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Workshop on Establishing and Operating a National Nuclear Security Support Centre Hypothetical Scenario:

"Republic of Centralia

Nuclear Security Support Centre Feasibility Report"

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NEN-3

Centralia Nuclear Regulatory Authority

REPUBLIC OF CENTRALIA

NUCLEAR SECURITY SUPPORT CENTRE FEASIBILITY REPORT

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1. PART 1: RESOURCE ASSESSMENT AND GAP ANALYSIS

1.1. INTRODUCTION

This report serves as official record of the coordinated process completed by competent authorities and other organizations with nuclear security responsibilities in the Republic of Centralia to determine the feasibility of establishing and operating a national nuclear security support centre (NSSC). The report summarizes all sustainability needs and available resources identified during the feasibility determination process, including consideration of possible NSSC institutional models, in line with the systematic approach recommended by the the International Atomic Energy Agency (IAEA) [1]. Centralia Nuclear Regulatory Authority (CNRA), as the designated lead organization for coordinating the feasibility determination process, has prepared this report in collaboration with members of the Committee on Nuclear Security (CNS) and based on input gathered among relevant national stakeholders. The report has been presented to the National Security Advisor (NSA), for final review and decision-making as to whether Centralia should proceed with establishing an NSSC.

1.1.1 Overview of the national nuclear security regime

The national nuclear security regime in Centralia is generally mature and complex, featuring diverse systems and measures for prevention of, detection of and response to possible malicious acts involving nuclear or other radioactive material and facilities. With an operational nuclear power plant, nuclear research facilities, and widespread industrial and medical use of radioactive sources throughout the country, Centralia has generally developed and implemented nuclear security systems and measures effectively, but in a somewhat segmented and uncoordinated fashion over several decades.

In its early years of establishing the nuclear security regime, Centralia did not place emphasis on long-term sustainability for nuclear security, responsibilities were not clearly documented or delineated, and coordination among competent authorities and other organizations with nuclear security responsibilities was inconsistent. Recognizing these challenges, and in response to the growing threat of possible malicious acts using nuclear and other radioactive material, Centralia began working more closely with the IAEA and other providers of assistance to strengthen the regime. One key resource that Centralia developed with support from the IAEA is an Integrated Nuclear Security Support Plan (INSSP). Through development and implementation of the INSSP, Centralia has been able to make notable progress in improving the effectiveness of the regime, particularly after Centralia developed and passed the Nuclear Safety and Security Act of 2012 (hereinafter referred to as “The Act”) [2].

The Act established stronger requirements for nuclear security to bring Centralia’s legal framework into compliance with and serve as implementing legislation for the Amendment to the Convention on the Physical Protection of Nuclear Material, which Centralia adopted in 2010 [3]. The Act also aligns Centralia’s legal framework more closely with IAEA Nuclear Security Series No. 13, Nuclear Security Recommendations on Physical Protection of Nuclear Material and Nuclear Facilities (INFCIRC/225/Revision 5) and other IAEA guidance [4]. The Act more clearly formalized roles and responsibilities for nuclear security and mandated the NSA to establish and lead a dedicated committee for coordinating on nuclear security matters, which became the CNS.

Through the activities of the CNS and through continued engagement with the IAEA on further development of the INSSP, Centralia has identified the following remaining general gaps in and challenges to the national nuclear security regime.

