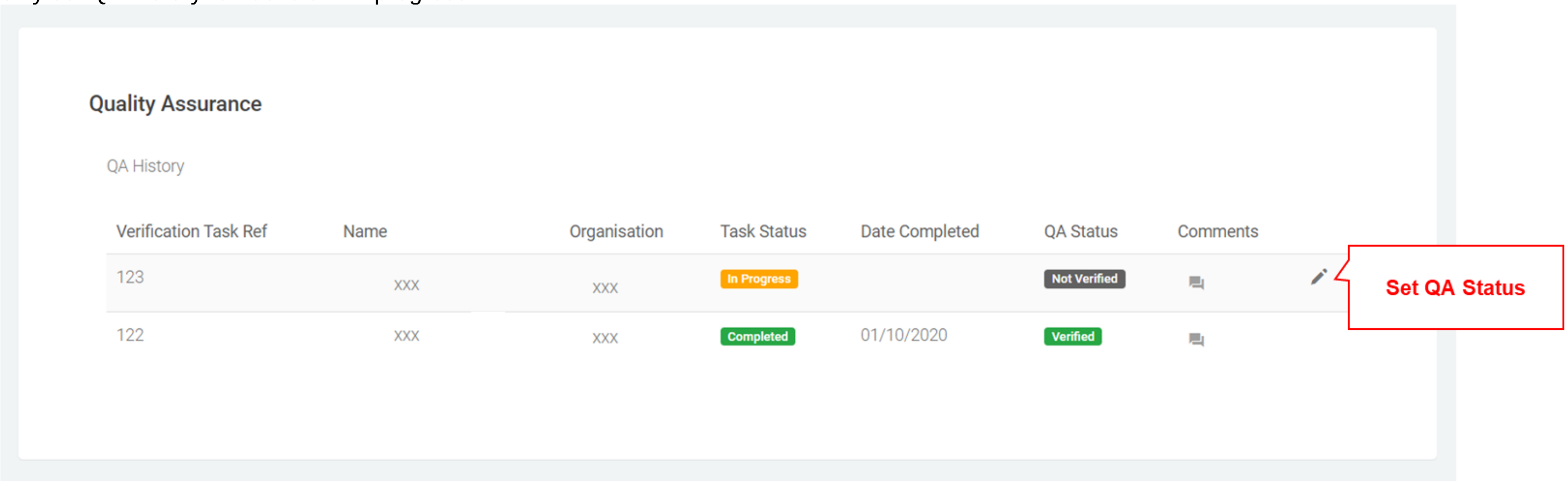


Figure 71: QA Status

Data Input

Title	Description	Data/ Action Type	Mandatory (Y/N)
Verification task ref	Reference of QA task	Text	View Only
Name	Name of Verifier	Text	View Only
Organisation	Organisation of verifier	Text	View Only
Task Status	Status of QA Task	Text	View Only
Date Completed	Date QA Task Completed	Text	View Only
QA Status	QA Status set by verifier	Text	View Only

Table 52: Data Input for QA Task Details

User Actions

Action	Description
Comments	Button to open pop-up for comments
	Edit Button

Screen 4: Admin/Audit Log

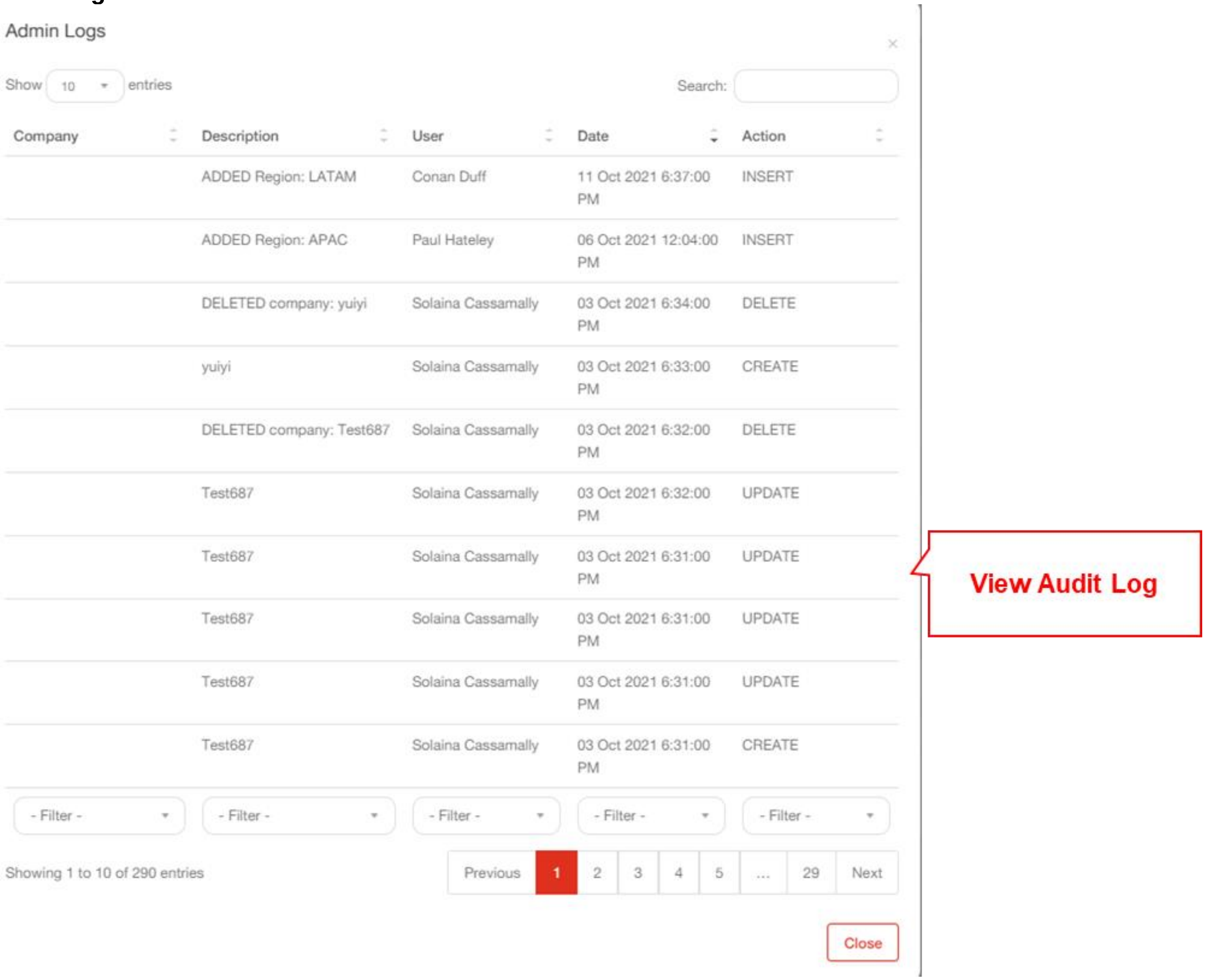


Figure 72: Admin/Audit Log

C.4 Visualisations

Func Req #	Requirement Description
C.4.1	Functionality similar to section B.6 Data Visualisation and Reporting. Each Thematic user will only be able to view data submitted as part of their TWG. The data visualisation will be filtered automatically to show only the data tagged with their thematic area (using the Thematic Area lookup vocabulary).

