Concept Note

SECTOR NETWORK
TUEWAS

Transport, Environment, Energy, Water in Asia

Distribution System Operation - Toolbox for Practitioners
Toolbox Description and Strategic Considerations Promotion and Sustainability

Developed under a dedicated Task Force of the TUEWAS Energy Working Group

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Zusammenarbeit (GIZ) GmbH

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Acronyms

ACE	ASEAN Centre for Energy
AEPC	Alternative Energy Promotion Centre
ASEAN	Association of Southeast Asian Nations
BMZ	Federal Ministry for Economic Cooperation and Development
DSO	Distribution System Operator
EE	Energy Efficiency
E.DSO	European Distribution System Operators
ESP	Energy Support Programme (GIZ Viet Nam)
GETRI	Gujarat Energy Training & Research Institute
GIZ	Deutsche Gesellschaft für Internationale Zusammenarbeit
HLM	High-Level Meeting
IGEF	Indo-German Energy Forum
IGEN	Indo-German Energy Programme
M&E	Monitoring and Evaluation
MS	Microsoft
Q&A	Questions and Answers
RE	Renewable Energy
TUEWAS	Transport, Environment, Energy and Water in Asia Network
TWG	Technical Working Group
VEECOM	Viet Nam Energy Efficiency Community
VEPG	Viet Nam Energy Partnership Group

1. Introduction

Distribution System Operators (DSOs) are responsible for distributing energy to the final consumers. They typically own and operate the grid infrastructure that connect the transmission network to the final consumers of electricity.

Over the last years, technological advances in automation and increased digitalisation have opened up new avenues to optimising energy system planning, operations and maintenance - especially for those with high shares of intermittent and distributed energy generation - and power system protection. In the years to come, as more and more countries move towards higher levels of digitalisation and automation, the role of DSOs is going to significantly change and not only their investment strategies and organisational set-up, but also knowledge and skills of staff and teams will need to evolve with technological progress.

Although relevant know-how and tools to help DSOs to adapt to these new developments exist, they are not easily accessible. Within GIZ, individual projects usually mainly focus on their partner organisations and knowledge management is, therefore, also mostly limited to the project level.

Against this background, members of the Transport, Environment, Energy and Water in Asia Network (TUEWAS) Energy Working Group (GIZ India, Nepal and Viet Nam) established a task force to harness the collective power of the knowhow gathered at individual project level and support the collection of content for the development of a Toolbox that shall help improve the capacities of distribution grid operators to operate modern-day grid networks across Asia. Further, it is expected that future GIZ projects in Asia will increasingly support DSOs. Therefore, the toolbox will be a valuable resource for GIZ, as well. The specific objectives and beneficiaries of the Toolbox are defined in Section 2. Currently, TUEWAS connects over 50 projects across 16 countries in the fields of transport, environment, energy and water.

To support the task force, two consultants were contracted:

1. Toolbox Development: This assignment, carried out by the consultancy firm Energynautics, focused on gathering a library of relevant contents (studies, papers, guidelines, etc.) from task force members, other TUEWAS members, as well as other sources. Furthermore, the consultant developed an excel-based database and search tool, in order to facilitate the use of the library by the end-users. The tool allows for further sources to be added to the database. The assignment was implemented in the month of August and led to the identification of >100 sources, as well as a final version of the Toolbox.

2. Toolbox Promotion Strategy: This assignment, carried out by the consultancy firm IB Consulting, is summarised in this report. The aim of the assignment was to develop a high-added-value approach to promoting the Toolbox effectively and efficiently among target audiences (Section 4), as well as supporting the development of a manual for the Toolbox (based on the descriptions in Section 3). It was also meant to generate recommendations for the further development, applications and maintenance of the Toolbox (Sections 5 and 6).

The results of this Task Force were presented at the TUEWAS Conference, which took place in September 2022.

2. Objectives and Main Characteristics of the Toolbox

The **overarching objective** of the Distribution System Operation Toolbox for Practitioners (hereafter referred to as "the Toolbox") is to be a repository for state-of-the-art knowledge and know-how that contributes to increasing the capacity of distribution grid operators to operate state-of-the-art distribution grids in an efficient and sustainable manner. More than that, the Toolbox aims to increase the technical capacity and, by extension, the interest of electricity network operating companies to absorb and distribute variable renewable-energy-based electricity and, thereby, contribute to more sustainable, robust, and climate-friendly energy systems. The Toolbox is particularly expected to support GIZ country projects supporting DSOs in Asia and beyond to learn from each other, use each other's knowledge products and to identify and replicate promising approaches that can be integrated in the design of energy distribution sector support measures.

Direct beneficiaries and targeted end-users of the Toolbox are distribution system operators (DSOs) in TUEWAS countries and beyond. GIZ and consultancies or other institutions specialised in providing technical assistance, training and/or services to DSOs are also part of the target audience of the Toolbox. The improved capacities of the grid operators will also indirectly benefit other energy sector stakeholders that interact with them within the energy system, such as transmission grid operators, and private sector stakeholders.

3. Toolbox Description, Structure and Contents

3.1. Overview

The Toolbox compiles and makes available a library of relevant documents through a user-friendly interface, including studies, scientific articles, guidelines and other relevant files. A category-based folder structure is backed by a database that maps the folder structure, allowing the end-user to easily find, add and delete files.

Technically, the Toolbox will be developed in two distinct phases. The first development **phase I**, which is covered with the current TUEWAS task force financing , **delivered an excel-based tool for download**, which, in principle, is **not built to be continuously updated**. While the user has the option to expand the library of the Toolbox on their own device, the original Toolbox itself will not be changed. If small amounts of financing could be made available for maintenance of the phase I Toolbox (rather than moving to phase II), it would be possible to foresee an update once per year or every two years.

The second development **phase II** would consist of converting the existing Toolbox into a **web-based Toolbox**. The web-based option would allow to upload new content and to remove obsolete or outdated content on a rolling basis, both by users and by a central Toolbox host. A web-platform could potentially also offer additional functions, such as discussion fora, and, in general, the concept could evolve from a tool to a more comprehensive platform for distribution grid operators across Asia. This level of sophistication would, however, require significant and longer-term financing, as well as a suitable partner interested in hosting and running the Toolbox sustainably (institutionalisation). Strategic considerations related to this second phase of development are further discussed in Sections 5 and 6.

3.2. Toolbox Download

The Toolbox is available for download on several platforms, including on the Energypedia platform. The download file is a zip file that contains all the elements of the Toolbox, as described in the next Section. It is recommended to users to update Adobe Acrobat before using the tool, as older versions might lead to errors when saving or opening entries that have a file. For this, in Adobe Acrobat[1], select Help>Check for updates. Install updates.

3.3. Folder Structure

The folder structure allows the storing of files according to categories. Eight categories have been defined in the current version of the Toolbox (Figure 1). Each file is assigned one main category (which also determines in which folder the file is stored). With the use of key words, which are defined for each category (Figure 1), the search options can be expanded beyond the main categories. This will be further detailed in Section 3.4.2.

Figure 1 – Categories and Key Words of the Toolbox

| Categories	Keywords
Active management of distribution grid	DERMS
	Monitoring solutions
	Control solutions
	Congestion management
	Forecasting
	Smart grids (AMI, smart meters, …) and increased digitalisation
Enabling distributed technologies	Battery energy storage systems
	Electric vehicles
	Distributed generation (solar)
	Distributed generation (small hydro)
	Distributed generation (others)
	Mini/micro-grids (when interconnected)
	Inverter-specific aspects
Market-based and tariff-based solutions	VPP and aggregators (market integration of DERs)
	Demand response
Connection agreement solutions	Technical requirements for connection (grid codes, standards)
	Interconnection application procedures
	Compliance mechanisms
Distribution planning	Distribution planning/ Electrification master plan
	Grid simulation studies
	Protection coordination and adjustments
	Centralised information database (e.g. DER register, GIS, ...)
	Disaster management and resilience
Operation and maintenance	Asset management
	Distribution transformer maintenance
	Distribution transformer health monitoring
	Information and operational technology integration (IT-OT)
Information exchange	Interoperability and communication protocols
	Cyber security
	TSO and DSO increased coordination and data exchange
Other	User defined

NOTE

The Toolbox Database (excel document) must be located in the same folder as the category folders 01-08, as available in the downloadable version of the toolbox and shown in Figure 2.

The folder structure itself (Figure 2) consist of two levels. The first level contains the category-based folder structure (folders numbered 01 to 08), the excel-based Toolbox database, as

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[1] In Adobe Acrobat, not in Acrobat Reader.

well as the User Guidance document. Within each of the folders (second level), all files that correspond to the particular main category are stored.