1. Emerging Threats: The Centralia Intelligence Services (CIS) and Centralia National Police (CNP), under the Ministry of Interior, have jurisdictional authority for the investigation of any nuclear security event and leads the interagency in identifying threats and potential adversaries, as a part of the national design basis threat process. CNP is concerned with increased activity among organized crime groups, in particular the New Order Syndicate (NOS), that are known to smuggle illicit goods for black market activities along Centralia's remote land border with Westland and the maritime border with Northland. CNP has also tracked movements among members of the multinational terrorist group Militant Armed Front (MAF), which operates as small cells of loosely coordinated groups and is active in the region, including recent attacks in Westland. MAF has not yet used nuclear or other radioactive material in a terrorist attack, but the group has threatened through social media posts to use a Radiological Dispersal Device (RDD) to attack city centres and critical infrastructure in the region.
2. Detection and Response: Per The Act, a national response plan (NRP) has been developed by the Ministry of Interior, and it is in the process of being implemented and improved. While the NRP defines mechanisms of communication and response roles for competent authorities, coordination among agencies is still in development and competent authorities have little experience in conducting interagency exercises to test and evaluate the effectiveness of the NRP. Consensus among CNS members is that additional resources and training for front line officers (FLO) in various organizations and for maintenance and repair of radiation detection equipment are also areas of need.
3. Security Culture and Insider Threat Mitigation: Related to potential threats by NOS, MAF and other radical or criminal groups, the CNP has determined that further training may be needed strengthen nuclear security culture and to mitigate against potential insider threats for authorized users of radioactive sources in industry and in hospitals and at the Centralia Nuclear Power Plant (CNPP), a 2-Unit 2000MW Generation II pressurized water reactor (PWR) plant operated by CentrAtom located to the west of Capital City.
4. Transport Security: CentrAtom imports low-enriched uranium (LEU) fuel for CNPP from suppliers on the international market. The imported fresh fuel assemblies arrive by sea at Port City and then make their way by rail and by road transit to the CNPP site. CNPP has over 20 years of experience in designing, implementing, and maintaining physical protection systems, and has updated these systems and measures to conform with The Act and with CNRA regulations. Competent authorities, CentrAtom, and local transport companies have little experience, however, in conducting training and exercises to evaluate the effectiveness of security during transport, which is a requirement per The Act and per CNRA regulations.

Lastly, at the recommendation of the IAEA, Centralia became a member of the International Network for Nuclear Security Training and Support Centres (NSSC Network) and requested through the INSSP framework that the IAEA conduct an expert mission on establishing and operating an NSSC. After the IAEA conducted the NSSC expert mission, CNS members agreed to proceed with the feasibility determination process for an NSSC.

1.2. POTENTIAL NSSC STAKEHOLDERS

The potential NSSC stakeholders include:

- CNRA - primary competent authority responsible for regulating and authorizing use of nuclear and other radioactive materials, including safety, security, safeguards, and licensing of materials and associated facilities.

- Centralia Border Guards (CBG) – military unit responsible for protecting and responding to threats along national borders, including assisting detection of and response to illicit trafficking of nuclear or other radioactive material at border crossing points or along green borders.

- CNP - primary law enforcement and intelligence agency responsible for detection of and response to possible material out of regulatory control, including serving as the lead for investigation of criminal activities involving nuclear and other radioactive material.

- Centralia Coast Guard (CCG) - military unit responsible for protecting waterways, ports and shorelines by enforcing laws and serving as a first responder on the water.

- Centralia Customs Agency (CCA) – processes all persons, baggage, cargo and mail crossing the country's borders; interdicts and seizes contraband, including illegal drugs; assesses and collects duties, excise taxes, fees and penalties on imported merchandise; enforces laws intended to prevent illegal trade practices.

- Centralia Ministry of Interior (CMI) - oversees CNP and CBG, responsible for coordinating development, implementation, and updates to the NRP.

- Centralia Intelligence Service (CIS) - responsible for the collection, analysis, and exploitation of information in support of law enforcement, national security, military, and foreign policy objectives.

- CentrAtom/Centralia Nuclear Power Plant (CNPP) – Operator of Centralia's largest nuclear facility, with responsibilities for design, installation, and maintenance of physical protection systems and for management and training of nuclear security staff at the CNPP site.

- Centralia Nuclear Energy Agency (CNEA) – nuclear fuel cycle research and development laboratories, managed under the Ministry of Education and Science, with an advanced research reactor and various types of radioactive sources in use. Responsibilities for design, installation, and maintenance of physical protection systems and for management and training of nuclear security staff at CNEA site.

- National Technical University of Centralia (NTUC) – Science and technology university in Hub City, with nuclear engineering, physics, and chemistry programmes and various types of radioactive sources in use in the associated laboratories.

- Centralia Ministry of Education and Science (CMES) – Ministry responsible for providing funding and guidance to fuel growth, innovation and development in the energy, science, and technology sectors.