Table 53: Visualisations (External)

C.5 Support Request

Func Req #	Requirement Description
C.5.1	Functionality similar to section B.8 Support Request. Users will be able to raise support requests to Coordinators.

Table 54: Support Requests (External)

D. System Administration

Key features of the system administration module are as follows:

D.1 User Account Management
D.2 Content Management

D.1. User Account Management

Func Req #	Requirement Description
D.1.1	**User Creation** System must allow System Administrators to create new users on the system. User roles include: **Coordinator/MoESWMCC User.** **1. System Administrators** System administrators are responsible for technical upkeep of the system. They are superusers and will have the following roles: • System Configuration (e.g., modifying/adding sectors) • User Account Management • Workflow and Notification management • Content Management • Update Lookup tables **2. Coordinators** Coordinators (MoESWMCC users) will have the role of managing the NDC registry. They will have the following roles: • Full Access to create, modify, deactivate NDCs, Interventions, outcomes, and Indicators (Registry Management) • Update Lookup tables • Respond to queries • Data input • Generate reports • View visualisations Once registration is complete, the system sends a notification to the registered stakeholder on their email address with their logins and One Time Password (OTP). The user will be required to create a new password on first time login.
D.1.2	**Update Account**

Func Req #	Requirement Description
	Registered users must be able to update their account information, limited to the following fields: 1. Email address 2. Phone Number 3. Reset password
D.1.3	**Reset password** System must allow users to reset their password on log-in page. System will trigger an email (registered email address) with a link to reset their password. System must also allow users to reset their password from their user profile.
D.1.4	**Deactivate Account** System Administrators must be able to deactivate user accounts on the platform. User roles include: Coordinator/MoESWMCC User, Thematic owners, Thematic Contributors and Verifiers. Data submitted by deactivated users will remain on the system.
D.1.5	**Screens for this functionality will be similar as in 1.5 External User Registration**

Table 55: User Account Management

Screen 1: List of System Users

This screen displays the list of all system users in a tabular structure with key fields which can also be used as filter. Coordinator can create new system users through webform or by using Excel template which will generate a pop-up for template download and data upload.

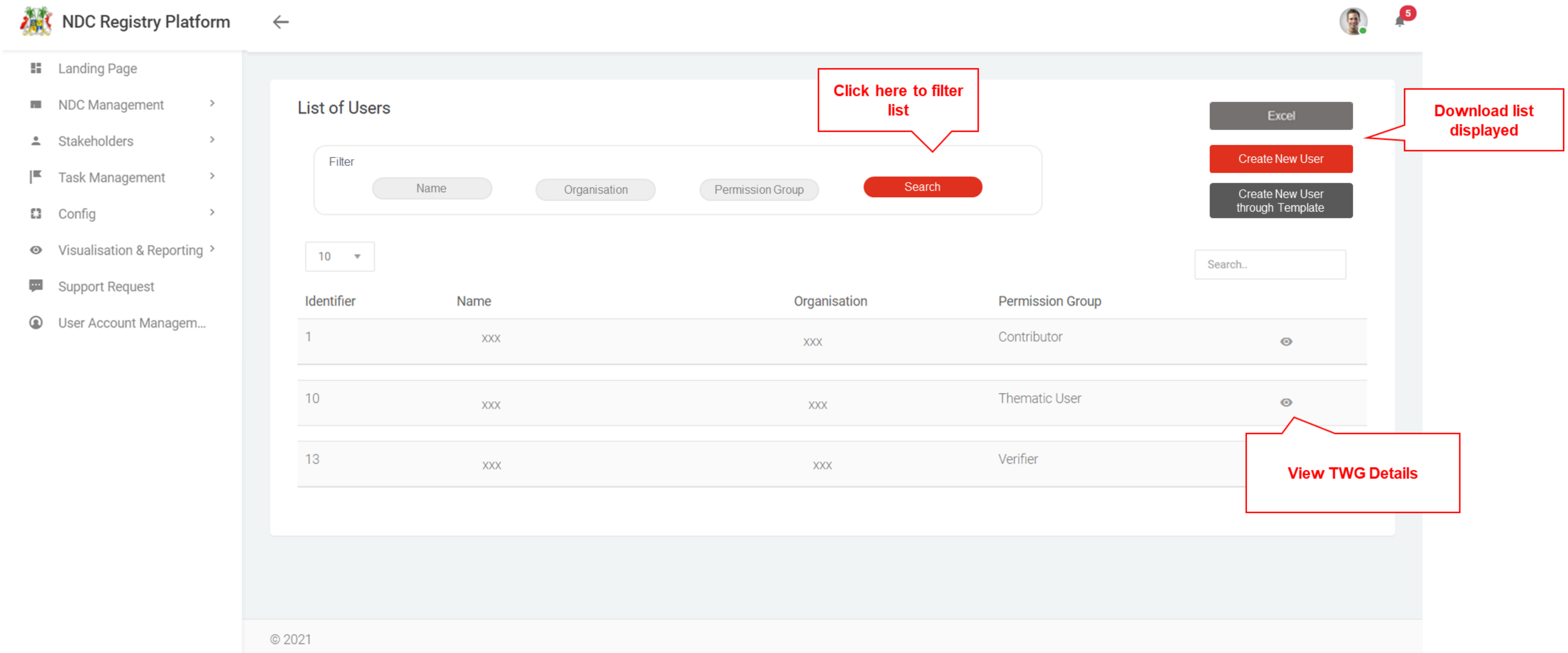


Figure 73: List of System Users

The table below provides a description on fields shown on the screen.

Data Input

Title	Description	Data Type	Mandatory (Y/N)
Filter	These fields can be used to filter the list of system users using the following: name, organisation, permission group		
Id	System generated unique identifier for each System User	Text	View Only
Name	Name of System User	Text	View Only
Organisation	Organisation this system user belongs to	Text	View Only
System User	Does the Stakeholder have access to the system?	Text	View Only

Table 56: Data Input for List of System Users

User Action	Description
	Button used to view more details for a specific System User. Clicking will navigate to detailed System User view.
Excel	Button used to generate an excel document with information displayed for all System Users.
Create New User	Button used to create new System User.
Search..	Field used to search System User based on keywords.
Create New User through Template	Button used to create new System User through Excel template.

