An IAEA Initiative to Provide Effective Stakeholder Support Services for International Decommissioning and Environmental Remediation – 17341

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ABSTRACT

The International Atomic Energy Agency (IAEA) has initiated a collaborative effort to promote stakeholder support activities through a stakeholder engagement advisory program (SEAP) as part of Phase II of the Constraints to Implementing Decommissioning and Environmental Remediation (CIDER II) program. CIDER II is a collaborative project involving a broad range of Member States, large and small, with ongoing and/or planned decommissioning and environmental remediation (D&ER) programs. The intent of this sub-group of CIDER II is to facilitate better sharing of information and knowledge in areas of stakeholder communication, engagement and participation, and a framework for directly using stakeholder input in the decision making process. The goal is to support trust building in D&ER decisions for radioactive contamination and facilities. A main premise of the CIDER II program is that stakeholder acceptance is necessary for successful D&ER decisions to be made.

This paper introduces some of the major challenges to implementing such a broad scale of support for stakeholder engagement, and approaches to overcoming those challenges. Major challenges include the need to address D&ER decision making in different countries with their different languages, cultures, religions, management structures, and politics. For example, in some cases it might be important strategically to first garner support from upper levels of social, management or political hierarchies, including for example, approaching community leaders, and allowing those leaders to directly address their community. Other sites might have more success, for example, if stakeholder interaction starts with the community members. A specific project strategy also probably depends on who makes the request for stakeholder support services.

Once the CIDER II SEAP gains traction, there will be a need to prioritize requests from Member States for assistance in connection with specific D&ER projects. A prioritization tool will be developed based on stakeholder engaged structured decision making (SDM) [14,15]. The projects in which support will initially be focused will span a wide range of D&ER problems, types of stakeholder groups, and technical issues such as potential risk to human health and the environment. A database management system will also be designed to capture information from the different proposed projects and will

be expanded to house implemented projects for future reference. The case study database will be an integral part of a web-based system that also contains technical approaches for stakeholder involvement depending on the situational environment. A community of practice will be formed that will involve technical experts in stakeholder engagement and structured decision making, and informed representatives from Member States. This will address the need for SEAP to build capacity and provide education for solving D&ER problems.

The web-based system will include technical tools for use by the projects, such as: identification of stakeholder groups; social network analysis (how stakeholders are connected); case study forms; best practice forms; information sheets; and 4tools that will directly support optimization of stakeholder guided solutions to D&ER problems.

INTRODUCTION

Many countries, or Member States (MS) of the International Atomic Energy Agency (IAEA), are plagued with radioactive contamination that is associated with historically abandoned building structures and facilities, or legacies that have caused environmental media such as soil, water, air, or biota. This includes contamination from the early development of nuclear energy, to dismantling redundant facilities, research reactors and power plants, uranium mining sites, and currently unaddressed radioactive problems such as naturally occurring radioactive materials (NORM). Some more technologically advanced countries are making progress with their D&ER legacy issues, but others face significant challenges, one of which is how best to engage stakeholders in the decision making process.

The waste technology section of the IAEA has recently completed an effort to identify constraints to implementing decommissioning and environmental remediation (CIDER) for the MS [1], and is continuing this effort with CIDER II [2], which is aimed at finding productive ways to overcome these identified constraints. The CIDER project was initiated to improve current levels of performance on D&ER programs through:

- Raising awareness at a policy level and promoting greater cooperation amongst IAEA Member States
- Developing a baseline report for use by policy makers and other involved parties that provides an overview of national and global liabilities for D&ER; discusses specific constraints impeding implementation; and provides recommendations on how these constraints might be overcome.
- Establishing a plan that proposes specific actions and associated timeframes to address constraints to progress, to include actions that are relevant at international, regional or national levels, and to include performance indicators that can be used to measure success.

The CIDER II project initiatives are intended to focus on MS where the greatest potential exists for increased D&ER program implementation by overcoming the identified constraints.