1.3. AVAILABLE RESOURCES FOR AND GAPS IN SUSTAINING THE NATIONAL NUCLEAR SECURITY REGIME

Each potential NSSC stakeholder has completed a Resource Assessment and Gap Analysis Worksheet, per REF [1], and a summary of the key findings for each stakeholder are provided below.

CNRA

- Resources: CNRA has a strong mandate, under The Act, for regulation of all nuclear and other radioactive material, facilities, and associated activities in the State. CNRA has many years of experience with internal training of inspectors and other staff, including on physical protection equipment performance testing and evaluation. CNRA has also in the past provided

ad hoc training to CNP, CBG, and CCA on operation of handheld radiation detection equipment. CNRA Training Unit applies a Systematic Approach to Training (SAT) and has used the IAEA methodology for the Systematic Assessment of the Regulatory Competence Needs (SARCoN) for its internal training program [3]. CNRA also owns a limited number of handheld radiation detection equipment and has a small storage and maintenance laboratory. CNRA headquarters has one large meeting room and several smaller meeting rooms that are used for training courses. Under The Act, CNRA also has responsibility for providing scientific expertise and support in response to nuclear material out of regulatory control.

- Gaps: CNRA has limited funding, staffing, and equipment to support training, technical, and scientific support for external stakeholders. CNRA would like to develop more training for authorized users of radioactive sources on nuclear security culture and on preventive maintenance of physical protection equipment. CNRA also has identified the need for further instructor development opportunities. For scientific support related to detection of and response to material out of regulatory control, in particular for crime scene management, CNRA has identified the need for greater coordination and collaboration with front line organizations such as CNP and CBG in implementing the NRP.

CBG

- Resources: CBG owns and operates both fixed and handheld radiation detection systems in place at the country's three largest land border points of entry. CBG has a CBRN team that provides training for FLO on carrying out duties for detection and responding to material out of regulatory control, including for operation and maintenance of radiation detection equipment. CBG has developed a mature program for internal preventive maintenance of radiation detection equipment and conducts limited corrective maintenance for equipment that is past warranty. CBG has a border guard academy where internal nuclear security training is conducted. The Academy has four classrooms with max capacity of 30 persons per room. One conference room with a one large table that has a max capacity of 18 persons and an auditorium with fixed desk seating with max capacity of 100 persons. There is an exercise area outside the training facility where hands-on training with detection equipment and instruments are performed. CBG does not provide or carry out scientific support functions.

- Gaps: CBG, like all front line organizations, is challenged by a high-turnover rate due to the internal staff rotation policy. So initial and recurring training needs for FLO are very high. While the CBG CBRN team conducts a regular program of training, CBG has not applied an SAT and has identified the need for developing a more structured and systematic instructor development program. CBG has provided ad hoc training to CNP on radiation detection techniques for FLO, but it does not have sufficient funding and staffing to provide this support regularly.

CNP

- Resources: CNP owns and operates handheld radiation detection systems and has a CBRN team that provides internal training for FLO on detection of material out of regulatory control. CNP has two classrooms (max capacity of 30 people each), two conference rooms (one with max capacity of 20 people, one with max capacity of 12 persons), and an outdoor exercise area for hands-on training with handheld radiation detection equipment.

  Gaps: CNP, like all front line organizations, is challenged by a high-turnover rate due to the internal staff rotation policy. So initial and recurring training needs for FLO are very high.

While the CNP CBRN team conducts a regular program of training, CNP has not applied an SAT and has identified the need for developing a more structured and systematic instructor development program. CNP also has not developed an internal detection equipment preventive maintenance program and has identified the need for technical support in this area. CNP has also identified the need for greater coordination and collaboration with CBG in implementing the NRP.

CCG

- Resources: CCG Special Mission Capabilities Training Centre (SMCTC) conducts training and exercises related to transport security for sea shipments of nuclear material, on response to illicit trafficking of nuclear material, and on response to sea-based attacks on nuclear facilities. CCG has applied an SAT to these training courses. CCG owns many personal radiation detectors (PRD) and personal protective equipment (PPE) for use during response to a nuclear security event. SMCTC has 2 large meeting rooms, 10 smaller meeting rooms, as well as an outdoor exercise area that are used for training courses.