Screen 2: System User Details

This screen displays details of a specific System User. If a user clicks on “edit”, fields will be unlocked for the user to edit changes. The screen also displays linked Organisations. A similar screen will be used to create a new user.

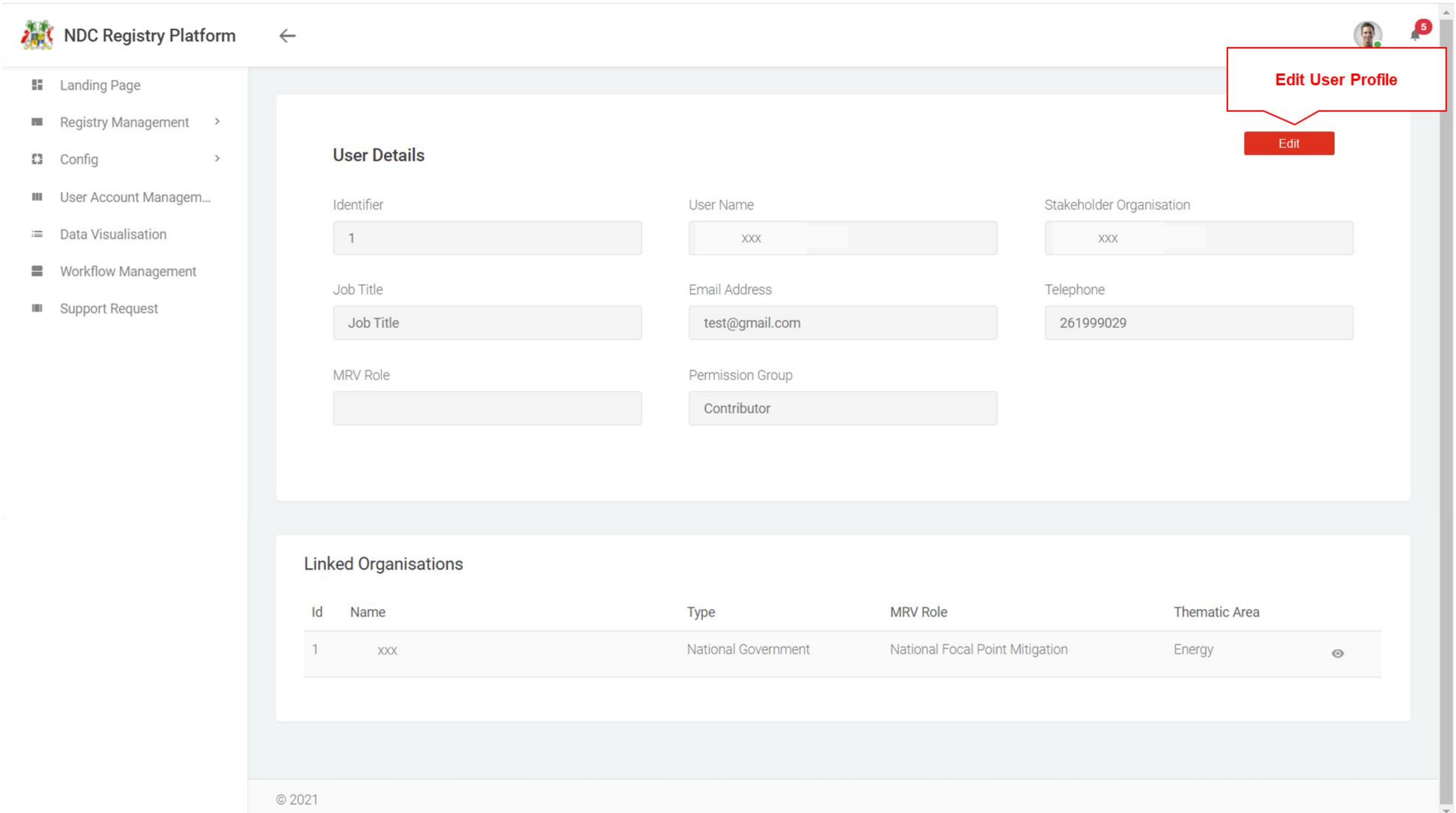


Figure 74:System User Details (End of page)

The table below provides a description on fields shown on the screen.

Data Input

Title	Description	Data Type	Mandatory (Y/N)
System User Details			
Identifier	System generated unique identifier for each System User	Text	View Only
Username	Legal name of System User	Text	Y
Stakeholder Organisation	Organisation this user belongs to	Text	Y
Job Title	Title of the System User	Lookup	Y
Email Address	Email Address of System User	Text	Y
Telephone Number	Telephone number of System User	Text	Y
MRV Roles	Roles of User	Multiselect	N
Permission Group	If user is a system user, what permission group they fall into: Coordinator, thematic user, Verifier	Lookup	N
Linked Organisations			
Id	System generated unique identifier for each Organisation	Lookup	N
Name	Name of Organisation	Lookup	N
Type	Type of Organisation	Lookup	N
MRV Role	MRV Role	Lookup	N
Thematic Area	Which TWG organisation belongs to	Lookup	N

Table 57: Data Input for System User Details

User Action	Description
Edit	Button used to unlock fields available for edit

D.2 Content Management

Func Req #	Requirement Description
D.2.1	**Create/edit web page content** The system shall allow creation/edit/delete of contents (Descriptive Text) on the system through web pages. Examples of content include FAQs and About us section.

Table 58: Content Management

Non-Functional Requirement

The table below highlights the key non-functional requirements to be considered as part of the NDC platform development.

Table 59: Non-Functional Requirements

Non Func Req #	Requirement Description
NR1	The web pages shall load in an average response time of 7 seconds on GOC servers.
NR2	The platform shall use secure login protocols for authentication of users.
NR3	The platform shall include web analytics code in all pages and integrate with webmaster tools.
NR4	The system must have an audit log to keep track of user activities on the system. Activities include: • Submitting Intervention, outcome, Indicator, vocabularies, organisation and Indicator data on the platform • Making changes to Intervention, outcome, Indicator, vocabularies, organisation and Indicator data submitted on the platform (including deactivation) • Changing QA/QC status • Adding comments • User management – Registration of user, making changes on user profile (including deactivation) • System configuration

Dependencies

a) Registration of users

Users interacting with the NDC platform must be registered by the Coordinators.

b) Data dependencies

The Platform will not rely/depend on any external datasets (integration with other system), data must be captured on either webforms or uploaded via excel in a predefined format on the NDC Registry Platform. The registry will require data and datasets to be identified and contributed by users on a regular basis such as updated NDC targets once they have been revised, highlights from the GHG inventory as Indicators, climate change actions and projects under Interventions. Key datasets include, but are not limited to:

- The NDC 2020 and any subsequent revisions
- National Climate Change Adaptation Strategy and Action Plan
- National Climate Change Mitigation Strategy and Action Plan
- National Adaptation Plan
- Previous UNFCCC National Communications
- Statistics Mauritius Environmental Digests
- Sectoral action plans

c) Configuration dependencies

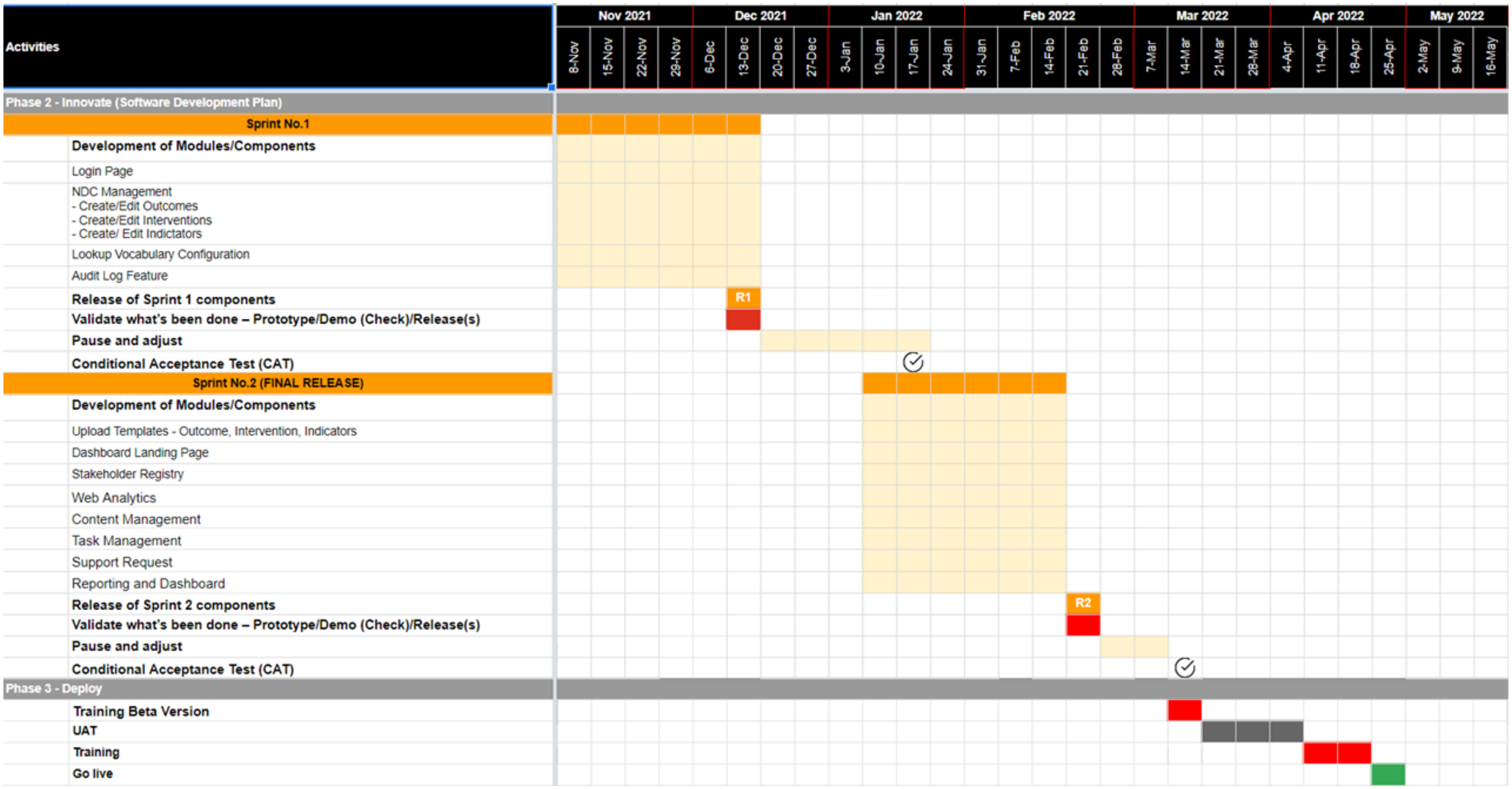
Coordinators must create NDCs, Interventions, outcomes and Indicators. Platform admins must also register users and allocate tasks to users for data entry and QA/QC.

d) System dependencies

Users of the system must have access to Computer devices and a reliable internet connection for system interaction.

3. Software Development Plan

The Mauritius NDC Registry development is planned over 2 sprints as follows:



***Subject to review comments on this report.*

Appendices

Glossary of Terms

Acronym	Definition
AFRC	*Albion Fisheries Research Centre*
AHRIM	*Association of Hoteliers and Restaurants in Mauritius*
BAU	*Business as Usual*
BRN	*Business Registration Number*
CIB	*Central Informatics Bureau*
CISD	*Central Information Systems Division*
COP	*Conference of Parties*
CSV	*Comma-Separated Values*
EEMO	*Energy Efficiency Management Office*
FAREI	*Food and Agricultural Research and Extension Institute*
GHG	*Greenhouse Gas*
GOC	*Government Online Centre*
ICZM	*Integrated Coastal Zone Management*
INDC	*Intended Nationally Determined Contribution*
IT	*Information Technology*
ITSU	*IT Security Unit*
MCCI	*Mauritius Chamber of Commerce and Industry*
MEPU	*Ministry of Energy and Public Utilities*

Acronym	Definition
NID	*National Identity Card*
QA	*Quality Assurance*
QC	*Quality Control*
TOR	*Terms of Reference*
TWG	*Thematic Working Group*
UNFCCC	*United Nations Framework Convention on Climate Change*
NDC	*Nationally Determined Contribution*
MRV	*Monitoring, Reporting and Verification*
NAP	*National Action Plan*
MoESWMCC	*Ministry of Environment, Solid Waste Management and Climate Change*

List of Tables

List of Figures

Appendix A – Meetings conducted

S.No	Workshops	Date	Time
1	Kick-off Meeting	23 August 2021	11:00 – 12:00
2	Deep dive session 1	25 August 2021	13:00 – 15:00
3	Deep dive session 2	26 August 2021	13:00 – 15:00
4	Meeting with IT Sector	2 September 2021	13:00 – 15:00
5	Showcase of initial concepts		
6	Showcase of concepts	8 September 2021	11:00 – 13:00
7	Meeting with ELIA	13 September 2021	13:00 – 14:00
8	Meeting with AETS Cibola Partners	13 September 2021	14:15 – 14:45
9	Status meeting no.1	20 September 2021	14:00 – 14:30
10	SRS Walkthrough	4 October 2021	11:00 – 12:30
11	Status Meeting no.2	22 October 2021	11:00 – 12:00

Appendix B – Data Structure

This section provides the details on all attributes and vocabularies included in the entities which are used across the data model. The table below provides details on each of the individual attributes. An accompanying Excel file 'Lookup Table Vocabularies.xlsx' provides the structure and example data for the vocabularies (orange rows in the table below).