Figure 2 – Folder Structure of the Toolbox

Level 1

Level 2
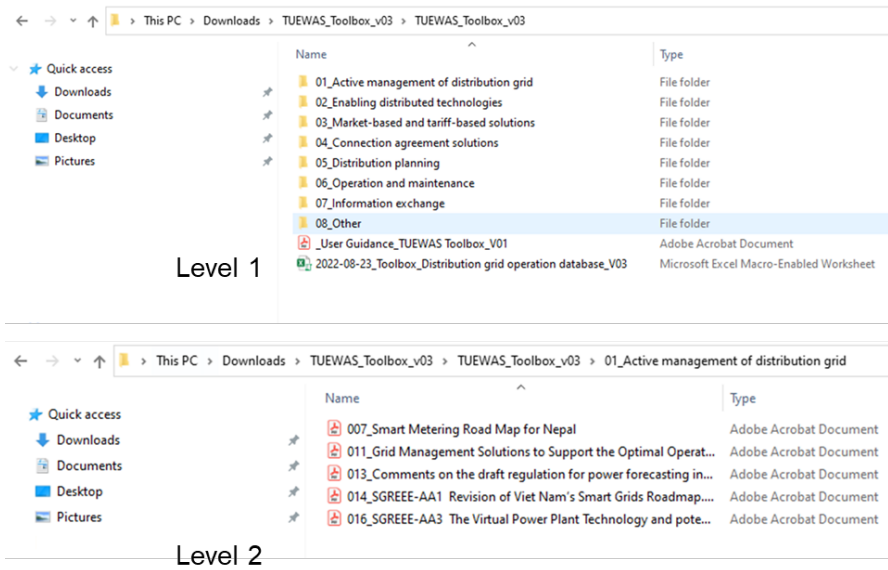
3.4. Excel-based Toolbox Database

The Toolbox Database is an excel document that uses macros to allow the user to easily search for documents that have been deposited in the filing system. It also allows the user to add or delete files to the database and folder structure and to make edits to individual database entries.

NOTE
Content must be enabled when opening the excel document for macros to work!

The excel file consists of three sheets: 1) Home, 2) Search, and 3) Database.

The Home sheet (Figure 3) provides a description of the Toolbox, as well as a link to the TUEWAS website. Next to that, the Home sheet mainly acts as an interface that allows the user to access the different sheets of the database, as well as the folder structure.
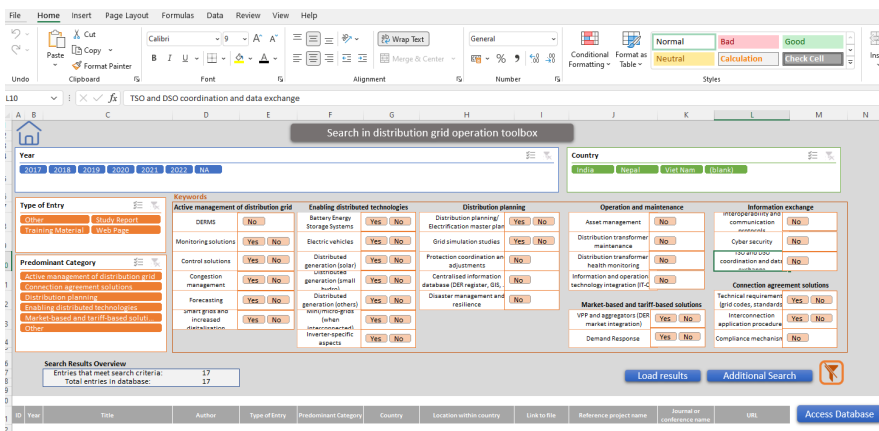
Figure 3 – Home Sheet of the Toolbox
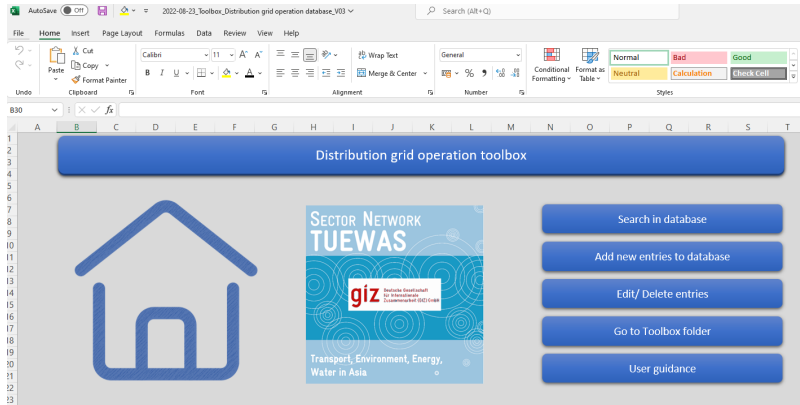
The Search sheet (Figure 4) consists of a dashboard of slicers that allow for a user-friendly filtering of the database. Slicers are available for categories, keywords, year of publication, country and type of material. How to conduct a search is further detailed in Section 3.4.2.

Figure 4 – Search Sheet of the Toolbox

The Database sheet contains the entire list of documents that have been deposited in the filing system and provides detailed information about each file, including title, author, publication year, type of entry, category, country, an abstract, keywords, etc. The database sheet also includes selected slicers, in case the user wants to conduct a search in the Database sheet, directly.

Figure 5 – Database Sheet of the Toolbox

3.4.1. Toolbox Navigation

From the Home sheet the user can access all the main functions of the Toolbox. The search, add and edit/delete functions are further detailed in Section 3.4.2, 3.4.3 and 3.4.4, which are written in instruction style to be used in the User Guidance. From the Home sheet, the user can also open the folder structure directly and open the User Guidance pdf document, in case they need further information on how to use the Toolbox.

Figure 6 – Navigation from the Home Sheet of the Toolbox
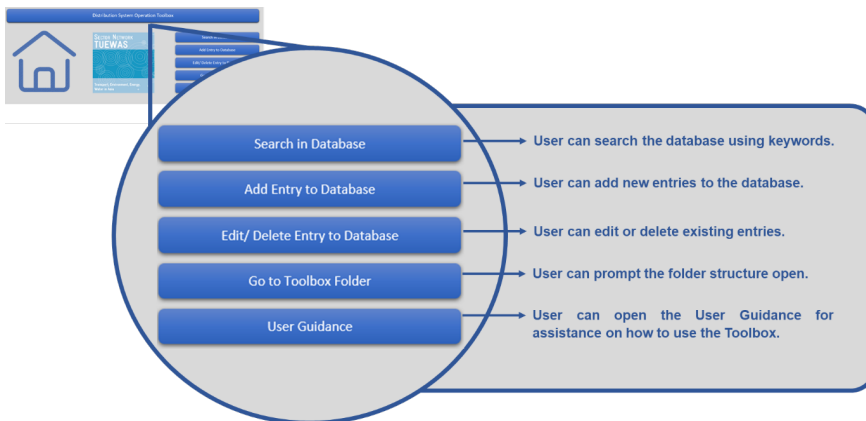
Figure 7 provides an overview of navigational and other buttons that can be found within the Toolbox, as well as their function.

Figure 7 – Functional Buttons of the Toolbox

Leads back to the Home sheet

Clears all filters

Unlocks individual rows of the database for editing
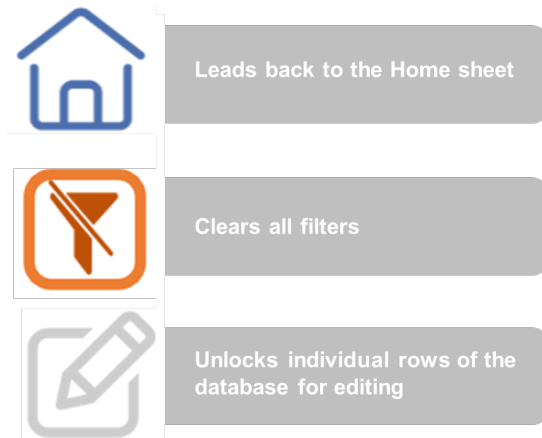
3.4.2. Conducting a Search

Go to the Home sheet.

Click on "Search in Database" (Figure 8), upon which the user is redirected to the Search sheet. You can also go directly to the Search sheet by manually clicking on the sheet tab at the bottom of the excel.