- Gaps: CCG is challenged by a high-turnover rate due to the military rotation policy and has identified the need for more interagency exercises and training, per the NRP.

CCA

- Resources: CCA participates in ad hoc training with CBG and CNP on detection and response to material out of regulatory control.

- Gaps: CCA is also challenged by a high-turnover rate due to the internal staff rotation policy. So initial and recurring training needs are high, but as CCA is primarily a revenue collection organization under the Ministry of Finance, its job-specific training needs related to nuclear security are relatively limited. CCA would like to see and participate in more regular interagency training and exercises on detection and response, per The Act and the NRP.

CMI

- Resources: oversight and management of CBG and CNP, who do have such responsibilities.

- Gaps: CMI currently does not have sufficient resources to cover all initial and recurring training for FLO. CNP and CBG do not regularly cooperate on joint training or on consistency of training materials and approaches and CMI would like to see improvement in this area.

CIS

- Resources: CIS does not itself carry out HRD, technical support, or scientific support activities, participates in training conducted by CNP and CBG on response to material out of regulatory control on an ad hoc basis.

- Gaps: CIS would like to see and participate more in interagency exercises, per the NRP, and to observe force on force training.

CNPP

- Resources: CNPP has an internal Training Department that operates the CNPP Training Centre (CNPPTC) for all NPP operations staff, applying an SAT in line with IAEA

publications and international best practices in the nuclear industry. Per The Act and per CNRA regulations, CNPP is required to develop and submit for approval by CNRA a Nuclear Security Training and Qualification Plan (NSTQP). CNPP training for security personnel consists of classroom instruction and exercises conducted at the CNPPTC and on-the-job training.

- Gaps: CNPPTC has limited experience in conducting force on force exercises, which are required per CNRA regulations, and would like to develop a more structured and regularized training programme in this area. CNPP has also been in discussions with CNRA about the need to develop a stronger nuclear security culture programme and to conduct more training on mitigation of insider threats. All maintenance of CNPP physical protection systems is currently outsourced to an external contractor, but CNPP would like to develop an internal preventive maintenance program for equipment outside of the warranty period to achieve better cost efficiencies. CNPPTC has also identified the need to develop better training on physical protection equipment performance testing and evaluation. Lastly, CNPP is not required to develop training on transport security, but would like to participate in such training and see a training program in this area developed at the national level.

CNEA

- Resources: Licensed operator of Centralia's only research reactor, CNEA is responsible for meeting CNRA regulatory requirements for designing, installing, and maintaining physical protection systems, as well as for managing and training onsite nuclear security staff. CNEA also conducts training on security of radioactive sources and provides expert support, both internally and to external stakeholders. 4 classrooms available, each with a 30-person capacity, and a large lecture hall that can accommodate up to 200 people. PPS and radiation portal monitors are installed at the research reactor, and both handheld radiation detection devices and nuclear material accounting and control (NMAC) equipment are also available. CNEA has expertise on physical protection system testing and evaluation.

- Gaps: Limited funding and staff for training and providing expert support on nuclear security. CNEA would like to establish a nuclear security training programme using an SAT and to upgrade to more powerful spectroscopy systems at the Post-Irradiation Examination Facility.

NTUC

- Resources: NTUC provides subject matter expert support for nuclear forensics and radiological crime scene management (RCSM) training for CNP FLOs carrying out duties when responding to and the detection of material out of regulatory control. NTUC conducts R&D on improvements in nuclear forensics and material analysis techniques. NTUC Forensics Laboratory owns several personal radiation detectors, high-resolution radioisotope identification devices (RID), Low-resolution RIDs, as well as equipment for alpha spectrometry, low background proportional counting, gamma spectrometry. Importantly, NTUC also owns and operates Inductively Coupled Plasma Mass Spectrometry (ICPMS) and other high-precision equipment for destructive analysis of samples.