A. Data Structures for Outcome

Field	Data type	Mandatory	Lookup Field
Identifier	Numerical	Yes (and unique)	
Name	Free text	Yes (and unique)	
Parent Outcome	Lookup	No	Outcomes.Name
Description	Free text	Yes	
Sector	Lookup	Yes	Sector.Term
Geography Lookup	Lookup	No	Geography.Term
Geography Text	Free text	No	
Reference	Lookup	No	Reference.Term
Monitoring Organisation	Lookup	No	Stakeholders.Name
Linked Indicators	Lookup	No	Indicators.Name
Data Source Text	Free text	Free text or links	
Data Source attachment	Attachment	No	
Notes	Free text	No	
Comments	Free text	Conditional, if QA/QC Status = "yes", then required	
Assigned QA/QC or Verifier	Lookup	No	
QA/QC status	Lookup	No	QA/QC Status.Term

B. Data Structures for Interventions

Field	Data type	Mandatory	Lookup Field
Identifier	Numerical	Yes (and unique)	
Name	Free text	Yes (and unique)	
Parent Intervention	Lookup	No	Interventions.Name
Objective	Free text	Yes	
Quantified Objective	Numerical	No	
Objective Unit	Free text	Yes if Quantified Objective is populated otherwise no.	
Methodologies Assumptions	Free text	Yes if Quantified Objective is populated otherwise no.	
Description	Free text	Yes	
Geography Lookup	Lookup	No	Geography.Term
Geography Text	Free text	No	
Longitude	Numerical	No	
Latitude	Numerical	No	
Classification	Lookup	Yes	Classification.Term
Sector	Lookup	Yes	Sector.Term
Gases Affected	Lookup	No	Gases.Term
Policy Instrument	Lookup	No	Policy Instrument.Term
Status	Lookup	Yes	Status.Term
Start Date	Date	No	
Implementation Date	Date	No	
Scenario	Lookup	No	Scenario.Term
Objective Achieved	Boolean	Yes	
Progress	Free text	No	
Priority	Lookup	No	Priority.Term
Costs description	Free text	No	
Constraints Barriers	Lookup	No	Constraints Barriers.Term
Implementing Organisations	Lookup	No	Stakeholders.Name

Field	Data type	Mandatory	Lookup Field
Monitoring Organisations	Lookup	No	Stakeholders.Name
Partner Organisations	Lookup	No	Stakeholders.Name
Linked Outcomes	Lookup	No	Outcomes.Name
Linked Indicators	Lookup	No	Indicators.Name
Data Source Text	Free text or links	No	
Data Source Attachment	Attachment	No	
Notes	Free text	No	
Comments	Free text	Conditional, if QA/QC Status = “Yes”, then required	
QA/QC status	Lookup	No	QA/QC Status.Term

C. Data Structures for Indicator

Field	Data type	Mandatory	Lookup Field
Identifier	Numerical	Yes (and unique)	
Name	Free text	Yes (and unique)	
Parent Indicator	Lookup	No	Indicators.Name
Description	Free text	Yes	
Indicator Type	Lookup	Yes	Indicator Type.Term
Progress Description	Free text	No	
Methodologies Assumptions	Free text	No	
Measurement Unit	Free text	Yes	
Monitoring Organisation	Lookup	No	Stakeholders.Name
Data Source Text	Free text or links	No	
Data Source Attachment	Attachment	No	
Notes	Free text	No	
Comments	Free text	Conditional, if QA/QC Status = “Yes”, then required	
QA/QC status	Lookup	No	QA/QC Status.Term

A. Data Structure for Indicator Data

Field	Data type	Mandatory	Lookup Field
Indicator Data Identifier	Numerical	Yes (and unique)	
Indicators.Identifier	System assigned	Yes	
Data Type	Lookup	Yes	Data Type.Term
Start date	Date	Yes	
End date	Date	Yes	
Quantitative Value	Numerical	Yes if Qualitative Description is not populated, otherwise no	
Qualitative Description	Free text	no	
Data Source Text	Free text or link	no	
Data Source attachment	Attachment	no	
Notes	Free text	No	
Comments	Free text	No	
QA/QC status	Lookup	No	QA/QC Status.Term

E. Data Structure for Organisations

Field	Data type	Mandatory	Lookup Field
Identifier	Numerical	Yes (and unique)	
Name	Free text	Yes (and unique)	
Acronym	Free text	No	
Parent Organisation	Lookup	No	Stakeholders.Name
Organisation Email Address	Free text	Yes	
Organisation Telephone Number	Numerical	Yes	
Address Details	Free text	Yes	
Organisation Type	Lookup	Yes	Organisation Type.Term
Thematic Area	Lookup	Yes	Thematic Area.Term
MRV Roles	Lookup	No	MRV Role.Term
Notes	Free text	No	

F. Data Structure for Individuals

Field	Data type	Mandatory	Lookup Field
Identifier	Numerical	Yes (and unique)	
Name	Free text	Yes	
Job Title	Free text	No	
Email Address	Free text	Yes	
Telephone Number	Numerical	No	
Stakeholder Organisation	Lookup	Yes	Stakeholders.Name
MRV Role	Lookup	Yes	MRV Role.Term
System User	Boolean	Yes	
Username	Free text	Conditional required if System User = 'Yes'	
Password	Free text	Conditional required if System User = 'Yes'	
Permission Group	Lookup	Conditional required if System User = 'Yes'	Permission Groups.Term
Thematic Area	Multiselect	Conditional required if System User = 'Yes'	Thematic Area.Term
Date and Time Confirmed	Time and date	Conditional required if System User = 'Yes'	
Enabled	Boolean	Conditional required if System User = 'Yes'	

Appendix C – Look Up Table Vocabularies

Lookup table vocabularies vF.xlsx

Appendix D – Sample Data Set

A. Sample dataset for Outcomes

Data Field	Data Set
Identifier	1
Name	Abate greenhouse gas emissions by 30%, by the year 2030
Parent Outcome	
Description	Abate greenhouse gas emissions by 30%, by the year 2030
Sector	Mitigation. 1: Energy; >>1.A.3: Transport. 2: Industrial Processes and Product Use. 3: Agriculture, Forestry, and Other Land Use. 4: Waste
Geography Lookup	Mauritius
Reference	INDC 2015
Monitoring Organisation	MoESWMCC
Linked Indicators	National GHG Emissions
Data Source	Link to the folder/file
Notes	Free Text Field
Comments	Free Text Field
QA/QC Status	Verified

