CHAPTER 4 – COMPARATIVE ASSESSMENT (CA) APPROACH FOR D&R

This chapter provides guidance for a Duty Holder to carry out D&R feasibility by the use of a Comparative Assessment (CA) to come with an accepted D&R solution. As highlighted in Section 6 of Chapter 1 of this Guideline, the Duty Holder shall use the technical requirements, conduct comparative assessment of all feasible options and justify the final declared state.

The CA process should indicate selection criteria, internal selection processes used by the Duty Holder when screening and justifying best available onshore and offshore options for the benefit of the country.

Selection of the feasible D&R options could be done through Comparative Assessment (CA) on a case-by-case or grouped basis taking the technical requirements into consideration in the Comparative Assessment.

The type of oil and gas assets which may be assessed by CA include but limited to offshore structures, onshore and offshore pipelines, onshore plant, above ground and underground structures and other related infrastructure. The D&R solutions from previous D&R Submission may be re-used for a new D&R scope of work, if the Review Panel agree that this approach is reasonable under the circumstances.

Where CA is being used, Duty Holders are encouraged to utilize existing CA output, if available and appropriate, to form the basis of any analysis. The focus from Duty Holder and the Authority can then be on differences, if any, for the current D&R Submission.

The objective of this chapter is to provide recommendations on, and encourage a consistent approach to the process to be used in completing and reporting CAs in support of D&R Submission submitted to the Authority.

It is anticipated that this approach will:

- Provide clear guidance to Duty Holders on:
  - the typical structure of a CA
  - the preparations which may need to be made ahead of a CA
  - the studies and data which may be needed to inform a CA
  - an evaluation method which may be adopted during a CA
  - ways in which CA results may be presented
- Provide transparency on trade-offs between different options and criteria, such as technical, safety, environmental, societal and cost impacts
- Enable straight-forward comparison of CAs for different facilities, and aid clear communication of findings to stakeholders
- Allow a continual improvement in the quality of CA as it should be easier to apply lessons learned if a consistent approach is followed

The evaluation method provided is intended as a guide and may be adapted by the Duty Holders as considered appropriate for their own CAs.

Contents

1.0 APPLICATION OF THIS CA

1.1 Applicability

This chapter is applicable to onshore & offshore oil and gas facilities & infrastructure in Brunei Darussalam, including pipelines, from the date of issue of this Guideline.

The CA process will not apply for well P&A activities. It is expected that the Duty Holders to implement well P&A as per well P&A Guideline and will also apply their own company and industrial standards.

1.2 Timing of CA

In line with the, 'Offshore & Onshore D&R Acceptance Processes', the CA process would normally be undertaken formally following Declaration of Cessation of Production (or Operation) COP (COO).

However, it may also be appropriate to conduct preparatory CA work before then, depending on the extent and complexity of the assets concerned, to ensure reporting requirements under the COMAH Regulations are not impacted.

1.3 Efficient Use of CA

Where it is proposed to use CA for assessment of D&R options, consideration should be given to use of any CA output available from previous assessments which may be applied to the current D&R subjects. The focus from Duty Holder and the Authority can then be on significant differences, if any, for the current D&R Submission, resulting in a more efficient assessment process.