Current methods for structuring radioactive contamination problems that are associated with D&ER, or even radioactive waste management, are adversely impacted by some major limitations or obstacles:

1. Political instability.
2. Inability to acquire the necessary funding.
3. A lack of broad-based expertise for managing and solving radioactive contamination problems in many of the MS.
4. A lack of broad-based technical expertise for solving radioactive contamination problems in many of the MS, and a concomitant drive towards conservative solutions that are more costly than necessary. The dominant way of thinking is that, for example, conservative models yield better, safer decisions.
5. A lack of methods to meaningfully address and incorporate the "human dimension", or stakeholder engagement. The dominant way of thinking is that current approaches are sufficient to bring together the values and interests of both internal and external stakeholders in making a decision.
6. They lack a formal method through which both internal and external stakeholders are encouraged collectively to "think through" complex problems that contain multiple competing objectives so that wise, socially acceptable, and scientifically-defensible decisions are made.

Some of the constraints, or obstacles, are clear. They include political instability and financial obstacles. However, other constraints include technical understanding and stakeholder engagement. The focus of the SEAP is items 5 and 6 above, which address the need for stakeholder engagement and using stakeholder input directly in the decision making process.

The IAEA held a conference in Madrid [3] that was devoted entirely to advancing the global implementation of decommissioning and environmental remediation programmes, with a significant emphasis on the need for more effective stakeholder engagement. This provided tacit support for the CIDER II efforts to improve stakeholder engagement. In addition, various organizations have addressed issues associated with stakeholder engagement in the decision making process for legacy radioactive contamination problems. These include, for example, efforts from with the IAEA [4-5], the Nuclear Energy Agency, Organisation for Economic Cooperation and Development [6-8], the Department of Energy on the US [9, 10], and the English Environment Agency [11, 12]. In January, 2017, the OECD-NEA held a conference in Paris [13] that was devoted entirely to advancing the global implementation of decommissioning and environmental remediation programmes through more effective stakeholder engagement.

The Intention of the SEAP is to build on these past experiences, to gather information from the MS on their approaches and needs, and to build an collaborative program that can be used to provide advice on stakeholder engagement methods and approaches, and on how stakeholder input can be used in the decision making process. The SEAP will include a training program to support building capacity across the MS, so that the MS are better positioned themselves to perform stakeholder engaged structured decision making.

The CIDER II program is intended to be action oriented, and as such, specific projects and tasks will be identified, defined, and reviewed annually in technical meetings among MS. These meetings will enable a regular exchange of experience and information among the MS. The focus will be on facilities and sites that have D&ER program needs, and will promote collaboration across MS to develop a consistent approach or process for addressing constraints to D&ER. The CIDER II project has identified the need for four working groups to fulfill its mission:

1. D&ER strategy development and implementation
2. Stakeholder engagement advisory program
3. Capacity building
4. D&ER inventory development.

The focus of this paper is the second of these four, although some interplay between the four is inevitable and expected. Many MS D&ER programs are challenged by social and stakeholder issues, although effective programs for stakeholder engagement can facilitate D&ER program implementation and solutions. In many aspects, social issues may have greater impact on D&ER programs than technical issues, although it is common to place more effort in technical areas than the socio-political areas that are subject to greater uncertainty than the technical components. For example, it is not always clear what a member of the public might be most concerned about, or what the political hierarchy might value most, but the half-life of any given radionuclide is well known.

DESCRIPTION

The second phase of CIDER II (Constraints to Implementing Decommissioning and Environmental Remediation) is about finding productive ways to overcome identified barriers to implementing D&ER programs. An important area to nurture and expand in relation to D&ER is stakeholder communication and engagement. As the IAEA, the OECD-NEA and other organizations have noted stakeholder engagement is an essential step in providing successful solutions to D&ER problems. Without the support of stakeholders projects typically face countless delays and setbacks that prove costly if not impossible to fix.