B. Sample dataset for Interventions

Data Field	Data Set
Identifier	1
Name	Energy efficiency plan
Parent Intervention	Abate greenhouse gas emissions by 30% by 2030
Objective	Improved energy planning, energy demand forecasting and strategy development
Quantified Objective	Example quantity of GHG emissions abated
Measurement Unit*	CO2eq
Methodologies Assumptions*	Free Text Field
Description	The objective of the project 'Technical Support to MEPU' is to provide capacity building to MEPU, the Energy Efficiency Management Office (EEMO) and the Central Electricity Board (CEB) of Mauritius in energy planning, energy demand forecasting and the development of strategies, action plans, regulation and incentive schemes in energy, renewables and EE.
Geography Lookup	Mauritius
Geography Text	Applies nationally
Longitude	20.1609° S
Latitude	57.5012° E
Classification	2.1 Energy efficiency technology; 1.1 Renewable energy
Sector	Mitigation. 1: Energy
Gases Affected	Carbon dioxide (CO2)
Policy Instrument	Planning
Status	Implemented
Start Date	22-Jun-15
Implementation Date	18-Mar-16
Scenario	Mitigation – With Existing Measures

Data Field	Data Set
Objective Achieved	TRUE
Progress	Completed
Priority	High
Costs	USD 1,000,000
Constraints Barriers	Capacity Building
Implementing Stakeholder	The Ministry of Energy and Public Utilities
Monitoring Stakeholder	The Ministry of Energy and Public Utilities
Partner Organisation	UNEP DTU
Linked Outcomes	Abate greenhouse gas emissions by 30% of the BAU projection by 2030
Linked Indicators	Annual energy consumption
Data Source Text	Free Text Field
Data Source Attachment	Technical Support to the Ministry of Energy and Public Utilities report
Notes	Free Text Field
Comments	Free Text Field
QA/QC status	Needs correction

C. Sample Dataset for Indicators

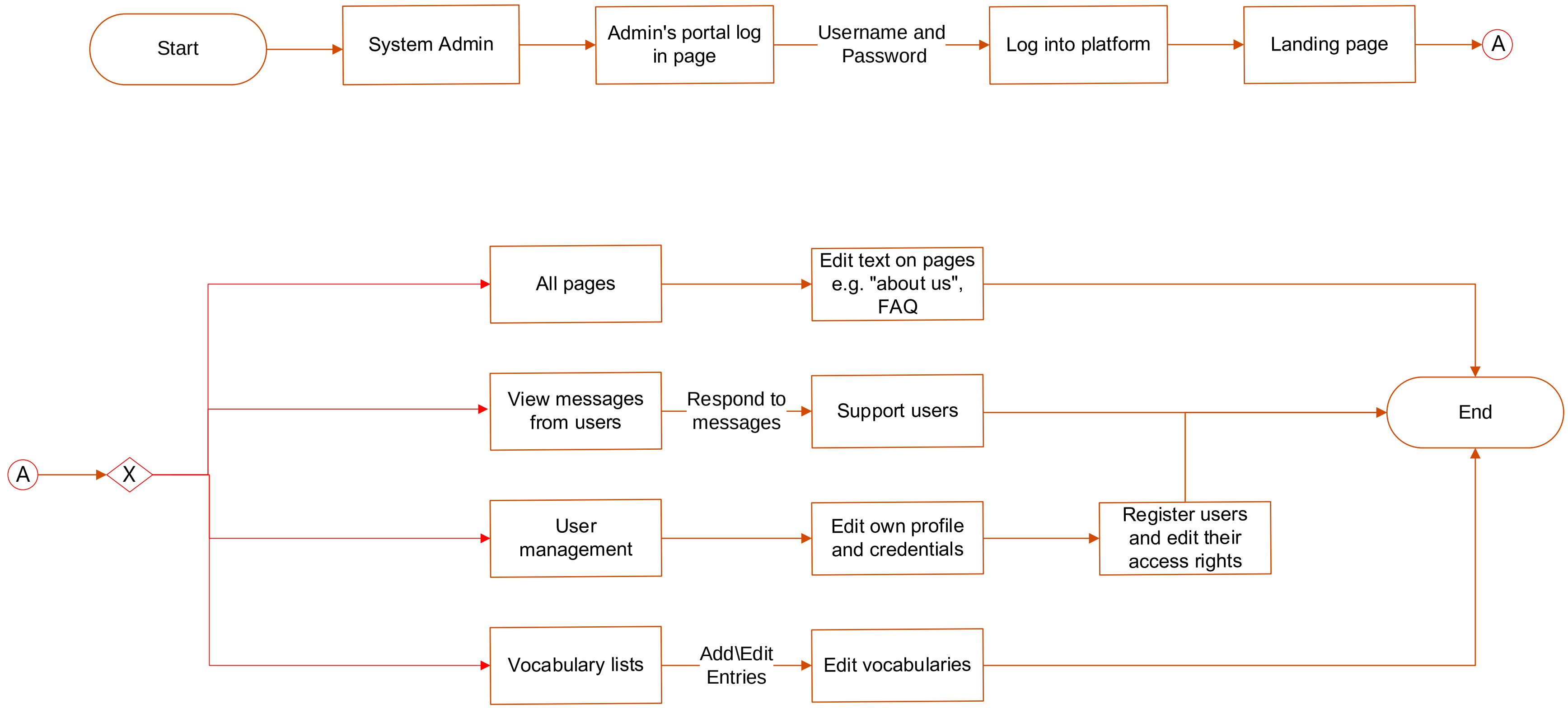
Data Field	Data Set
Identifier	1
Name	Annual energy consumption
Parent Indicator	
Description	The amount energy consumed in Mauritius every year
Indicator Type	Progress Indicator
Progress	Energy consumption has steadily increased since 1980
Methodologies Assumptions	Free Text Field
Measurement Unit	TWh
Monitoring Stakeholder	The Central Electricity Board
Data Source Text	https://our worldindata.org
Data Source Attachment	Attached document
Notes	Free Text Field
Comments	Free Text Field
QA/QC status	Verified