2.0 THE CA PROCESS

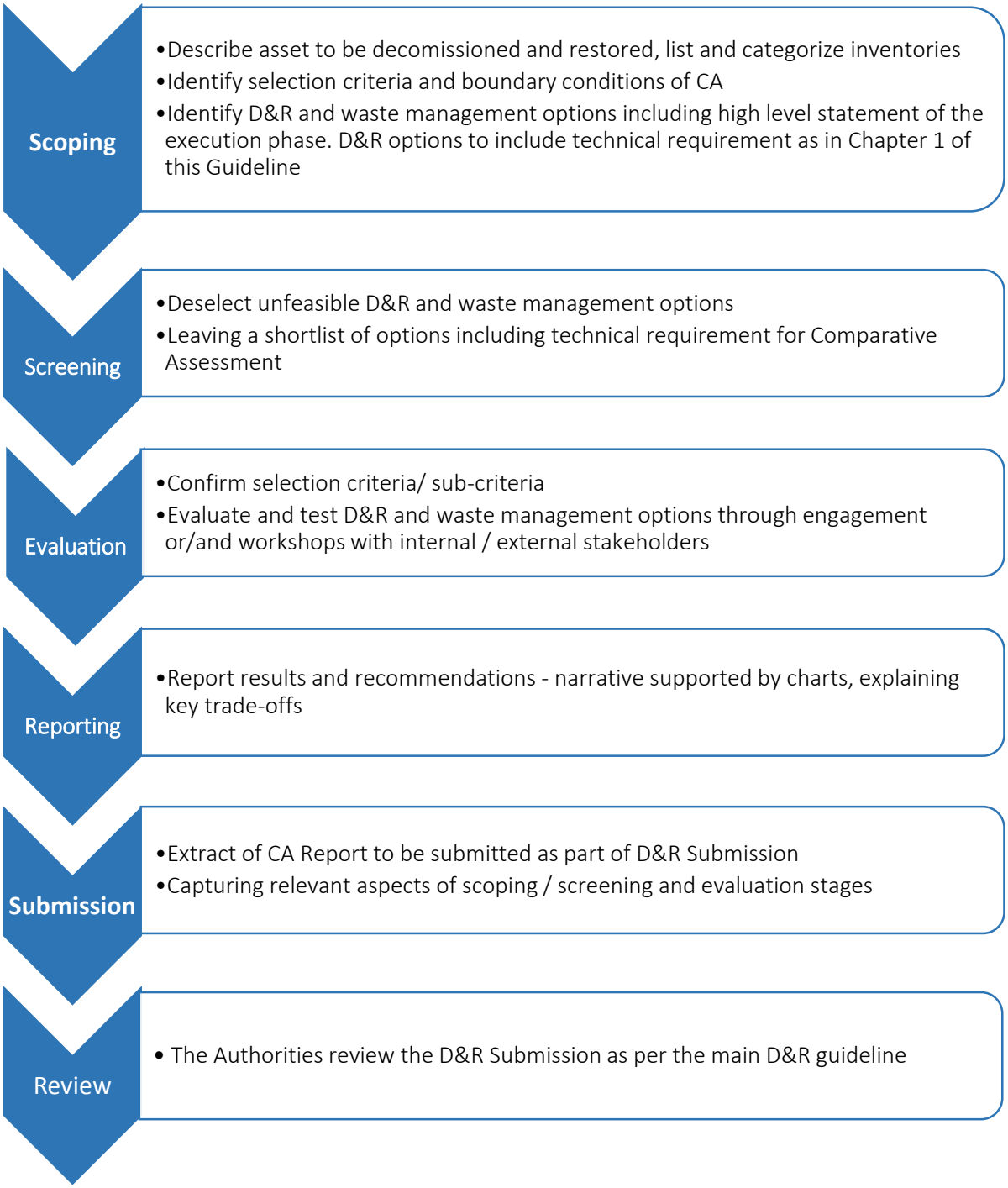
The purpose of CA is – to compare options, examine if there are real differences, and identify the "most preferred" option. The CA outcome should demonstrate if / why there are significant reasons why one option is preferable to the other options under consideration.

An overview of the CA process is presented in Figure 2-1.

The steps and activities anticipated within each phase of the CA process are described in more detail in sections 2.1 to 2.6.

Section 2.7 provides some general guidance to assist Duty Holders in planning the CA process within the wider D&R project schedule.

Figure 2-1: Overall CA Process



2.1 Scoping

2.1.1 Facilities description

To enable the extent of the D&R scope to be properly understood, each facility should be described in sufficient detail to enable consideration of the available D&R options to be assessed during the CA process.