Figure 8 – Opening the Search sheet
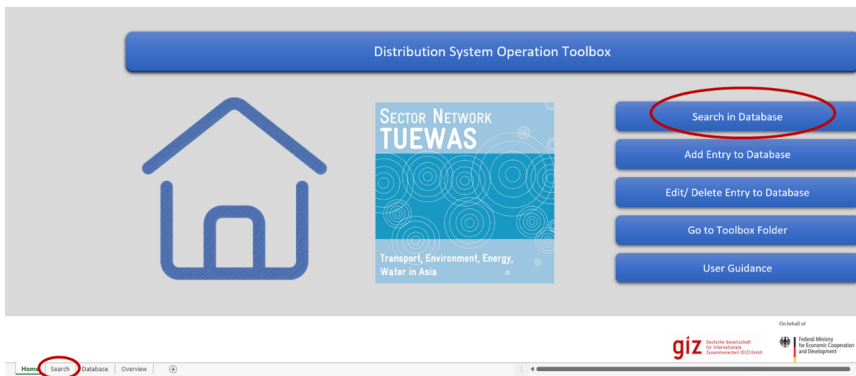
In the Search sheet you can filter entries form the database by using the slicers (

Figure **9**). There are five types of slicers: 1) Year, 2) Country, 3) Type of Entry, 4) Main Category and 5) Keywords. You can choose which way to best use the slicers to find what you are looking for, i.e., there is no need to use all of them.

> **NOTE**
>
> *To select or remove from selection more than one filter criteria <u>within the same slicer</u> (e.g., search database for both "Article" and "Guidelines"), hold Ctrl key and click on the slicer criteria. Grey or white colouring represent those not selected.*

Each new slicer selected for filtering will add to the previously selected filtering criteria (slicers). For example, by selecting Viet Nam in the country slicer, as well as "Control solutions" and "Battery energy storage systems" in the keyword slicers, the filtered results will be those for Vietnamese sources that are marked with both keywords.

Figure 9 – Slicers in the Search sheet

Upon filtering, the user will notice two types of slicer colour changes. The **Type 1** is to indicate that one or more options have been selected in each activated slicer. Selected options keep their original slicer colour, whereas non selected options (within an activated slicer) will turn grey (or white in case of slicers for keywords). The second c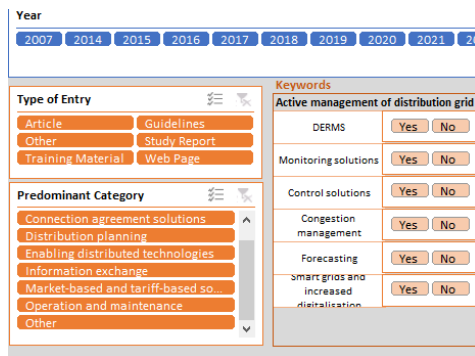olour change (**Type 2**) is when the colours within the slicer keep the original main background colour (i.e., do not turn grey or white) but are marked in a lighter tone. This means that with the already applied filters, there are no results for that specific criteria. In the example shown in Figure 10, when selecting "Guidelines" in the "Type of Entry" slicer, the non-selected options in that slicer turned grey (Type 1), whereas a few options in the "Main Category" slicer changed to a lighter colour (Type 2). This means that there are no entries marked as "Guidelines" that are part of the "Operation and Maintenance" category, for example.

Figure 10 – Slicer colouring changes in the Search sheet

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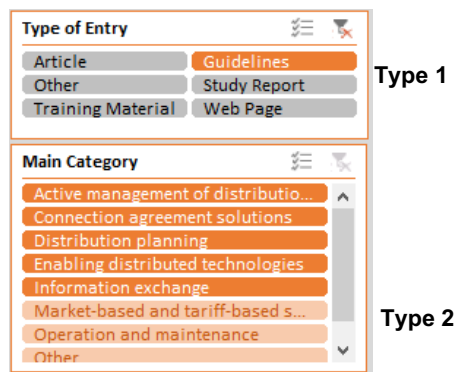
If you want to conduct a more detailed search, you can use the Search Form, which can be opened by clicking on the Additional Search button on the bottom right of the Search sheet (Figure 11). Multiple search fields filled in the Search Form will create "AND" conditions. For example, writing "feasibility" in the title field and "Smith" in the author field will search the database for entries that meet both criteria.

It is recommended to use the special character "*" in the search form to provide more flexibility when filtering (similar to the use of "…" in written texts). For example, in the title field, filter titles that contain the words "feasibility study" in a specific position by:

- Typing "*feasibility study*" to search for titles that contain these words in any position. (Recommended).
- Typing "feasibility study*" to search titles that begin with "feasibility study".
- Typing "*feasibility study" to search titles that end with "feasibility study".

Figure 11 – Additional Search Form
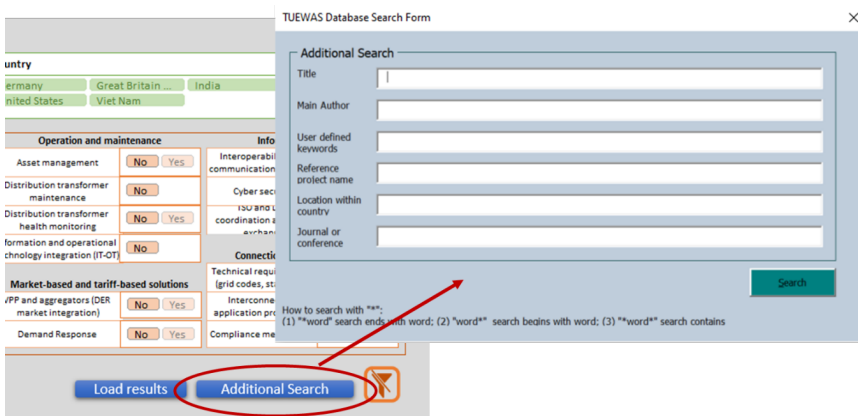
Once you are done selecting your search criteria you can see how many entries match your search criteria in the bottom left of the Search sheet and proceed to load the results by clicking on "Load results" (

Figure **12**).
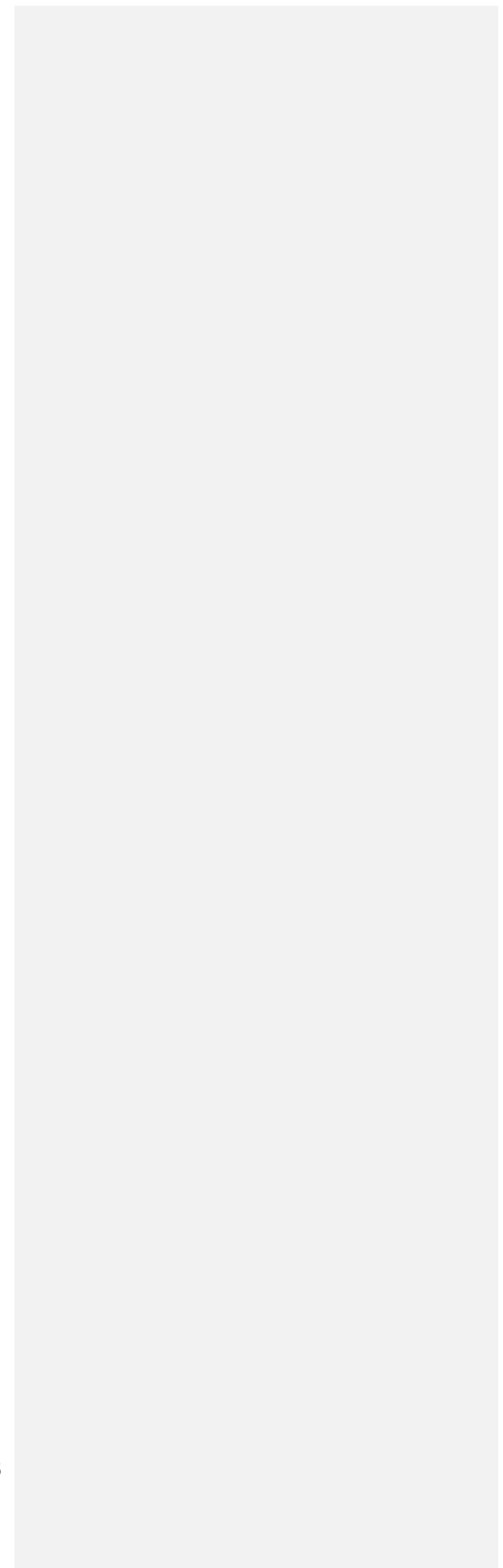
Figure 12 – Search Results

You can either choose to open the loaded files from this search list by clicking on "Link to File" or click on "Access Database" to get more information on the filtered documents. If you click on "Access Database" you will see the same search results but have access to more detailed information about each file. To access this information, you must click on "Extra Data" in the Database sheet (Figure 13), which unhides additional data rows to the right of the sheet.