- Gaps: NTUC has identified the need for further training on maintaining chain of custody for evidence in support of radiological crime scene management and nuclear forensics. Limited staffing and funding for providing external training and SS functions.

CMES

- Resources: CMES provides oversight and funding for CNEA and NTUC to conduct research and development and apply scientific expertise to support and advance the field of nuclear security.

- Gaps: None, as CMES does not have a mandate to perform HRD, technical support, or scientific support functions directly itself.

1.4. PRELIMINARY NSSC FEASIBILITY DETERMINATION

Based on the findings through the Resource Assessment and Gap Analysis Worksheet, per REF [1], the members of CNS determined that Centralia's nuclear security sustainability needs and gaps could effectively be addressed through the establishment of an NSSC. Such a centre would likely need to feature programmes in all three core functions of HRD, technical support, and scientific support to close identified gaps and strengthen coordination and collaboration. While The Act, CNRA regulations, the NRP, and other policies and procedures have established clearer roles and responsibilities and stronger mandates for competent authorities within the national nuclear security regime, improvements can and should be made to sustain nuclear security in a more coordinated and systematic manner.

In particular, an NSSC could be helpful in identifying needs and coordinating resources at the national level to implementing training, including but not limited to the following areas:

- radiation detection equipment operation and maintenance;
- physical protection equipment preventive maintenance, performance testing and evaluation;
- nuclear security culture;
- insider threat mitigation;
- transport security; and
- interagency exercises and training on response to nuclear security events.

An NSSC could also further strengthen and improve coordination on technical support services and scientific support services. It is clear that capabilities, facilities, equipment, and infrastructure exist among various potential stakeholders that could support such a centre, but that additional resources and infrastructure would likely be needed to establish an NSSC as coordinated, integrated institution to support sustainability at both the national and operational levels in Centralia. CNS members therefore agreed to continue with and complete the NSSC feasibility determination process, per REF [1], in order to conduct a cost-benefit analysis and identify a viable institutional model that could help effectively and efficiently meet Centralia's needs.

2. PART 2: FINAL FEASIBILITY DETERMINATION

2.1. POSSIBLE NSSC INSTITUTIONAL MODELS

Based on the resources and gaps presented in Sections 1.3. and 1.4. above, the following institutional models for an NSSC were proposed and considered, with a view ultimately not to exceed available and forecasted resources.

1. Centralized/CNRA
    a. Core functions: HRD, Scientific Support
    b. Technical focus areas: nuclear security culture, insider threat mitigation, transport security, physical protection equipment lifecycle maintenance, response to nuclear security events

c. Institutional model: Centralized

d. Parent Organization: CNRA

e. Infrastructure and resources: CNRA would require additional funding to convert unused office space into training facilities, to expand laboratories for maintenance, and to hire additional instructors and other training and administrative staff.

f. Cost-Benefit Analysis Summary: This proposal would provide a relatively low-cost option in the near term, and it would build on CNRA's current capabilities and mandate and strong experience in applying an SAT. But this institutional model would also be low-benefit in addressing overall sustainability needs in Centralia, as it would not meet the needs of several stakeholders. In particular, it would not address needs among front line organizations for training of staff and maintenance of detection equipment.

2. Centralized/CNEA

a. Core functions: HRD, Scientific Support

b. Technical focus areas: physical protection of nuclear and other radioactive material, NMAC, nuclear forensics

c. Institutional model: Centralized

d. Parent Organization: CNEA

e. Infrastructure and resources: CNEA would require additional funding to expand laboratories, procure new equipment, and to hire additional instructors and other training and administrative staff. Training material design and development would also require additional funding and support from external experts.

f. Cost-Benefit Analysis Summary: This proposal would provide a medium to high-cost option, and it would build on CNEA's current capabilities in physical protection. But this institutional model would be medium benefit in addressing overall sustainability needs in Centralia, as it would not meet the needs of some stakeholders. In particular, it would not address needs among front line organizations for training of staff and maintenance of detection equipment and for more coordinated training and exercises on response. This proposal would also not address transport security, insider threat mitigation, or nuclear security culture training needs in the near term, though CNEA proposes to develop these capabilities over time. Lastly, some of the equipment upgrades included as part of this proposal are costly and could duplicate capabilities existing elsewhere in Centralia.