For many MS, stakeholders innately have a relationship with the D&ER happening around them. That does not however mean that they have a good understanding of the technical factors and risks involved. A proactive first step with stakeholders is to create easy channels of communication that they feel comfortable using. Communication with stakeholders should answer the "W" questions, Who? What? Where? When? Why? If those in charge of the D&ER are unable to comprehensively answer these questions then confidence in the project is shaken and possibly disappears all together.

Approaches or methods for answering the "W" questions could include a simple website which lays out various information about the project and ways to get in touch with the project team if there are any concerns. However, computer technology might not be available to all stakeholders, in which case some other options might be needed, including face to face meetings, passing out flyers or documents with relevant information, or possibly having a phone line with the purpose of providing information to those who are seeking it. Communication is key in all areas of business but particularly when projects may disrupt day-to-day lives of the stakeholders (e.g., communities who must work during the day). Communication also needs to be friendly and open, and usually requires patience and understanding that those coming to them with questions do not have the same level of technical training. If communication is less than friendly it will be much more difficult to bring about stakeholder engagement in D&ER projects. More generally, the basis for successful stakeholder programs is trust and relationship building.

Stakeholder engagement also requires an understanding that the D&ER work is being done for the benefit of the stakeholders. This requires a more holistic consideration of benefit, which can be obtained through consideration of not only the financial and environmental concerns of a D&ER problem, but also the socio-political factors that are, perhaps, more important for the long-term success of a D&ER project. This requires identifying the stakeholders, and then finding out what matters to them, or what they are concerned about, or what they value. This values-focused approach can be used directly to support the decision making process using an approach that is called structured decision making (SDM).

Stakeholders must be clearly identified, and the different stakeholders potentially play very different roles and might have competing objectives. Stakeholders could include, for example, a local community, community leaders, community involvement groups, environmental groups, regulators, politicians, managers, owners/operators, developers, bankers, insurers, etc. One of the ideas behind the SDM approach is to help reconcile different values and objectives by bringing them out in the open.

Once lines of communication have been set up and stakeholders have gained a better understanding of the D&ER projects that will be taking place, the next thing to do is engage them. This is a process which will vary based on

who the stakeholders are. For example if a D&ER project is needed for a small community pond that has been contaminated and that needs to be cleaned up before contamination can reach drinkable water sources then a favorable way to engage stakeholders could be to have a community meeting near the pond which would help emphasize a spirit of togetherness and make the community want to come together to make sure the problem is fixed before anything more disastrous happens. That is a very simple example but the principles hold firm in other D&ER situations, and some creativity in approach often goes a long way. Engagement of stakeholders is important because without it, knowledge of the situation remains vague and if stakeholders are unaware of the problem or how serious it is, then it is much easier for them to choose to ignore it altogether. Engaging stakeholders through meetings, social media, or even going door to door is important because it helps to create a bond that encourage trust and relationship building. Ultimately it is the trust between stakeholders and MS or D&ER practitioners that will lead to a productive D&ER project and a positive step for the future of the area.

Often the next step in earning the trust of stakeholders and having them committed to the D&ER process is participation. This again is something that will vary based on projects and the stakeholders. In community situations there will likely be a larger number of stakeholders who are individuals within the community and possibly fewer stakeholder groups. Participation will come in many forms. It could be having stakeholders create a social network that supports the D&ER while also allowing voices of other stakeholders to be heard. In addition to a potential social network, if a D&ER project would disrupt the living conditions of an area for a specific amount of time, a catalyst for encouraging stakeholder participation could involve directly helping those in the affected area.

Another type of situation is if D&ER was needed in an area populated by stakeholder groups rather than individuals. Stakeholder groups could be companies or governments, basically a collection of individuals that is controlled by a group rather than just a loose gathering of those individuals. For example if the D&ER project interferes with company or political operations, then stakeholder engagement could occur through sharing workspace or meal space between company workers and D&ER project workers. This might be a simple idea, but these types of ideas encourage communication, which is the cornerstone to effective stakeholder engagement. The sharing of space allows stakeholders from both groups to interact and talk about what is happening with the D&ER project.