Figure 13 – Extra data

3.4.3. Adding an Entry to the Database

You can expand the database by adding new files, allowing you to build your own personalised Toolbox over time.

To add a new file, you must click on "Add Entry to Database" on the Home sheet, which will prompt a data entry form (Figure 14).

Figure 14 – Opening the Data Entry Form

To successfully add a new file, all fields that are marked with a star (*) <u>must</u> be filled in. The choice of at least one category and one keyword is obligatory and you must assign the main category, which determines in which folder the file (if you are uploading a file) will be saved. Other fields are optional. We do recommend adding as much information for each entry as possible to facilitate future filtering and use of the Toolbox. Click save to complete the data entry. Additional guidelines can be found by hovering the cursor over some of the fields.

Upon clicking on save and confirming the action of saving the entry to the database, the user will receive the message box shown in Figure 15. When selecting Yes, the user will be able to select a file from his/her computer to be copied into the toolbox (does not change the user's original file). If the user selects No, this means that there is no file to be uploaded for this specific database entry, which is usually the case for entries of the Web Page type.

Figure 15 – Message box when entry is added with a file.
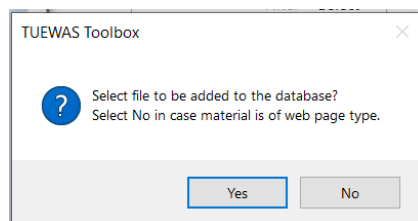
3.4.4. Editing and Deleting Entries

To edit or delete files, you can click on "Edit/Delete Entry to Database" on the Home sheet, which will direct you to the Database sheet, where the Edit Toolbox message box will be automatically prompted (Figure 16). You can also go directly to the Database sheet and click on the edit icon to prompt the Edit Toolbox box.

Figure 16 – Opening the Edit Toolbox box
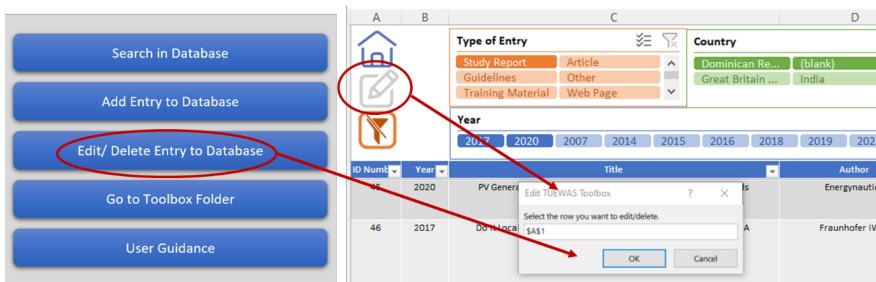
To avoid accidentally editing or deleting vital information, the Toolbox only allows for editing of one row of the database at a time. You must select which row you want to edit by using the Edit Toolbox box. Click o.k. to unlock the selected row and proceed with the intended changes. You can also completely delete the entry at this point using the mouse right-click and delete option. Once you are done editing the row will be automatically locked again when selecting a new row to edit, or when the user switches to the Search or Home sheets.

4. Promotion Strategy of the Toolbox

The objective of the Promotion Strategy is to ensure that the Toolbox is known and used as much as possible across TUEWAS countries and, thereby, to contribute to the modernisation and improved performance of DSOs in the region. The main target audiences of the Toolbox are, therefore, DSOs directly, but also GIZ energy projects and consultants that support DSOs and that can find inspiration in the Toolbox for effective project design and instrument deployment, as well as academic/training institutions that can use the Toolbox to create/add content to their curricula. The Toolbox will also be relevant, naturally, for other energy sector stakeholders (such as donors, power producers, etc.) interested in distribution system issues (Figure 17).

Figure 17 – Target Audience of the Toolbox
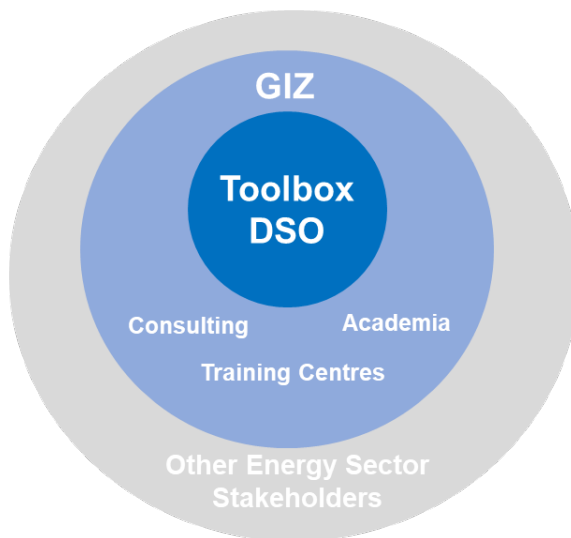
The Promotion Strategy, therefore, aims at ensuring that the Toolbox is widely known and used among the target audiences across all TUEWAS countries, as well as at providing visibility to the work of TUEWAS and Germany/BMZ as a donor. The overall promotion strategy is developed around three main blocks (Figure 18), which are further described in the following subchapters.

Figure 18 – Toolbox Promotion Strategy

TUEWAS Conference
- **Main audience**: GIZ
- **Objectives**: Feedback, additional documents for database, create interest in the toolbox approach.
- Mid-September 2022

Toolbox Launch Event
- **Main audience**: DSO and GIZ Projects in TUEWAS region, as well as key energy scetor stakehodlers in each country.
- **Objectives**: present the toolbox to the target audience, get their feedback and gain commitment from potential multipliers to promote the toolbox on their webpages and other online media.
- Tentatively early December 2022

Long-term Promotion
- **Main audience**: DSOs and GIZ in and beyond the TUEWAS region, other energy sector stakeholders, potential sources of finance.
- **Objectives**: ensure that the toolbox is used as much as possible, promote the replication of the toolbox approach, raise funds to further develop the toolbox and/or to achieve replications.
- Continous after launch event and for as long as relevant.

4.1. TUEWAS Conference September 2022

The first version of the Toolbox was be presented at the TUEWAS conference, which took place from 19. to 23. September 2022 in Bangkok, Thailand. The draft agenda of the event is provided in Annex I. At the conference, the tool and its main features was introduced among an audience of GIZ energy, climate and water projects and programme representatives, providing a first opportunity to receive feedback and validation of the Toolbox structure and contents among peers and target users of the Toolbox.

The following contributions resulted from this work:

- Marketplace presentation: A poster was presented (Annex IV) along with a live demonstration of the toolbox on a monitor. The presentation received notable interest from subject-matter experts and beyond. GIZ staff from other technical fields showed interest in a toolbox for their topic using the same concept.

- GIZ got solutions presentation: A presentation in Pecha Kucha format (20 slides, each shown for 20 seconds, slides moving forward automatically) was given in a plenary session to all conference participants (approx. 300 GIZ staff). The interest in improving knowledge management in GIZ was overwhelming and lots of positive feedback was received. Knowledge management continued to be a present topic throughout the conference.

- Energy Working Group presentation: A presentation with live demonstration was given to the members of the energy working group of TUEWAS. The aim was not only to

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showcase the toolbox, but especially to motivate more GIZ staff to initiate a Task Force for next year by elaborating the Task Force lifecycle.