The following lists are examples of typical information which may be needed for the different types of facilities being assessed, to help inform the CA process.

Offshore Installations and subsea structures:

- Name and location
- Type, function and age of the structure
- Weight, size and construction
- Fixing details to sea bed or foundation details onshore
- Condition
- Decontamination method
- Disposal

Pipelines:

- Pipeline identification number, age and pipeline route
- Duty (Gas export, Condensate, Water Injection etc.)
- Diameter, current wall thickness and length
- Estimate corrosion rate
- Pipeline materials and coatings (where applied)
- Burial status, mattresses, crossings & interfaces)
- Condition
- Decontamination method
- Disposal

Onshore Facilities

A site information assessment may be completed to inform CA of onshore facilities. The type of information that would be compiled and reviewed is typically as follows:

- Type, function and age of the facility
- Location of facility, proximity to populated areas, potential future land use
- Physical layouts and specification of plant, buildings etc.
- Equipment lists
- Residues or contamination anticipated to be present
- Site access / transit constraints

Disposal

Information should be provided on the proposed disposal site(s), dismantling yards (if different from disposal sites) and disposal method.

2.1.2 Boundaries

The boundaries of the CA should be clarified for each facility:

Physical boundaries in terms of extent of facilities or structures to be considered:

- Example boundaries for installations may be:
  - Jacket structure at interface with Module Support Frame (MSF)
  - Piles to required depth below seabed
  - Including drilling template (if appropriate)
  - Interconnecting bridges to other installations (if appropriate)

- Example boundaries for pipelines may be:
  - At bottom of riser / Subsea Isolation Valve (SSIV)
  - Tie in to subsea tree
  - Tie into export trunk line
  - Clarify import line interfaces from other assets

- Example boundaries for onshore facilities may be
  - Up to and including the perimeter fence of the site under consideration.
  - May also include access roads and facilities from main highway to site.

Potential for the transfer of ownership and undertakings for buildings roads or other infrastructure to the government for other future use should be considered when determining the D&R boundaries of onshore facilities and before commencing the CA.

2.1.3 Identifying the D&R options

Assets or facilities may have particular characteristics which determine available D&R options for comparison and therefore the project team developing the options to be considered should be familiar with the characteristics of the subject undergoing the CA.

Describing and presenting the D&R options in a consistent manner is important in ensuring they are compared fairly. It is generally helpful to develop and apply an option template to ensure that the information relevant to the subsequent CA is provided in a consistent manner for each of the options.

The following subsections provide guidance and examples of D&R options that may be considered when conducting a CA. However this section is not exhaustive and it will be the responsibility of the Duty Holder to ensure all appropriate and relevant options have been identified.

Offshore Facilities and Structures:

Refer to Chapter 1 on the technical requirement for offshore structures.

The ADG also provides examples which are not repeated in detail here, it is therefore recommended that the ADG should be referenced to ensure appropriate D&R options are considered.

Initial strategic options are:

- Complete Removal
- Partial Removal
- Leave in place
  - In original configuration
  - Toppled on location

Follow-on strategies for consideration thereafter may be:

- Disposal
  - Disposal in shallow water (where suitable submerged clearance is available)
  - Disposal in deep water
  - Disposal and recycle onshore (National sites and International sites)
- Re-use as an Artificial reef
  - In existing location
  - In separate dedicated location
- Re-use as others

A number of flowcharts are provided in ADG providing examples of D&R options and the potential methods and equipment types available to support D&R option. These are not repeated here, however it is recommended that these flowcharts are referenced when developing the initial D&R options to be considered at this stage of CA.

For facilities or structures which are outside territorial waters but within the EEZ, Ref.1 must also be considered. The flowcharts and D&R options developed within the ADG are based an interpretation of Ref.1 from a regional perspective.

For structures and facilities located within the boundary of the territorial seas it is clear that Ref.1 need not be applied. However, all reasonable D&R options should be considered as part of the CA. Chapter 1 section 6.0 applies and in principle will be prioritized.