Ultimately the purpose of having communication, engagement, and participation is to make stakeholders feel important and cared about. Having those three steps as guidelines for how to create and nurture a bond with stakeholders is a solid starting place and extrapolated ideas should branch out from these core three. The next complication facing member states that are attempting to form a trustworthy relationship with stakeholders is that

there are many different types of stakeholders. When implementing any of these there must first be an understanding of who the stakeholders are. As noted, stakeholders range widely from individuals to companies, communities, all the way to governments or international committees.

At an individual level the best way to garner support is likely to be through a one on one connection and create a respectful relationship. For individual stakeholders there is a wider range of options for contact, and the potential to have a less formal relationship with them. The advantage to a less formal approach is that individual stakeholders will find it easier move towards a trusting relationship with MS and project teams. Open lines of communication are critical, whether that is by phone, email, direct contact or some other method. This must be continued throughout the project into engagement and finally participation. It should not be overlooked that all stakeholders are important and need to be afforded equal information and communication.

Stakeholder engagement is first about trust and relationship building, but second it is about obtaining information from stakeholders that directly supports the decision making process. Finding out what matters to the stakeholders, what their values are, is done through elicitation. Although that, perhaps, sounds formal, obtaining values from stakeholders is performed by asking questions in a setting that is appealing to the stakeholders. The questions are usually framed in terms of "Why" is a particular issue of concern. The process is described briefly in the technical section below.

TECHNICAL APPROACH

The approach to stakeholder involvement depends on the situation, and considerable knowledge and craft is needed for a successful stakeholder engagement program. The knowledge and craft require consideration of the situation and creativity that allows the stakeholder engagement experts to find a winning strategy. For example, the approach to addressing a political organization or a company or a community is likely to be considerably different.

If management is dominant, then it might be best to approach the higher levels of the company or organization first. In this situation the stakeholder engagement strategy might follow the cliché "if the boss tells you to do something you do it". In this type of situation MS or project teams would use a more professional means of communication, showing their professionalism and redeemable qualities. However, for a more egalitarian organization, it might be more inappropriate to engage lower level employees or members before ever approaching managers or leaders. In contrast to the individual stakeholder where a friendship needs to be built to gain trust, in the corporate world friendship is not as necessary as having a mutually beneficent relationship. When discussing D&ER with a corporate or political stakeholder information should be expressed in ways that clearly show the

benefit to the company stakeholder. This is not to say MS should be keeping different information from different stakeholders but rather that there are ways that resonate better and worse with different types of stakeholders.

Another important consideration is that different stakeholders have different levels of technical training from those who will be carrying out the D&ER work. Often, patience is needed for effective communication between the D&ER experts and the stakeholders who are relatively uninformed on D&ER issues. Another part of this has to be an understanding that every stakeholder is different and respectful approaches must be taken with each and everyone. Often company's put together packets of general information and encourage a "one size fits all" method, this is not something MS have the luxury of doing, and the politics, culture, religion, and financial situations are very different from project to project. To successfully nurture a relationship with stakeholders MS and project teams need to create individual programs or strategies that cater to the needs of different stakeholders. During the process of working with stakeholders it will become clear that there are those who want to really be a part of the work and gain as much knowledge as possible, and there will also be those that simply wish to hear what the schedule and plan is and then will continue on with their own projects. This is an oversimplification but the fact is that the same approach will not fit all situations.

Another obstacle facing member states as they try to connect with stakeholders is considering the culture of the area. Culture will include everything, religion, political views, and spoken language, how communities are run, and public activity levels. These are a few of the more major influences member states will find in populated areas of D&ER work. Member states will need to work tirelessly at not upsetting the balance of culture in areas of D&ER work. This also means that sufficient research must be done far in advance of any potential projects.