4.2. Launch Event

The main instrument to promote the current version of the Toolbox will be a **launch event** to be conducted virtually to allow for a maximum participation among the identified DSOs across TUEWAS countries, GIZ country projects and other stakeholders. This is the most efficient and impactful way to draw attention to the Toolbox among a large number of representatives from the relevant audiences. The launch event will be backed by an active pre and post event information campaign, using a wide number of communication channels available to the task force. Table 1 summarises the main steps to prepare, advertise, implement and follow-up on the launch event:

Table 1 – Overview: Launch Event of the DSO Toolbox for Practitioners

Launch Event Preparation		
Actions	**Description**	**Status**
1. Setting-up a participant database	This is an important first step, as all people in this **database** will not only be invited to the launch event but also targeted for any pre- and post-event pro-motion and communication actions. Next to the already identified main audi-ences, the database should also include key multiplier organisations, such as DSO associations, that can easily reach a higher number of potentially inter-ested end-users. Furthermore, raising HQ/FMB/AL interest is key for the further development of the Toolbox and its integration into GIZ's knowledge management framework. Relevant contacts shall be gathered and added to the invitation database. The TUEWAS Secretariat should also promote the event internally and partic-ipate. Their newsletter has an excellent outreach within GIZ. Note for VN Team: VEPG TWG3 members should all be invited to the launch event.	Preliminary database submitted to the task force next to this report and can be accessed here. In a next step, contacts should be gathered from the other TUEWAS Network members that were not part of the task force. This should be done once the date of the launch event is fixed, so that save-the-dates can be sent promptly.
2. Defining the agenda	The contents of the agenda should be discussed and decided by the task force. At the **centre point of the launch event should be an introduction to the Toolbox, as well as a live demonstration** of the same. Furthermore, this opportunity should be used to collect additional inputs for the Toolbox (e.g., more relevant content but also feedback on the user-friendliness).	A proposed concept and draft agenda for the launch event has been drafted and is included in An-nex II of this report. The next steps would consist of dis-cussing and agreeing on a final agenda for the launch event.
3. Participant manage-ment: Sending of save-the-dates, invitations, remind-ers and registration	The main purpose of a **save-the-date** is to inform all potential participants about the upcoming event and to allow them to mark their calendars accord-ingly. Save-the-dates should be sent to the contacts in the database, as soon as the date has been confirmed. It can be a short text only, with a short intro into the topic and a calendar file. **Official invitations** should be sent out as soon as the event date is fully con-firmed, the agenda has been agreed on and the virtual event room is set-up (see action 7 below).	Not started yet, to be done once the date for the event has been defined. The concept note in Annex II pro-vides some suggestions on timing of participant management.

Commented [IB3]: Christoph: please add MS teams link when you have uploaded the database I provided to Teams.

Commented [LCGV4R3]: ok

	Note: There are email automation software solutions, such as MailChimp, that can support both the save-the-date and the invitation sending processes. It will have to be decided, though, from which inbox the emails will be sent. **Registration** to the event should be done through RSVP to the invitation email by a given deadline. If the database gets too large, it may be advisable to switch to an online registration option (e.g., on the ESP or, if possible, the TUEWAS website). **Confirmation**s should be recorded in the database for future follow-up activities (see e.g., Actions 13.-15- in this Table).	
5. Website, Newsletter and Social Media Advertising	Next to the participants that will be directly invited from the contact database, a broad advertisement of the event on relevant websites, newsletters and social media platforms should be used in order to increase participation of interested stakeholders to the event. Pre-event objective: increase participation Post-event objective: maximise the number of downloads and users of the Toolbox. It is recommended to have a content developer, e.g., a member of one of the project teams of the task force that works in communication, develop a few standard news items that then can be used for the different channels.	A number of promotion channels have been identified through a questionnaire among task force members, as well as research and listed in Annex V. Annex III includes some ideas of standard news items to be developed. Furthermore, it is strongly recommended to include the local communication teams in the finetuning and roll-out of the promotion strategy, as the channels identified so far seems to have some gaps.
6. Preparing event contents	The exact content to be developed will depend on the final agreed agenda. The live demonstration should be based on the last version of the Toolbox and should optimally conducted by the consultant who developed it.	Not started yet. Proposed draft agenda is available in Annex II.
7. Preparing virtual event room	Create MS Teams Meeting and link to be shared with participants in the days before the launch event. It must be made sure that MS teams is adapted, technically, to the agenda and other requirements.	Not started yet, to be prepared in conjunction with the invitations.

	It is recommended that moderator and speakers have the same background, following branding requirements (see Section 4.4.). Background material developed for the TUEWAS conference could also be used, if it is not feasible to create a new digital background. The event will be in English. In this case, local interpreters would have to be made available by the individual GIZ country projects and alignment for parallel channel creation on MS team would be required.	
Launch Event Implementation		
Actions	**Key Steps and Considerations**	**Status**
8. Moderation	Moderates the introduction to the agenda and facilitates all interactions with the audience, as well as discussions and feedback rounds. Senior staff member or consultant with excellent English skills to navigate the international audience.	To be appointed and added to agenda.
9. Rapporteur	Responsible for taking minutes and preparing a report of the main discussion points, feedback given, and steps agreed. The rapporteur should also take separate note on who is proposing additional materials or other sort of inputs for the Toolbox to be able to follow-up after the event.	To be appointed.
10. Speakers	Present the content to the audience. The main content presenters should be members of the task force that led this assignment. If required, the consultant that developed the Toolbox could lead the live demonstration.	To be appointed and added to agenda.
11. Technician	Responsible for ensuring that all technical requirements of the virtual event are met to facilitate a smooth implementation of the launch. The event should be recorded. In addition, the technician could: ▪ Take screenshots of the virtual conference for later social media postings. ▪ Send relevant messages in the chat during the event, e.g., to ask participants that registered following online advertisement (i.e., who did not receive an invitation directly from the task force) to send their contact per chat if they wish to be received the Toolbox and be informed of developments in the future.	To be appointed.

Launch Event Follow-up		
Actions	**Key Steps and Considerations**	**Status**
12. Updating database	After the event, the database should be updated to: ▪ Reflect who in the database participated and who did not. ▪ List all additional participants that registered following online media advertisement. ▪ Record which participants submitted a feedback questionnaire (see below).	To be done after the launch event. Person responsible to be appointed.
13. Collecting and incorporating any additional inputs to the Toolbox	Based on the minutes of the rapporteur, as well as any additional inputs the launch event participants may provide, the Toolbox is updated, and a final version is created to be sent to all participants and to be uploaded and advertised on online/social media.	To be done after the launch event. Person responsible to be appointed.
14. Preparing feedback questionnaire	A feedback questionnaire should be developed to allow participants to 1) give feedback on the Toolbox and 2) give feedback on the launch event. This is to be sent with the "thank you"-email (see below).	Person responsible to be appointed.
15. Sending thank you email and download link	Latest one week after the event, a thank you email should sent to all participants with the following contents: ▪ Thank you note for participation and inputs. ▪ Link to Toolbox download (in its final version, see above). ▪ Feedback Questionnaire attached (or also as link).	To be done after the launch event. Person responsible to be appointed.
16. Social Media postings	Once the Toolbox is available online, the planned social media posts should be launched.	To be done after the launch event. Person responsible to be appointed (staff generally responsible for social media posting in each country are listed in Annex III).

4.3. Long-term promotion

There are no dedicated resources to the long-term promotion of the Toolbox (yet) and, there-fore, the promotion of the Toolbox after the launch event will depend on the following:

- Integration of the Toolbox as a product of the GIZ energy projects in the task force countries.
- Online presence in TUEWAS website and interlinkage with the websites of key multi-pliers[2].
- Planning for periodical posts.
- Individual commitment to advertising the Toolbox on social media.

On the first point, the **integration of the Toolbox into the product portfolio of the GIZ energy projects** in the task force countries, but also in other TUEWAS country, would be an easy way to consistently promote it without the need to develop new material or actively create promotion opportunities. Concretely, this would entail a good internal marketing of the tool (e.g., during the TUEWAS conference but also directly with cluster managers) and the prepa-ration of some simple but key promotion material (e.g., a standard slide to be added to energy cluster standard presentations, a fact sheet to be laid out physically, etc.). By featuring in GIZ standard presentations on the energy portfolio, the Toolbox will automatically receive visibility among a broad audience at various events.

As described in the previous section, after the launch event, the final version of **Toolbox will be made available online**. The main host of the Toolbox (for now) is expected to be the TUEWAS website[3]. To increase visibility and traffic to and downloads from this main site, it will be important to gain the interest of key multipliers to include a sub-page or a news item that directs potential users to the main site. A preliminary list of key multipliers has been iden-tified and categorised as such in the database provided next to this report. It is strongly rec-ommended to consider including the Toolbox into www.energypedia.info, a relatively well-known repository for energy knowledge products. This is further discussed in Section 5.

Another way of ensuring traffic to the website in the longer term is to **plan for periodic posting on online/social media**, for instance, when new versions of the Toolbox are available. It is also possible to, e.g., mention the Toolbox in relevant contexts, e.g., when releasing a post on a Facebook group on LinkedIn about the importance of planning for intermittent energy a reference to the Toolbox as a knowledge source for "how-to-plan" could be added. However, it is important to note that **social media posting (and its effectiveness) heavily depends on the commitment of individuals** to do so. Some GIZ energy teams have communications staff with dedicated time to social media posting (see Annex III). Where this is the case, it is recommended to engage with them and agree on how they can support the Toolbox promotion over a longer time period.