Offshore Pipelines:

Refer to Chapter 1 on the technical requirement for subsea pipelines

Alternative options to leave in place may include rock-dumping, trenching, partial or full removal, where appropriate. The ADG gives some examples of D&R options for pipelines.

Onshore Facilities:

Refer to Chapter 1 on the technical requirement for onshore facilities

The ADG does not cover D&R of onshore facilities and therefore can provide no context around potential D&R solutions. The D&R options to be considered and assessed should be based on industry standards. The range of D&R options available will vary depending on the type of facility subject to CA.

Onshore Pipelines:

Refer to Chapter 1 on the technical requirement for onshore pipelines

The ADG does not cover D&R of onshore pipelines and therefore can provide no context around potential D&R solutions. The D&R options to be considered and assessed should be based on industry standards and on the characteristics of the pipelines under consideration.

2.1.4 Identifying the criteria and sub-criteria

An assessment to identify the criteria and sub criteria to be adopted in the CA should be completed at the scoping phase as this will also inform the level of supporting data and any studies that will be required.

Appropriate criteria / sub-criteria selection is key to development of a robust CA. Further detail on how to approach criteria / sub-criteria selection is provided in Section 3.0, together with examples of typical criteria and sub-criteria which may be used.

2.1.5 Stakeholder Consultation

Initial stakeholder strategy should commence at the scoping phase. This will be an internal process conducted by the Duty Holder. The Duty Holder shall submit the preliminary stakeholder engagement strategy for the Authority consultation (refer to respective chapters)

2.1.6 Grouping of the facilities or pipelines for CA

ADG implies that D&R of all facilities and pipelines should be considered on a case-by case basis. Ref.1 also identifies that each platform should be evaluated on a case-by case basis.
However, when viewed in the context of the multiple similar assets present in Brunei, it may be more practical and appropriate both from the perspective of the Duty Holder responsible for development of the CA, and for the Authority when reviewing the CA results, if similar facilities or pipelines which are being considered for decommissioning and are anticipated to have a similar D&R solution, be grouped together and assessed under one CA process.
In this case, the facilities or pipelines to be grouped together should be identified during the scoping phase and the basis and justification for such grouping should be documented.

2.2 Screening

Depending on the potential complexities and the number of D&R options and methods identified in the scoping phase, it may be possible and beneficial to carry out a screening phase, to reduce the number of D&R options or methods to be considered before moving to the next phase, as this may reduce the effort and time required to prepare for the CA phase.

The screening phase should result in only feasible options and or methods being carried forward to the next stage.

2.2.1 Objective of screening

An objective of the early scoping phase is to demonstrate that the widest possible review of

D&R options has taken place and to ensure all options have been considered.

The subsequent screening phase may then review and screen out unrealistic options or obvious non-starters, e.g. due to clearly unacceptable safety risk.

This phase should document the reasons for reducing options to a manageable level, which will ultimately limit the effort and time expended in reaching a shortlist of D&R options.

2.2.2 Screening Method

Duty Holders may have their own screening methods for development projects in early appraisal or assess phase and such methods, if available and appropriate may be applied at this stage to screen out the marginal options.

If an existing screening method is not available, a simplified version of the evaluation method described in Section 4.0, carried out at main criteria level only, may be adopted.

It is anticipated that this phase will result in the documentation and clarification of why some of the marginal options identified during the scoping phase can be discounted at this point in the process.

2.3 Preparation

The preparation phase should commence after the shortlisted decommissioning options have been agreed. Any required supporting method statements, described in Section 2.3.2 should be completed in this phase, as far as practicable.

2.3.1 Terms of Reference

A Term of Reference for the CA should be prepared at this phase identifying:

- The shortlisted feasible decommissioning options and methods to be assessed
- The boundaries of the CA
- Initial identification of potential criteria and sub criteria to be adopted
- The participants in the CA process and their roles
- Any data requirements and any supporting studies that are envisaged to be needed to support the evaluation phase

2.3.2 Method Statements

In order to help differentiate between the D&R options under consideration, it may be useful to develop simple high level method statements of the execution phase for each option which can be used to inform the comparison of the options.