D. Sample Dataset for Organisations

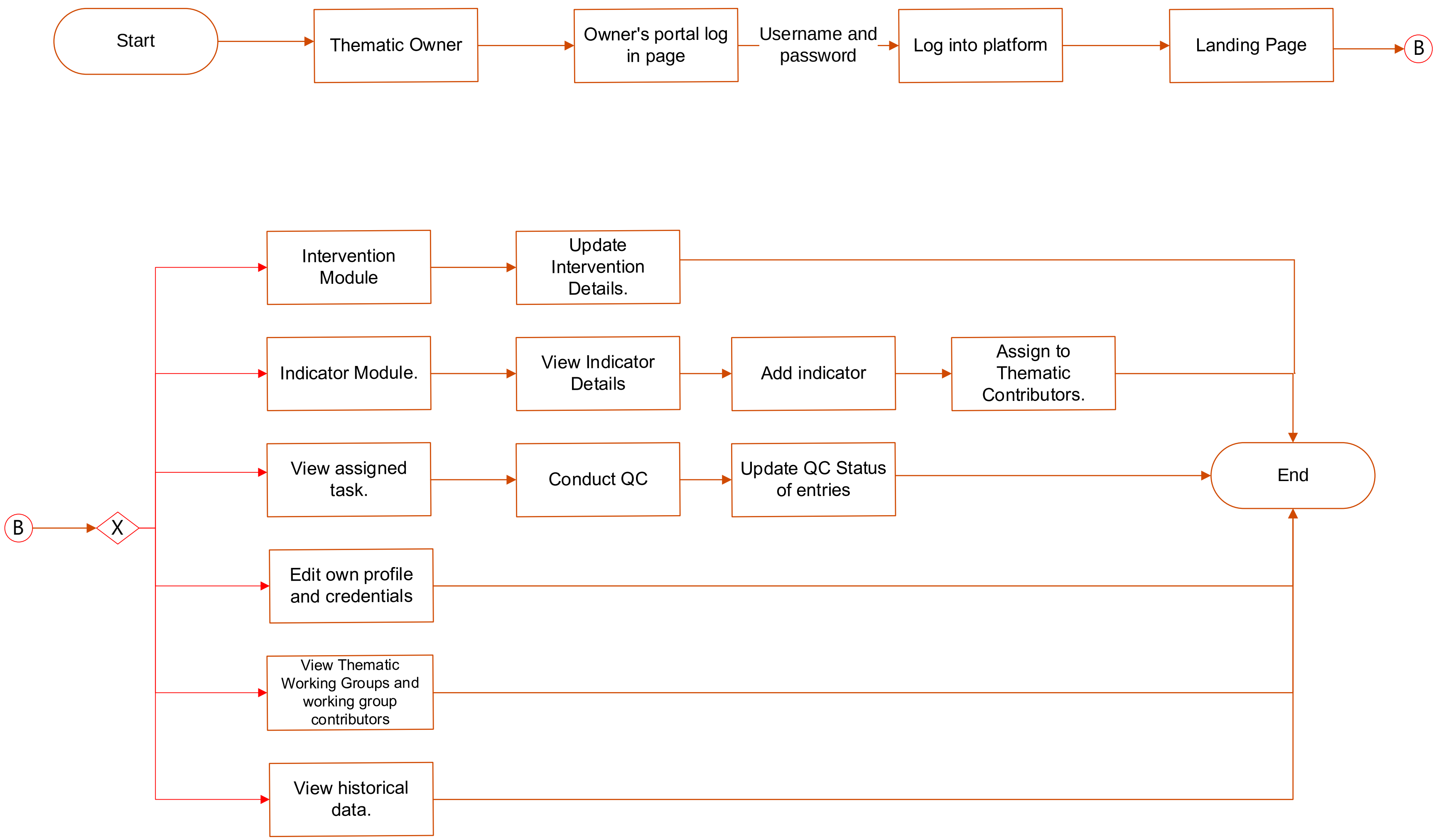
Identifier	Data Set 1	Data Set 2
Name	The Central Electricity Board	Ministry of Environment, Solid Waste Management and Climate Change
Acronym	CEB	MoESWMCC
Parent Organisation	Government of Mauritius	
Email Address	admin@ceb.com	Joe.bloggs@govmu.org
Telephone Number	00000 000000	00000 000000
Address Details	Port Louis	Port Louis
Organisation Type	Companies / businesses / industrial associations	National government
Thematic Area	Energy sector resilience in the Republic of Mauritius	Technical support
MRV Roles	1.1.4.2. Expert: Mitigation: Energy Production	1.1. Co-ordinator Mitigation MRV
Notes	Free Text Field	Free Text Field