The Environment Agency (EA) in England has developed method and approaches for stakeholder engagement that have been used successfully in England's nuclear programs, and in other environmental programs [11,12]. The EA has developed programs such as the Working with Others, and Building Trust and with Communities programs. The tools that EA has developed will form the basis for building the stakeholder engagement component of the SEAP. Other resources will also be researched, and attention will need to be paid to the cultural and political needs of the different MS, but the EA program provides a good starting point. An advantage is that the EA guidance provides a process for engaging stakeholders, rather than being prescriptive.

The EA approach starts by identifying stakeholders, where a stakeholder is defined as "*any individual, or group or organization who has an interest in, could impact on, or could be impacted by, or could influence, the issue*". This definition is inclusive and generic, which avoids prescription. Engagement is

described as "*any kind of interaction with stakeholders, including giving information, consultation an/or collaboration*". Again, this is a neutral definition that focuses on process over prescription.

This approach also implicitly acknowledges that there can be different approaches to stakeholder engagement:

- Decide, Announce, Defend (DAD)
- Engage, Deliberate, Decide (EDD)
- Collaborate

Each has its place, and one of the goals of the SEAP will be to build capacity and provide training for implementing each of these approaches. These three approaches are also related to the need to inform stakeholders, listen to their needs, and/or decide together how to proceed. Working with others in the appropriate stakeholder engagement environment helps:

- reduce miscommunication, misunderstandings and conflict
- ensure everybody understands each others' views, concerns and values
- build on local knowledge that will lead to better decisions
- increase mutual trust
- enable as many people as possible to influence and own the outcomes
- encourage problems to be jointly owned and solved
- take stakeholders on the decision-making journey with us to make it more open and accountable
- make sure everyone has, as far as possible, an input into decisions
- comply with our legal obligations

These are primary objectives of the EA stakeholder engagement program, which are used to support 7-step process that addresses the "W's" and defines the EA's Working With Others (WWO) approach:

1. Preparation – how much engagement is needed?
2. What do you want to do? (business objectives)
3. Why do you need to engage others? (engagement objectives)
4. Who do you need to work with? (stakeholder analysis)
5. How will you work with them? (engagement plan)
6. Do it!
7. How did it go and what did you learn? (evaluation)

The EA stakeholder engagement program will be adapted and developed to address the needs of the SEAP to provide a program that can work effectively for the MS, including cultural, political and management differences that exist. The focus will be on developing an effective process, and will be coupled with a training program to build capacity for this aspect of SEAP. The next step in a successful approach to stakeholder engagement is to use stakeholder input to directly support decision making, and the EA approach sets the stage for moving into the SDM steps of the SEAP program.

A fully developed SDM method available to MS provides a more in depth look at D&ER projects and is better equipped to directly support decision making. The purpose of Structured Decision Making (SDM) is to provide a quantitative framework whereby all aspects of a decision problem, such as remediation and waste management decisions, can be addressed quantitatively, and hence, defensibly, transparently and traceably. The vast majority of D&ER decisions are made without quantitative consideration of economic and socio-political factors. They are made instead based on quantitative metrics of human health risk. Sustainable decisions need to be made based on all three "pillars of sustainability" (economics, environment and social), and require understanding and characterization of the costs and values associated with each pillar. In addition, such decisions need to conform to regulatory or other legal requirements, which often constrains the decision space of interest. Although efforts are often made to include factors across all three pillars, these efforts are usually qualitative, and hence difficult to defend. They lack the technical defensibility, transparency and traceability that SDM can provide.