Method statements should preferably be developed at key activity level that enables clarification of the main differentiators between the D&R methods / options under consideration.

Below are examples of the types of activity that would typically be described in the method statements, depending on the nature and complexity of the scope:

- Identification of types of vessels or major equipment proposed for the activity
- The duration each vessel is on-station or where major equipment is in use
- Numbers of supporting personnel for key tasks
- Extent of diving activity (offshore) or confined space entry (onshore)
- Description of any explosives which are planned to be used
- Number and type of major lifts
- Transfers to barges (offshore) or to transport vehicles (onshore)
- Main mobilization, demobilization and transit activities anticipated
- Extent of materials being returned to shore
- Main waste disposal activities
- Description of seabed disturbance anticipated
- Description of land disturbance anticipated onshore
- Details of materials left in situ after completion of D&R

The level of detail provided against each activity should be adequate to enable an understanding of the key differences between each option.
It may be helpful to set out the methods statements in a tabular form to enable similar activities across all the options being considered to be easily compared.

2.3.3 Supporting Data

Depending on the extent of the CA scope, range of D&R options, and availability of existing information, additional data may be required to support the CA. Supporting study work may also be carried out if necessary, to generate required data. Typical examples of supporting data are:

- Seasonal weather and sea-state data / operational constraints
- Integrity / condition of assets
- Environmental impact information (e.g. from ESHIA)
- Fishing industry overview
- Onshore receiving facilities and capabilities (dismantling, material handling, waste handling and disposal)
- Schedule and cost estimates for each D&R option, based on method statements

2.4 Evaluation

2.4.1 Confirm Criteria / Sub-Criteria

On completion of the scoping, the proposed criteria and sub criteria should be checked and reconfirmed as applicable, before initiating the evaluation phase. This will ensure the outcomes of the scoping phase are addressed. Refer to Section 3.0 for more information on selection of criteria and sub-criteria.

2.4.2 Evaluation Method

The suggested method for evaluation of D&R options is described in Section 4.0. This is a qualitative method using narrative description, with output presented in the form of colour coded charts.

2.4.3 Offshore Facilities and Structures

CAs for offshore facilities and structures should be carried out on a case by case or grouped basis, as appropriate for the assets under consideration. Brunei has a large number of structures, many of which fall under similar categories, for example, in terms of function, size, location or envisaged D&R timeline. Therefore, as described in Section 2.1.6 it may be appropriate to group similar structures which are anticipated to have a similar outcome from the CA process.

2.4.4 Pipelines Evaluation

As described in Section 2.1.6, where there are a significant number of pipelines in the field being decommissioned it may also be appropriate to group similar pipelines together and to carry out a combined CA.

For example, from the pipelines inventory generated during the scoping phase:
a) Sort pipelines inventory to group together based on similarity e.g. for offshore lines:

- Type (export line, rigid flowline, flexible flowline, jumper spools etc.)
- Medium (oil, gas, condensate, etc.)
- Size, length, coated / uncoated (by coating type e.g. concrete coated)
- On bottom status (Exposed, trenched, buried, rock dumped, etc.)
- Condition (good and recoverable, damaged etc.)
- Residues likely / Ability to clean

b) While groupings for onshore lines are generally similar to those for offshore lines, there are potentially more social or environmental impacts due to the onshore location.