4.4. Branding

The branding will follow TUEWAS branding guidelines, including colour coding and placement of logos. Should an additional source of finance be secured from another donor to further

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[2] Key multipliers are organisations that have access to a high number of other organisations and individuals that form part of the target audience for the Toolbox, such as associations or regional/international organisations.
[3] Discussions on options ongoing as of August 2022.

develop/maintain the Toolbox, branding guidelines would be revisited to accommodate the new contributor.

5. Further Development and Maintenance of the Toolbox

In terms of maintenance and further development of the Toolbox, there are three main scenarios, as outlined in Table 2.

Table 2 – Scenarios for Maintenance and further Development of the Toolbox

Scenario 1: No further development nor maintenance is done.	The Toolbox is not further developed and is never updated with, e.g., new content. It remains available for download for as long as hosting website(s) agree(s) to do so. The Toolbox is expected, however, to continue evolving on the users' devices or cloud spaces, as they add new content to the database. *No additional costs.*
Scenario 2: Minimal maintenance is done without further development.	The task force members (or a third party) commit to ensuring that the Toolbox is maintained periodically, e.g., annually, but without investing into further development of the Toolbox (e.g., into a web-based platform). This particular case could be technically challenging. As the Toolbox is now available as a static, downloadable version and users can add more content to it, locally, on their devices, as time passes there will be more and more different versions of the Toolbox in different locations. An update of the Toolbox would, thus require an approach that allows pooling new relevant inputs to the Toolbox, while making it possible to maintain (not override) existing individual Toolboxes of the users. The costs are difficult to foresee at this point, but they should be relatively low compared to establishing a web-based platform. However, if this is repeated over several years, the cost may actually be higher than investing in a web-based solution. *Estimated costs lie at around €2,500[4] per year for maintenance and small updates of features/functions.*
Scenario 3: The Toolbox is further developed, e.g., into a web-based tool, and continuous maintenance is secured.	The task force members can either raise the funds or raise the interest of a third party to fund the development of the Toolbox from a local to a web-based solution. The advantage of the web-based solution would be that the Toolbox could continue to grow organically over time through inputs from the users, making it a living rather than a static tool. Users would not have to download large files on to their devices (unless they chose to) and can have access to the Toolbox form any device or location. A web-based solution would, however, require constant maintenance and quality control of inputs.

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[4] Estimate based on 5 working days à €500

	Estimated costs lie at around €8,000 for the development and around €2500 per year for maintenance and small updates.

For all scenarios, the immediate challenge is to find a long-term solution for hosting the Toolbox. For as long as the TUEWAS network exists, it can be the TUEWAS website, but this initiative may eventually come to an end. While for Scenario 1 this may not be as relevant, for Scenarios 2 and 3 it will be important to identify a platform that can host the Toolbox for an unlimited period of time (or as long as possible).

Based on some preliminary research, it is recommended to look at the following two options for long-term hosting of the website (Table 3):

Table 3 – Potential long-term Hosts of the Toolbox

Potential Long-term Host	Pros	Cons
Energypedia https://energypedia.info/wiki/Energypedia Energypedia is a wiki platform for collaborative knowledge exchange on renewable energy, energy access, and energy efficiency topics in developing countries, currently recording over 100,000 visitors per month. They provide free information, have a monthly newsletter and continuously develop knowledge sharing tools to improve the user's experience on energypedia. Energypedia already hosts several GIZ Tools[5].	Global reach Experience in Knowledge Management Contact available	Would either need maintenance from a GIZ staff or financing for maintenance by Energypedia (or third party)
ASEAN Centre for Energy (ACE) https://aseanenergy.org/ ACE is an intergovernmental organisation within ASEAN structure that represents the 10 ASEAN Member States' interests in the energy sector. Their work focuses on inter-country transmission grid connections and on facilitating regional exchange. It also sees providing a knowledge repository for ASEAN Member States and services through data management, publication and dissemination one of its key roles. The even have topical pages that	Regional reach May be willing carry on financing maintenance and further development of the Toolbox, as it seems possible to easily integrate the Toolbox into their existing "Topic" sub-page (e.g., ASEAN Power Grid). But this would need to be	No interest in replicating in other regions Contact needs to be established

[5] https://energypedia.info/wiki/Toolbox_on_SPIS
https://energypedia.info/wiki/Portal:Water_and_Energy_for_Food
https://energypedia.info/wiki/Mozambique_Off-grid_Knowledge_Hub
https://energypedia.info/wiki/Humanitarian_Energy_Knowledge_Hub
https://energypedia.info/wiki/Energy_Efficient_Building_Refurbishment_in_Mongolia

resemble the Toolbox (see https://aseanenergy.org/)	confirmed in direct discussion with the centre.	

The next important aspect is securing the financing needed to cover the costs of hosting and maintaining the Toolbox. TUEWAS could potentially provide a new round of financing (maximum of €10,000 provided). Given the cost estimates presented in Table 3, this budget would probably suffice for a pursuing scenario 3. However, additional resources for maintenance would still have to be mobilised from GIZ projects or other sources.

By the time the concept note was being finalised, the following was achieved:

- Preliminary conversations were held with Energypedia to confirm their availability and interest to develop a web-based version of the Toolbox and to host the Toolbox.
- A request for additional budget of €8,000 was submitted and granted by TUEWAS to pursue scenario 3.
- The process of contracting Energypedia was launched.

6. Further applications of the Toolbox

The Toolbox has been developed for the topic of distribution grid operation. However, it could also be adapted to be used for any other technical topic, e.g., rice farming in the Mekong delta.

The current Toolbox design requires to change the code and layout in order to be adapted. Nevertheless, a topic-independent, blank Toolbox could be conceptualised and developed in the future. This would allow the user to add documents and keywords from scratch, without any coding or layout tweaking needed.

The general concept of the Toolbox can be used by different user groups for different purposes as shown in Table X and explained below.

Table 4 – Levels of Application of the Toolbox

Personal	The Toolbox can be run on a personal computer and be used for personal knowledge management on a technical topic.
Project	The Toolbox can the saved in a cloud, e.g., SharePoint or MS Teams room, to allow all project members to expand it. This may be advantageous over a shared knowledge management folder, which tends to become messy over time.

Cluster	Similar approach as on "project" level. The only difference is a larger user group. With larger user groups, quality checking becomes an increasing need.
GIZ internal global	For global internal applications, the Toolbox can be hosted on Share-Point or an MS Teams room and grow over time in a similar manner. Quality control becomes a necessity, though. There could even be a repository of toolboxes on various technical topics as knowledge management vehicle for the entire organisation. It shall be considered to switch from the Excel-based toolboxes to a web-based toolboxes at that scale to include more functions, such as approval/rejection routines for quality assurance.
Global open access	A repository of toolboxes for various technical topics would be not only valuable for GIZ staff, but also for non-GIZ experts. Therefore, an open-access repository of toolboxes is also relevant. External user could also add entries and contribute to the toolboxes. Hosted on a GIZ website, such open access toolbox repository would also further strengthen the branding of GIZ as knowledge-based organisation with high-quality knowledge management accessible for everyone. Obviously, the open access version must not contain internal GIZ documents. If the toolbox repository gains momentum and many users contribute, quality control efforts would increase.

For the global levels, an e-library system across topics with keyword function might be the more promising solution. A new Task Force is going to explore knowledge management on global level in depth.

Annex I – Preliminary Agenda of the TUEWAS Conference 2022 (version: 04/08/2022)