Appendix E – Data Flows

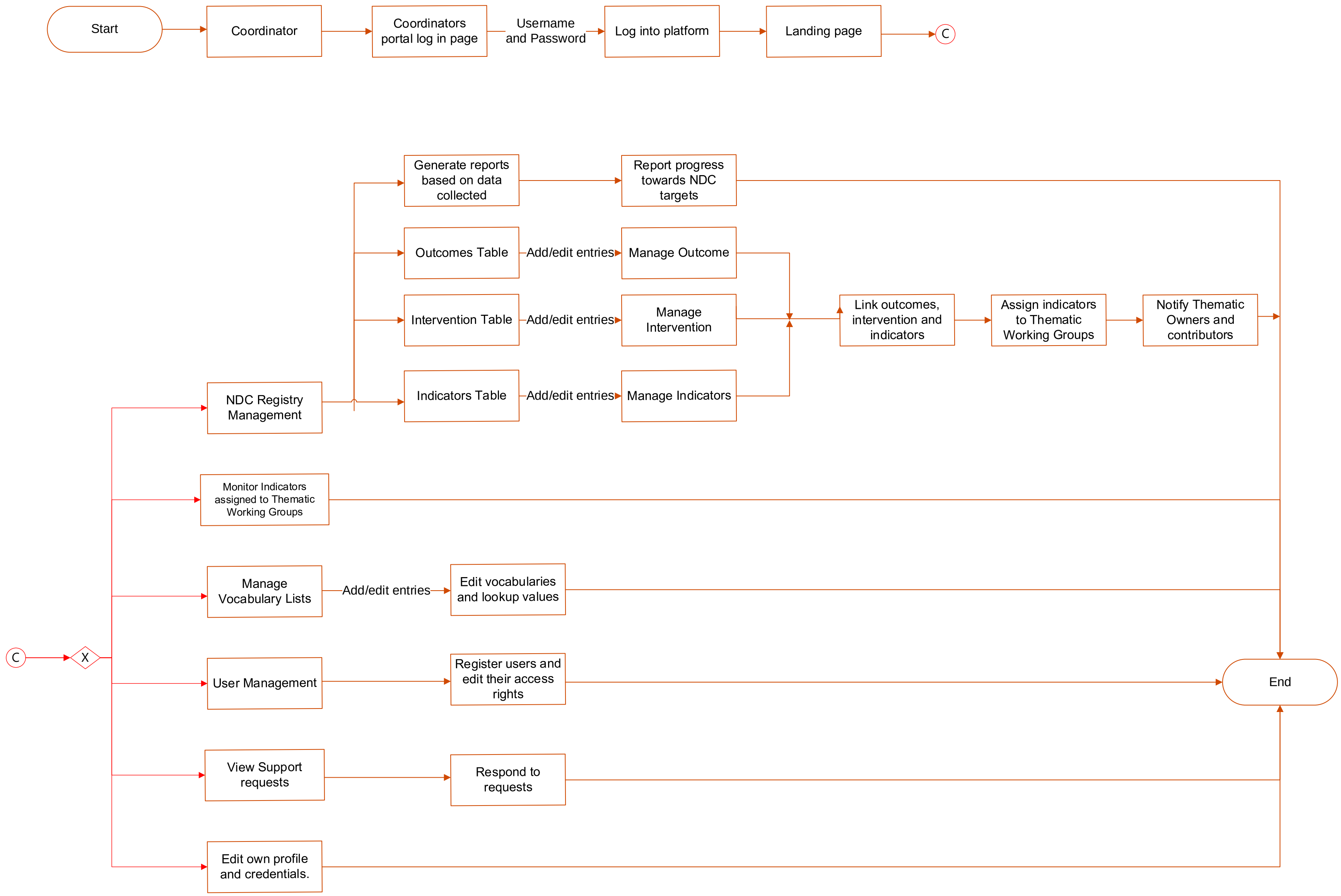
A. System Admin



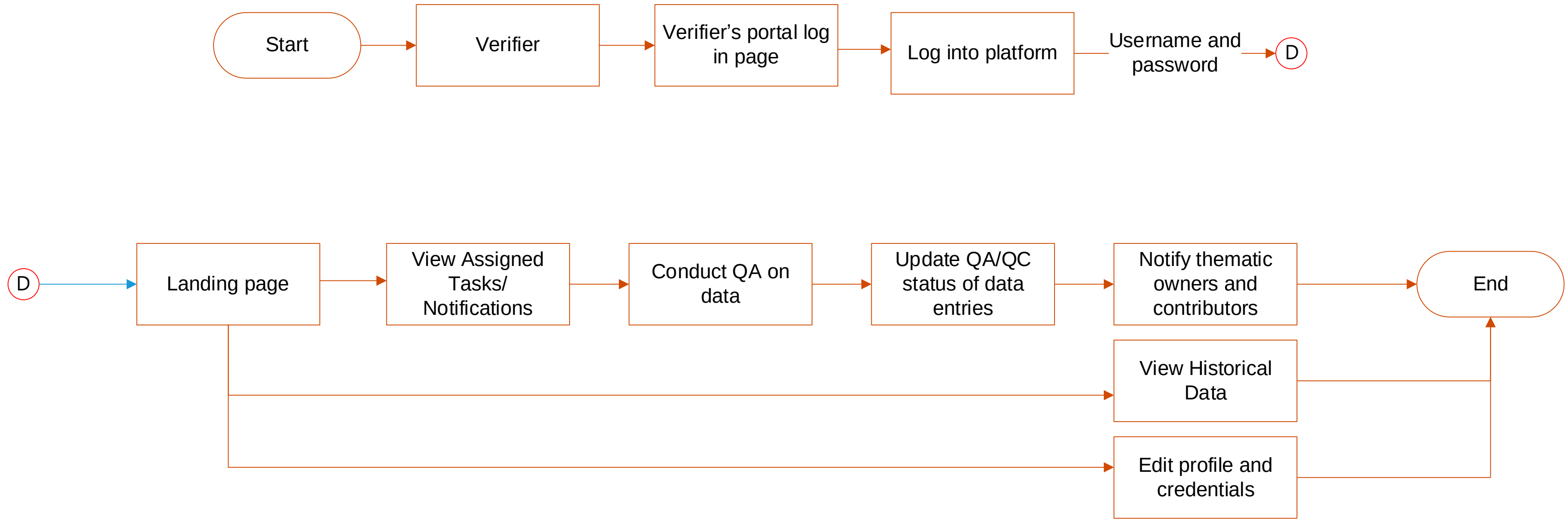
B. Thematic Owner



C. Coordinator

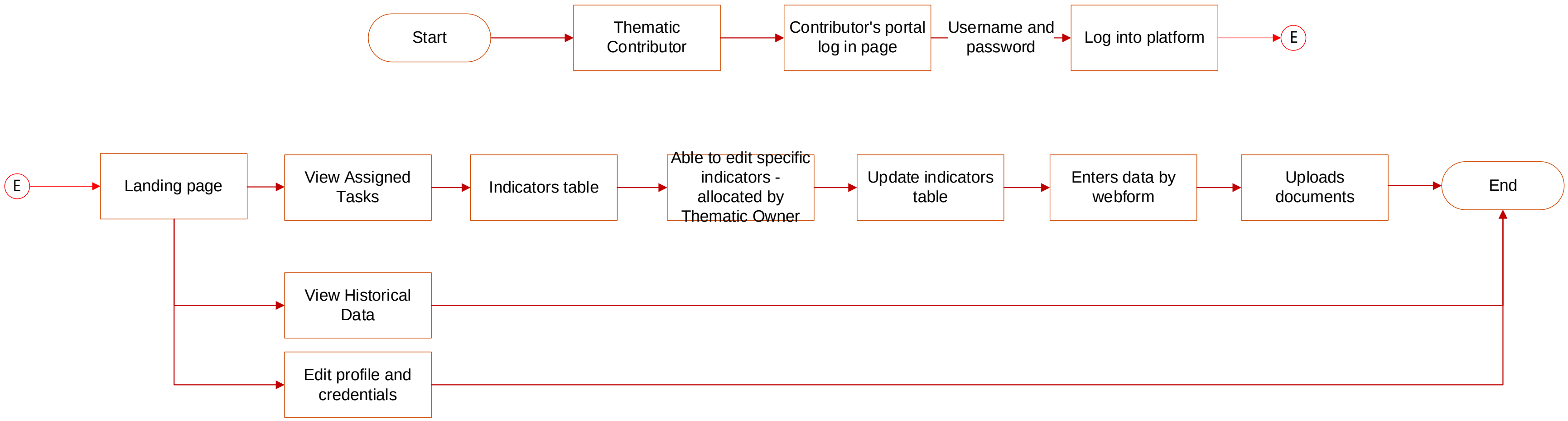


D. Verifier



Start
Verifier
Verifier's portal log in page
Log into platform
Username and password
D
D
Landing page
View Assigned Tasks/ Notifications
Conduct QA on data
Update QA/QC status of data entries
Notify thematic owners and contributors
End
View Historical Data
Edit profile and credentials

E. Thematic Contributor



www.pwc.com/mu