Therefore, the list of similarities could be based on the following, as applicable:

- Type (rigid flowline, jumper spools etc.)
- Medium (oil, gas, condensate, etc.)
- Size, length, coated / uncoated
- Installed status (Laid on surface, trenched and buried)
- Condition (good and recoverable from trench, damaged etc.)
- Residues likely / Ability to clean
- Location in environmentally sensitive zone
- Potential future use of pipeline location
- Location in zone with potentially significant societal impact (close to residential area, schooling, or crossing roads)

c) Carry out separate CA on each group of similar pipelines

Grouping the pipelines before carrying out CA will streamline not only the CA process for the project team, but also streamline the D&R Submission review cycle by the Authorities. However, any grouping must first be agreed with the Authority to align with the requirements of the D&R Safety Case requirements under the COMAH Regulations.

2.4.5 Onshore Facilities

There is a wide range of different types of onshore facility, from small or simple plant to large and complex facilities. These factors should be taken into account when grouping any such facilities for CA purposes.

2.5 Reporting

The CA process and outcome should be recorded accurately and concisely, with sufficient content to enable a clear understanding of the outcome.

It will be beneficial to Duty Holders when developing the CA to adopt a consistent approach to the development of the CA report, including the CA summary extract which can be presented in support of a D&R Submission and subsequently in the D&R Safety Case.

This should also help the review panel when reviewing the summarised CA result.

Existing CA reports issued by Duty Holder can be used as the basis for preparing future CA reports, where considered appropriate. In this case, the focus should be on differences between the historic and current D&R scopes. Where the historic and current D&R scopes are very similar, the output of the original CA report may be used directly to determine the current D&R solution.

An outline list of contents is provided as an example in Section 2.5.1.

2.5.1 Typical CA Report Content

The report should generally include the following headings.

1. Summary Extract giving overview of CA with results
2. Introduction

3. Preparation Work
4. Comparative Assessment Process
5. Results
6. References
7. Appendices

2.6 Submission

The detailed process for review of a D&R Submission by the Authorities is described for onshore and offshore assets in respective chapters. After review of the D&R Submission, the Duty Holder is required to prepare a D&R Safety Case at such a time, as to allow them to take into account any comments from the Authorities, prior to commencement of D&R activities on site. Acceptance of the D&R Safety Case, will result in the Authority issuing a D&R Safety Case certificate to the Duty Holder.

Where CA has been used to inform the selection of D&R Concepts, there is no requirement to submit a CA report. However, the Duty Holder may present the key CA processes, assumptions and outcomes in a CA report summary, which can be extracted and submitted in support of the D&R Submission and D&R Safety Case. The 'Summary Extract' can be used for this purpose (see Section 2.5.1).

2.7 Planning for CA

The Duty Holder should ensure adequate time and resource is allocated during the initial project planning stage for the scoping, screening and preparation phases of the CA process to ensure the evaluation phase is adequately informed and the evaluation is carried out at the appropriate level. The actual amount of time required will depend on the complexity, size and originality of the scope. The D&R Review and Acceptance Process, for onshore and offshore assets can be found in respective chapters, recognize the need for flexibility in determining the appropriate timescales for submission, review of the D&R Submission, Notifications and acceptance of the D&R Safety Case.

Therefore, rather than provide specific timelines, it sets out key principles under which the Duty Holder and the Authority are to work together in an effective and timely manner to expedite the preparation, submission and acceptance of a D&R Submission. Early CA assessment is seen as a positive step to ensuring timely submission of the D&R Submission for review by the review panel. Any comments made by the review panel should be taken into consideration and will support the preparation of the D&R Safety Case and its implementation on site.

3.0 CRITERIA SELECTION

3.1 Defining Criteria and Sub-Criteria

Criteria are aspects of the situation which primarily affect the success of the project and are reasons why one option may be judged to be better or worse than another.

The criteria need to be carefully defined to avoid inconsistency and misunderstanding. A full sentence is preferable; and it may help to start with the phrase "The extent to which the option maximizes/minimizes…"

The means of assessing each criterion may also be specified, as part of the criterion definition, for example "measured in terms of tonnes of CO2 emitted during the project".