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Date/Time	Mon 19 September	Tue 20 September - Focus: Understand	Wed 21 September - Focus: Envision	Thu 22 September - Focus: Implement	Fri 23 September
			Optional Morning Yoga	Optional Morning Exercise	Depart from hotel to Ancient City
09:00 – 10.30	Arrival of participants & Registration	**Opening & Welcome** *Mr. Reinhold Elges, Country Director Thailand* *Ms. Lisa Hunsinger, Spokesperson SNRD AP* *Mr. Raghu Nukala, Spokesperson TUEWAS*	**Mission of Day 2 & Recap of Day 1**	**Driving transformative change through SNRD AP & TUEWAS** *Parallel technical discussions I along thematic areas Led by WG &TF leads*	**Closing Plenary** *Ms. Lisa Hunsinger, Spokesperson SNRD AP* *Mr. Raghu Nukala, Spokesperson TUEWAS*
		Showcasing GIZ's ideas and impacts for Asia and the Pacific *Marketplace by SNRD AP & TUEWAS member projects*	**7x7: Envisioning transformative change** *TEDx-style inputs by thematic area experts*		
10:30 – 11:00		Coffee Break	Coffee Break	Coffee Break	Coffee Break
11:00 – 12:30		**Opening statement and discussion on challenges and trends for German development cooperation in the Asia and Pacific region** *Mr. Georg Schmidt, H.E. Ambassador of the Federal Republic of Germany together with* *Mrs. Kerstin Nagels, Head of Department Asia I, GIZ* *Mr. Jochen Renger, Head of Department Climate, Rural Development, Infrastructure, GIZ*	**Co-Creating and Collaborative Action for transformative change** *Open space Method*	**Driving transformative change through SNRD AP & TUEWAS** *Parallel technical discussions II along thematic areas Led by WG &TF leads*	**A tour around Ancient City**
12:30 – 14:00		Lunch at Luna (10th Floor)	Lunch at The Market (Riverside, ground floor)	Lunch at Skyline (11th Floor)	Lunch
14:00 – 15:30	**Working Group / Task Force Meetings (optional)** *** flexible time slots from 14:00-18:30*	**Transformative trends and drivers of change in Asia and the Pacific** *Talk-show* *Prof. Sherman Cruz, Chair at the Association of Professional Futurists (virtual)* *Ms. SungAh Lee, Deputy Director General, IUCN (virtual)* *Ms. Nathalie Pladsyodtao, Chief Executive Officer, WWF Thailand* *Mr. Surigon Vichitlekarn, Executive Director, Mekong Institute* *Dr. Katinka Weinberger, Chief of Environment and Development Policy Section, UNESCAP* *Moderator: Mr. Joel Wagner, Conference Facilitator and Chief Navigator, Asia-Pacific Futures Network (APFN)*	**GIZ got solutions** *Showcasing transformative approaches for Asia and the Pacific developed by GIZ*	**SNRD AP / TUEWAS Plenaries** *Parallel Plenary Meetings*	*Enjoy activities around Ancient City****
					Joint SNRD AP/TUEWAS Steering Group Meeting **for Steering group members only*
15:30 – 16:00	Coffee Break	Coffee Break	Coffee Break	Coffee Break	Coffee Break
16:00 – 17:30	**Joint SNRD AP/TUEWAS Steering Group Meeting** **for Steering group members only 16:30-18:00*	**Foresight radar: Emerging trends, challenges, scenarios** *World Cafe-style conversation*	**From foresight to insight to action** *Interactive discussions and reflections in plenary*	**Bazaar of Opportunities** *Gallery walk with display of the WG and TF achievements and plans & snacks and drinks*	Depart from Ancient City
		Closing of Day 1	**Closing Day 2 & Outlook to Day 3**		Arrive at the hotel
18:30 – 20:30		**Joint Dinner Cruise**			

Live streaming with options for virtual participants to interact during the session
Smaller group discussion, no live streaming
Technical discussion, participants can join via MS Teams (organised by Topic lead)

Joint Steering Group Meeting
Networking Activities

*** Participants can choose to leave after lunch to the airport or back to the hotel
If you have any questions, please do not hesitate to contact us at: daneva.siamwalla@giz.de

CONCEPT NOTE

Launch of the Distribution System Operation Toolbox for Practitioners

Date and Time	[day, Month, year], 00:00 – 00:00 (up to 2 hours in the afternoon Asia time)
Objectives	▪ Presentation of the DSO Toolbox for Practitioners to the target audience ▪ Collect comments and feedback from stakeholders from public and private sectors and identify possible opportunities for improvement. ▪ Gauge interest among participating organisations in a more sophisticated, web-based version of the Toolbox and potentially pre-identify possible host organisations for the Toolbox.
Target Audience	▪ DSO and other interested energy sector stakeholders across all TUEWAS countries. ▪ GIZ Energy Project staff from TUEWAS countries and beyond
Format	▪ Microsoft Teams online, interactive event. ▪ Moderated presentations and live demonstration. ▪ Fully in English language, with interpretation services to be considered at local level. ▪ TUEWAS branding + BMZ and GIZ logos.
Invitation and Participation Management	6 or more weeks before the event: ▪ Email requests to key multiplier organisations to promote the event among their members/networks via their own channels. 4 weeks before the event: ▪ Email invitations to stakeholders identified in database. ▪ Online advertisement in social media and webpages of TUEWAS, of the TUEWAS task force member projects, other TUEWAS member projects, etc. 2 weeks before the event: ▪ Deadline for registration by participants (replying to email or online). ▪ Send reminder to non-registered participants about the event. 1 week before the event: ▪ Send reminder to all (registered and non-registered) participants for the event, including message about MS Teams link to be sent. 1 day before the event: ▪ Send MS Teams link to all registered participants.
To be prepared	▪ Standard contact letter for multipliers ▪ Invitation letters and standard Email text ▪ Ppt presentation(s) for the launch event

Draft Agenda

00:00	**Welcoming of Participants (Moderator)**

00:05	**Introduction (Moderator)[6]**

00:10	**Overview of the Toolbox for Distribution Grid Operators**

Dr. Christoph Luerssen
International Advisor, Commercial and Industrial Rooftop Solar (CIRTS) Project, GIZ

00:25	**Live Demonstration of the Toolbox**

Ms. Alice Turnell or Ms. Vibhuti Nougain or Mr. Bikash Uprety
Consultant Energynautics or National Advisor, GIZ

00:45	**Q&A and Feedback from Participants**

01:15	**Highlights and Future of the Toolbox [7]**

01:35	**Feedback from Participants**

01:45	**Summary and Closing Statements (Moderator)**

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[6] Introduction of speakers and agenda.
[7] Optional agenda item, if at that point there is a need to identify an organisation that can host the Toolbox in the long term. Participants could offer some insights/ideas on potential candidates.

Annex III – Ideas for Promotion Items for the Toolbox

Promotion Channel	Standard Item
Website	• Standard text and graphic for the events sections of websites announcing the launch event and with a short description of the Toolbox. Should include an email contact to express interest to participate and invite people to get in touch if interested. • Standard text for the news section of websites after the launch event has taken place with some highlights of the launch, link to Toolbox.
Newsletter	• One page article about the Toolbox and link to Toolbox • Mention of launch event in events section, if relevant
Social Media	• Standard text and graphic announcing the launch event and invite people to get in touch if interested to join (eventually link to registration or other form of standard way to share contacts with the organisers). • Standard text and picture informing that the launch event has taken place and link to Toolbox. Can be further personalised by person posting, e.g., on LinkedIn. Staff Responsible for social media Posting at GIZ project offices: • India: Pallavi Sinha (pallavee.sinha@giz.de) and Neha Madhuri (neha.madhuri@giz.de) • Nepal: Milu Shree Shakya (milu.shakya@giz.de) • Viet Nam: Nguyen Kim, Ngan GIZ VN (ngan.nguyen1@giz.de)

Annex IV – Poster presented at the TUEWAS Conference in September 2022

Annex V – Promotion Channels for the Toolbox

Channel	Channel Type	Link and Description
India		
GIZ India	Twitter (>4,300 follow-ers)	https://twitter.com/giz_india Official GIZ India twitter account used for communicating news and other relevant con-tents across GIZ projects in India. This would be a good channel to inform people who generally interested in GIZ work and have subscribed to the group. However, it is prob-ably not the best channel to reach the target group of DSOs directly.
Indo-German Energy Programme (IGEN)	Newsletter	x The GIZ IGEN project issues a [how often? monthly?] newsletter, which is circulated among [who?] via [which channel? Email?]. The newsletter includes information about different events/workshops/seminars/webinars. It would be possible to publish a one-pager (e.g., a news piece with the Toolbox link.
Indo-German Energy FORUM (IGEF)	Twitter (>1,100 follow-ers)	https://twitter.com/IGEFSO The German Chancellor and the Indian Prime Minister established the Indo-German Energy FORUM (IGEF) in April 2006 to enhance and deepen cooperation between In-dia and Germany in the energy sector. The process focuses on both promoting private sector activities and putting in place an enabling environment so as to further develop the market for power plant technologies, energy efficiency and renewable energies in India.
Know Energy Session of the GIZ India Energy Cluster	Event	x The GIZ energy cluster hosts monthly virtual meetings (on MS Teams) on energy re-lated topics, known as Know Energy Sessions, to which [who? Internal? External?] are invited. Anyone from the cluster may present there. A member of the task force team has a slot in January and I will present the Toolbox at this occasion.
Gujarat Energy Training & Research Institute (GETRI)	Website	http://www.getri.org/ GETRI is one example of several energy training institutes that exist across the coun-try. The Toolbox should be actively promoted amongst these institutes as it may be a useful resource for trainings and a good source of knowledge, in general. These train-ing institutes could offer the Toolbox for download (directly or lining to main page).
Smart Grid Knowledge Centre	Website	https://sgkc.powergrid.in/lobby.php

Commented [I5]: Vibhuti: is there a link to the news-letter or how is it sent? How often does it appear?