The SDM approach requires the methods laid out in EA's approach to stakeholder engagement, but uses those methods to hone in on the values of the stakeholders, and hence their underlying objectives. Most decision-makers do not currently have access to useful or usable methods and approaches when are presented with choices that have significant impacts across all three pillars of sustainability. The goal of SDM is to provide that access by identifying or developing effective and user-friendly decision methods and approaches that empower stakeholders and decision-makers to explicitly and routinely incorporate all aspects of sustainability into their decision-making. SDM provides the tools needed for decision-makers and stakeholders to understand and characterize their knowledge of their current decision-making processes.

The SDM process starts with statements of concerns or values of the stakeholders, and, by extension, the objectives and criteria used to define and measure their attainment. This promotes a more transparent, inclusive, and defensible process for decision making, and creates an environment for identifying options with better prospects for desired outcomes and minimal negative impacts. Making decisions based on "what matters" is the basis of value-focused decision-making as described in [14, 15]. As noted by Keeney [15], "Values are what we fundamentally care about in decision making. Alternatives are simply means to obtain our values".

SDM is inherently a decision analysis process, but with a focus on stakeholder values as the starting point. Keeney [16] described the discipline of decision analysis (DA) as "a formalization of common sense for decisions that were too complex for the informal use of common sense." SDM is a formal process that facilitates decision-making through the integration of science and fact-based information with stakeholder-derived values in an

analytic-deliberative structure [16]. Implementations of SDM provide a DA framework for defensibly merging human dimensions, costs and value judgment, and technical input enabling decision-makers and stakeholders to:

1. understand the underlying context of the decision
2. define desired outcomes and measurable objectives
3. identify options (actions) for achieving desired outcomes
4. evaluate options using applicable data and models
5. take appropriate action when significant uncertainty exists

These five steps form the core approach to SDM, and requires collaboration with stakeholders to obtain the necessary input. This is where the stakeholder engagement process described above and the decision making process that is inherent in SDM come together.

The five steps begin with a shared understanding of the problem. This is sometimes presented as building a conceptual model of the problem, but also includes sharing of background information. Step 2 addresses the concerns of the stakeholders, which are translated into statement of the values of the stakeholders. This is immediately followed with translating the values into objectives that are measurable in some fashion. For example, an objective to minimize cost of implementation is measurable in monetary terms; an objective to minimize human health risk from radionuclides might be measured in terms of radioactive dose, cancer risk or mortality and morbidity measures; and, an objective to maximize quality of life could be measured in terms of quality of life measures (QALYS [16]), or perhaps in more rudimentary scaled measures (e.g., good, neutral, bad).

Once objectives have been defined, the next step is to identify options that might achieve the desired objectives. Options often include some manifestation of removal of material or engineering solutions to stabilize radioactive material in place. Specific options are often more complicated, including, for example, waste reprocessing, repackaging and shipping to another location. Risks associated with all aspects of the decision problem need to be addressed. It is then possible to consider for each option (or combinations of options), how well the desired objectives might be achieved. The set of options that maximizes how fully the objectives are achieved is then identified as the optimal solution. From that point, various methods can be utilized to determine whether additional information might be valuable for increasing confidence that the optimal decision has been selected, to determine which additional information would be most valuable, and to establish a plan for revisiting the decision in the future as conditions change, as appropriate [17].

Computer aided tools for SDM are described in [18, 19], and can be used successfully to developed objective hierarchies with subsequent identification of options. These computer tools are particularly effective at supporting the

elicitation process that must be used to obtain values, objectives and options from the stakeholders.

With high functioning SDM available, member states will be able to turn to that tool when needing a better understanding of the intangibles of D&ER work. Situations could arise where a D&ER appears to be straightforward and simple but thanks to SDM program member states won't make the mistake of jumping in with both feet before fully understanding the risks and benefits of their chosen project. The EA and SDM tools are proven in a wide range of applications, and can be used together as the basis for the SEAP, with subsequent adaptation to address different MS needs. Training programs also need to be built to address the capacity building needs of the SEAP.