Defining a clear set of criteria is one of the most important steps of a good CA. The set of criteria should be:

- Complete
- Non-overlapping
- Assessable

Common pitfalls in developing criteria include:

- Ignoring 'soft' criteria that require judgements (typically where data is not available).
- Not describing criteria clearly enough, leading to inconsistent use and interpretation.
- Considering criteria that do not differentiate the options and are irrelevant to the decision being made.
- Including too many or irrelevant criteria, thus overcomplicating the assessment.

It is often the case that similar decisions use similar general criteria. However, it is important that criteria are reviewed on a case-by-case or grouped basis to ensure they suit the specific situation. Criteria may also change over time as the context of the decision evolves, and it may be useful to revisit the list of criteria if, for example, new options are added.

D&R options are assessed based on their performance evaluated against sub-criteria. These assessments take into account a number of 'factors' that the sub-criteria are functions of, for example under the safety sub-criteria of "Project risk to personnel" factors which may influence the assessment of this sub-criteria may be the number of vessels involved and simultaneous operations activity, the number of personnel involved and the duration of the activity, the number of crew changes anticipated during the activity as transfers to and from the worksite may be regarded as higher risk.

Section 3.2 and 3.3 are the examples of factors that may influence other sub-criteria and illustrates a typical main and sub-criteria structure. The factors may be different ways of looking at a criterion or sub-criterion, or may be different ways in which performance can be measured.

3.2 Examples of Criteria / Sub-criteria: Offshore D&R

Table 3-1 provides a shortlist of some of the most commonly identified criteria and sub-criteria adopted in recent CA's within the industry internationally for D&R of offshore assets.

This is offered here as an example only and to assist the development of a consistent approach to CAs in Brunei Darussalam. The examples provided are not exhaustive and the Duty Holder should apply the guidance from Section 3.1 when developing their own criteria/ sub-criteria tables.

The Duty holder also provides an explanation of the applicability of each criterion, factors which influence each criterion and possible metrics which may be applied when assessing each criterion.

It is recognized that different Duty Holders and different facilities may have unique characteristics, drivers or constraints that will determine the criteria and sub-criteria to be adopted, however to improve consistency and transparency in the CA process it is recommended, where practical, a similar approach to criteria selection as defined here should adopted for CAs in Brunei Darussalam.

Table 3-1: Examples of Sub-criteria grouped by Main Criteria (Offshore D&R)

Criteria	Sub-Criteria
Safety	• Project Risk to personnel – Offshore • Project Risk to Other users of the sea
Environmental	• Marine Impact of Operations Spills • Energy/ emissions / resource consumption
Societal	• Commercial impact on fisheries • Socio-economic impact on communities and amenities
Technical	• Risk of major project failure • Technology demands
Economical	• Comparative Cost • Cost Risk / Uncertainty

3.3 Examples of Criteria / Sub-criteria: Onshore D&R

For assessment of D&R options for onshore assets, the main criteria would typically be the same as for offshore assets. However, there may be differences in some of the sub-criteria, in order to reflect the differing nature of the onshore assets and the potential impacts of onshore D&R.

A comparison between typical example sub-criteria which may be used for assessment of offshore and onshore D&R, and where they may differ, is presented in Table 3-2.

Table 3-2: Example Sub-criteria for Offshore & Onshore D&R

Criteria	Sub-Criteria (Offshore)	Sub-Criteria (Onshore)
Safety	• Project Risk to personnel – Offshore • Project Risk to Other users of the sea	• Project Risk to personnel at onshore D&R site • Project Risk to Other users of the onshore D&R site
Environmental	• Marine Impact of Operations Spills	• Impact of Operations on land (spills, discharges, disturbance to land, noise)
Societal	• Commercial impact on fisheries	• Commercial impact on other land users
Technical	• Risk of major project failure • Technology demands	• Risk of major project failure • Technology demands
Economical	• Comparative Cost • Cost Risk / Uncertainty	• Comparative Cost • Cost Risk / Uncertainty

4.0 EVALUATING THE OPTIONS

4.1 General

This section describes a suitable method for evaluating D&R options. This is based on a qualitative assessment which uses narrative description, supported by relevant information and data as appropriate, with output presented in the form of colour coded charts.