Commented [I6]: Vibhuti: could you please give more information about why it is a good event to present the toolbox? Who attends these meetings?

		The Vision of Smart Grid Knowledge Center (SGKC) is to Establish India's Leadership in Smart Grid. The Toolbox could be uploaded on their Resources Tab.
Nepal		
GIZ Nepal	Facebook Page >4,400 followers	https://www.facebook.com/GIZinNepal Official GIZ Facebook page used for communicating news and other relevant contents across GIZ projects in Nepal. This would be a good channel to inform people who generally interested in GIZ work and have subscribed to the group. However, it is probably not the best channel to reach the target group of DSOs directly.
IDA Page	Internal Sharepoint	https://gizonline.sharepoint.com/sites/group_1259
		x
Alternative Energy Promotion Centre (AEPC)	Facebook Page >6,400 followers	https://www.facebook.com/AlternativeEnergyPromotionCenter/ AEPC is a government institution established with the objective of developing and promoting RE in Nepal. Currently, it is under the Ministry of Energy, Water Resources and Irrigation.
		https://www.kms. aepc.gov.np/
URJA News	Facebook page (>7,300 followers) and Twitter (25 followers)	https://www.facebook.com/energynewsnepal/ https://twitter.com/urjanews Media channel specialising on energy-relevant news.
National Association of Community Electricity Users-Nepal	Website	https://naceun.org.np/
Vietnam		
GIZ Energy Support Programme	Website and Facebook Private Group (>4,100 members)	http://gizenergy.org.vn/en/?fbclid=IwAR3Qy8ysfR0WtrM-FnZx7CmfRVxclLlbSb_RQYRjvt-qdyZGvNRqXO7uo9ZA https://www.facebook.com/gizenergysupportprogramme/ The Programme is a partnership between Viet Nam's Ministry of Industry and Trade and the GIZ contributing to Viet Nam's emissions reduction strategy and green growth strategy by improving the existing regulatory framework for Renewable Energy and Energy Efficiency to foster private sector investment and by increasing the professional and organisational capacities of key institutions and stakeholders.

		This would be a good channel to inform people who generally interested in GIZ work within the energy sector and have subscribed to the group.
GIZ Smart Grid Project	Website and Facebook Private Group (>970 members)	http://smart-grid.vn/ https://www.facebook.com/groups/smartgridvn/ The Smart Grid Viet Nam Knowledge Hub is the country's first public platform to share Smart Grid concepts and solutions, the progress in developing Smart Grid in Viet Nam as well as official Smart Grid-related documents in Viet Nam. The Toolbox launch could be promoted through the news section of the website and it could also be considered to include a more visible permanent link to where the Toolbox will be uploaded. The Facebook group can be considered highly interesting for promoting the Toolbox, as it can be assumed that the nearly 1,000 members are experts on grid topics and ,thus, part of the target audiences. It is, however, still to be determined how the page and hub will be administered after the end of the GIZ smart grid project.
Viet Nam Energy Efficiency Community (VEECOM)	Webpage and Facebook (>260 followers)	http://veecom.vn/ https://www.facebook.com/veecomee VEECOM is a website jointly developed by GIZ and MOIT with the purpose is to provide reliable information on policies, technologies, equipment, and services for energy efficiency. As it focuses on EE rather than on RE and grid issues and does not address the main target group of the Toolbox, it is probably not the most effective channel for promotion.
VEPG	Website and Technical Working Group 3	https://vepg.vn/ Viet Nam Energy Partnership Group (VEPG) consists of the Government of Viet Nam and several international development partners, mostly multilateral development banks (MDB) and Official Development Assistance (ODA) organisations. The stated objective of the VEPG is "to work towards effective and efficient international support to sustainable energy development in Viet Nam, in line with national law and international agreements of which Viet Nam is a member." Technical Working Groups (TWGs) contribute to the overall and specific objectives of the VEPG. Specifically, the TWGs prepare inputs into High Level Meetings (HLMs) which focus on policy dialogue. TWG operations address specific topics within the

		VEPG thematic areas and must complement dialogues on related matters in other partnerships or TWGs under the VEPG.
		TWG 3 would be a perfect platform to present and discuss the Toolbox. TWG 3 members should be invited to the launch and there also could be a dedicated presentation at one of the TWG meetings.
		The VEPG website`s calendar can feature the Toolbox launch and a news items pot-launch could be uploaded. At a later stage, the Toolbox itself could be made available through the resource tab of the website.
Ho Chi Minh City University of Technology - Department of power system	Website	http://dps.dee.hcmut.edu.vn/ This could be a good channel to advertise the launch of the Toolbox and attract participation of students/future DSOS staff, as well as of academic staff that could weave Toolbox contents into the curricula. Further, it could be considered to organise a guest lecture/presentation to introduce the Toolbox to students and academic staff. This is also valid for other relevant universities in Asia.
Brownbag Lunch	Event	GIZ Vietnam holds brown bag lunches every monthand this occasion could be used to present the Toolbox but also the Toolbox approach for knowledge management to a broad group of GIZ colleagues in Vietnam.
Internal EVN communication channel	Internal Email	EVN could spread the resource internally to reach all 63 DSOs, which are EVN subsidiaries. Also, it could be introduced at a GIZ event with DSOs as target audience on a side note.
OTHER		
Energypedia	Webpage and grid portal	https://energypedia.info/wiki/Main_Page https://energypedia.info/wiki/Portal:Grid Energypedia is a wiki platform for collaborative knowledge exchange on renewable energy, energy access, and energy efficiency topics in developing countries. The Toolbox could be integrated into its grid portal. A long-term financing plan would need to be put in place to ensure the Toolbox is updated regularly.
TUEWAS	Webpage and Newsletter, as well as Library	https://tuewas-asia.org/ https://tuewas-asia.org/category/newsletter/ https://tuewas-asia.org/our-library/

Commented [I14]: Christoph: no other universities?

Commented [LCGV15R14]: Vibhuti, Kashish, Bikash and Phan: Please add more relevant universities.

		The GIZ internal sector network TUEWAS (Transport, Environment, Energy and Water in Asia) was established as a platform for regional professional exchange and cooperation between GIZ experts in Asia and at head office. Currently, TUEWAS connects over 50 projects across 16 Asian countries in the field of transport, environment, energy and water. This is an excellent platform to make the Toolbox known across all associated GIZ projects in Asia. While the Toolbox itself is particularly interesting for energy projects, the approach of developing a Toolbox to improve knowledge management should be of interest across the different thematic projects of GIZ.
European Distribution System Operators (E.DSO)	Website and Network LinkedIn Page (>3,800 followers)	https://www.edsoforsmartgrids.eu/home/ https://www.linkedin.com/company/edso-for-smart-grids/ E.DSO promotes and enables customers empowerment and the increase in the use of clean energy sources through electrification, the development of smart and digital grid technologies in real-life situations, new market designs and regulation. Their role could be potentially twofold: 1) they could be asked to review the Toolbox and provide additional sources to enrichen it and 2) they could become a partner in DSO related follow up projects, e.g., it could be considered to replicate or expand the German Utility knowledge transfer programme also currently being developed under TUEWAS. They also organise a lot of thematic webinars and virtual events, that could be interesting for Asian DSOs.
ASEAN Centre for Energy (ACE)	Website and Newsletter Facebook Page (>2,700 followers), LinkedIn page (>19,000 followers) and Twitter (>1,600 followers)	https://aseanenergy.org/ https://www.facebook.com/aseanenergy/ https://www.linkedin.com/company/aseancentreforenergy/ https://twitter.com/aseanenergy ACE is an intergovernmental organisation within ASEAN structure that represents the 10 ASEAN Member States' interests in the energy sector. Their work focuses on inter-country transmission grid connections and on facilitating regional exchange. It also sees providing a knowledge repository for ASEAN Member States (AMS) and services through data management, publication and dissemination one of its key roles.
		- International, but mostly limited to TSOs: https://globalpst.org/ - https://aseanenergy.org/introductions/ -- ACE might really be interesting. I could get someone to introduce us but I do not have a strong personal connection there

		• Renewable Energy Institute in Japan, Asia Super Grid (ASG) initiative https://www.renewable-ei.org/en/asg/about/ • https://hapua.org/main/apgcc-secretariat/ • https://www.linkedin.com/company/go-15-reliable-and-sustainable-power-grids-/