The amount of preparation for D&ER work, and the amount of projects which are available means that there will need to be a way to prioritize which projects should be worked on and which can stand to delay for an acceptable amount of time. Prioritization can be based on many different things, and there will always be intangibles to consider for every project. It could be that D&ER must be worked on in a less urgent area to gain the trust of stakeholders so that D&ER work could then be carried out in an urgent area. There is also the potential human health risk in some projects. Places with the potential to cause damage to human health will most likely need to be prioritized to the top of the list of projects. This prioritization tool will implemented using the SDM tools with the goal of finding the most efficient way of completing D&ER work. In this case the stakeholders might be simply the IAEA responsible parties.

The SEAP program will also be supported by web-based technology that can be used to support training, capacity building, stakeholder engagement tools, SD tools, and prioritization. The web-based system will also include case studies that can be used to establish templates and learning tools for other projects. This will provide ideas for future endeavors.

The tools described above are under development for the CIDER II SEAP program. It is expected that they will be developed over the course of the next two years, and that the SEAP will then be in a position to support D&ER projects where necessary.

CONCLUSIONS

The overall goals of the IAEA CIDER II SEAP program are to:

- Discuss SE challenges facing MS projects
- Identify specific SE needs
- Recommend ways to achieve SE needs
- Implement recommendations in select MS D&ER programs

The SEAP has developed 10 "commandments" for a successful stakeholder engagement (SE) program:

1. SE is critical for the success of MS D&ER projects
2. SE is an integral part of decision making
3. SE needs to be led by experts in SE (but with engineers/scientists)
4. SE should learn/adapt from past experiences in SE (good and bad)
5. SE approach needs to provide maximum flexibility because of differences among countries/regions
6. SE should be an integral part of any D&ER strategy
7. SE must have a direct connection to decision making
8. SE capacity must be built with a top down strategy that leads to locally led SE efforts to the extent possible/reasonable
9. An effective SEAP requires training, and training of trainers
10. SEAP aims to create a lasting legacy of the importance or value of SE

The SEAP has also identified the following important concepts for a successful stakeholder engagement program:

*   SE is successful when there is an emphasis on relationship building and trust building
*   Once trust is forming/obtained then approaches to SE can be further explored in the site-specific (local) setting of the project
*   Interest is in obtaining/understanding stakeholder values/concerns
*   Values/concerns can/should be used to support decision making
*   SE must happen at the beginning, throughout, and at (after) the end of a project (supports adaptive management)
*   SE leads to better solutions because it avoids redo if everyone is on board

Implementing a SEAP program that follows the ten SEAP commandments using these concepts:

*   maximises opportunities to engage the communities involved
*   increases stakeholder understanding, how they can access information and where and when they can get involved
*   can lead to improved decisions
*   reduces the risk of inconsistent messages
*   more effective and efficient use of resource
*   minimises the risk of carrying out communication and engagement activities at the same time, when not carrying out jointly
*   makes the most of the existing stakeholder relationships and knowledge from a history of engagement around the site or on issue
*   helps develop a culture of openness and transparency between the organisations to take forward throughout the lifetime of the project

The process-oriented approach to stakeholder engagement coupled with the values-focused approach to SDM is well aligned with statements made at the

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recent January 2017 OECD-NEA conference on stakeholder support and involvement [13]. In particular, the NEA Director-General, Mr. Magwood, was quoted as follows:

"As we have learned through hard experience in many countries, experts cannot act alone to solve difficult problems. For the greatest challenges facing society today, they must, as a central component of their activities, ensure the broad and deep support of public stakeholders. This is important in all long-term, complex undertakings, but for decisions concerning nuclear energy that employ large tracts of land, use significant quantities of resources, and sometimes generate public questions about safety, achieving a durable public consensus has become an absolute requirement."

The IAEA CIDER II SEAP has set out to accelerate successful decision making for complex D&ER decisions by engaging stakeholders in a process oriented approach that directly feeds into a SDM approach to defensible, reproducible, transparent, and traceable decisions.

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