Evaluating options against criteria and sub-criteria will require technical knowledge of the options and their differentiators, and in such cases the evaluation should be performed or supported by personnel who are both familiar with the assets being considered and the D&R options being assessed.

Where data is available, it may be used as appropriate to support option assessments.

Workshop sessions can help in ensuring that the right people get a say, assumptions and resulting decisions are recorded, and relevant knowledge is used appropriately. It is therefore recommended that the use of workshops should be considered during the evaluation phase.

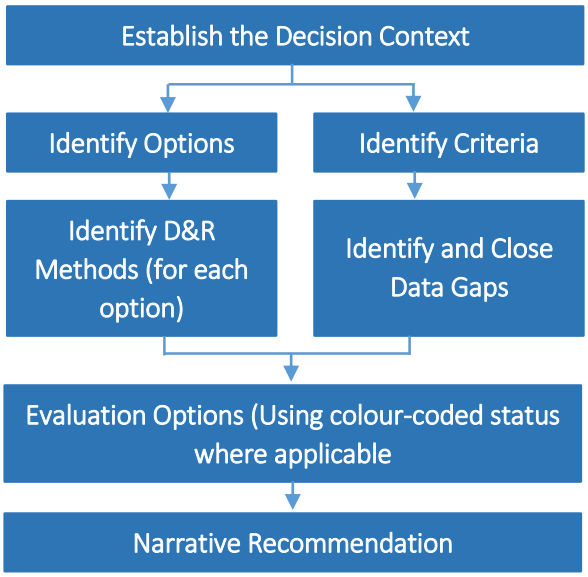
4.2 Key drivers / Trade offs

When evaluating options, it can be helpful to bear in mind the performance of the options relative to 'normal operations'. This can be captured at the criteria definition phase, by relating the context for the sub-criterion to the normal operational level of a factor. This can be useful when assessing the extent to which a sub-criterion impacts a decision, for example by comparing the difference between options with 'real world' examples for normal operations, to clarify how significant a difference really is.
Similarly, if all options provide something that is lower risk than the acceptable level for a normal operation, it may not be considered a differentiator. In such circumstances, this sub-criterion should be rated accordingly and identified as not being an influence when deciding the preferred option.

4.3 Evaluation Method

4.3.1 Evaluation Process

Figure 4-1: Evaluation Process



4.3.2 Evaluation Process

Under this evaluation method, colour coding will represent the relative preference of the options with respect to the criteria, see Figure 4-2. Options are assessed against each sub-criterion in turn. All of the relevant D&R options being considered are compared, with reference to an individual sub-criterion before moving on to the next sub-criterion. This encourages and ensures a consistent and relevant comparison of each option at sub-criteria level is achieved.

Following confirmation of the criteria and sub-criteria to be adopted, a rating template should be developed to inform and align the meaning of the colour-coded ratings to the workshop participants.

Figure 4-2: Performance Rating and Colour-Coding

Performance Rating and Colour Coding
Most Preferred (Lower impact)
Not a Differentiator (Moderate impact)
Least Preferred (Higher impact)

5.0 EXTERNAL STAKEHOLDER ENGAGEMENT

5.1 General

Stakeholder engagement activities should be conducted in accordance with the D&R Acceptance Process (Stage 2) presented for onshore and offshore D&R on respective chapters.

Key points to note are as below:

- Authority to agree on the preliminary stakeholder engagement plan prior to the stakeholder engagement with other relevant stakeholders.
- After the engagement, Duty Holder shall then submit the D&R Submission to be reviewed by the Review Panel. Any material changes resulting from the review, will require the D&R Submission will to be amended accordingly and resubmit for assessment.
- The Duty Holder shall submit the D&R Safety Case prior to any physical D&R activities commencing on site, as early as practicable to allow for taking account of any comments made by the Authority.

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