3. Centralized/CBG

a. Core functions: HRD, Technical Support

b. Technical focus areas: Detection of nuclear and other radioactive material outside of regulatory control, response to nuclear security events

c. Institutional model: Centralized

d. Parent Organization: CBG

e. Infrastructure and resources: CBG would require additional funding to procure additional training equipment and to hire additional instructors and other training and administrative staff. Training material design and development would also require additional funding and support from external experts with experience in applying an SAT.

f. Cost-Benefit Analysis Summary: This proposal would provide a relatively low-cost option in the near term, and it would build on CBG's current capabilities, mandate, and strong experience training and technical support in the area of detection. But this institutional model would also be low-benefit in addressing overall sustainability needs in Centralia, as it would not meet the needs of several stakeholders. In particular, it would not address needs for CNPP and other licensed operators of nuclear and other radioactive facilities for training on transport security, insider threat mitigation, nuclear security culture, or physical protection equipment maintenance. This proposal would also not address scientific support gaps identified by several stakeholders, including CNRA and NTUC.

4. Decentralized/CNRA

    a. Core functions: HRD, Technical Support, Scientific Support

    b. Technical focus areas: nuclear security culture, insider threat mitigation, transport security, radiation detection equipment operation and maintenance, physical protection equipment preventive maintenance, performance testing and evaluation, interagency exercises and training on response to nuclear security events

    c. Institutional model: Decentralized

    d. Parent Organization: CNRA, with experts contributed from and activities carried out for certain topical areas by CBG, CNP, NTUC, and CNEA

    e. Infrastructure and resources: CNRA would require additional funding to convert unused office space into training facilities and to hire additional instructors and other training and administrative staff. CBG, CNP, NTUC and CNEA would all require additional funding for experts and trainers to participate in and support NSSC activities. Training material design and development would also require additional funding and support from external experts. This proposal would involve a high-degree of resource sharing among stakeholders, and thus additional equipment procurement needs would be limited; however, NSSC stakeholders would have to conduct further needs analysis to determine if additional units of specific equipment may be warranted.

    f. Cost-Benefit Analysis Summary: This proposal would provide a medium-cost option, building on the existing mandate and capabilities of several stakeholders. This institutional model would be of high-benefit in addressing overall sustainability needs in Centralia, as it would aim to address all or most needs of stakeholders to some degree. The primary challenge associated with this proposal, however, is the high-degree of stakeholder coordination required, including by establishing a novel framework within the government of Centralia for resource and cost-sharing.

5. Decentralized/CMI

    a. Core functions: HRD, Technical Support

    b. Technical focus areas: Detection of nuclear and other radioactive material outside of regulatory control, response to nuclear security events

    c. Institutional model: Centralized

    d. Parent Organization: CMI, with CBG and CBP as primary providers of services

    e. Infrastructure and resources: CBG and CNP would require additional funding to procure additional training equipment, to expand laboratory space at CNP, and to hire additional instructors and other training and administrative staff. Training material

design and development would also require additional funding and support from external experts with experience in applying an SAT.

f. Cost-Benefit Analysis Summary: This proposal would provide a medium-cost option in the near term, and it would build on CMI's mandate in funding and providing oversight of CBG and CNP. The proposal would also build on CBG and CNP's current capabilities, mandate, and strong experience training and technical support in the area of detection. This institutional model would be of low to medium-benefit in addressing overall sustainability needs in Centralia, as it would not meet the needs of some stakeholders. In particular, it would not address needs for CNPP and other licensed operators of nuclear and other radioactive facilities for training on transport security, insider threat mitigation, nuclear security culture, or physical protection equipment maintenance. This proposal would also not address scientific support gaps identified by several stakeholders.:

2.2. COORDINATION AND COLLABORATION

For all proposed institutional models presented in section 2.1, CNS members agreed that a Memorandum of Understanding among stakeholders or Terms of Reference would likely be needed to clarify roles and responsibilities, as well as coordination and communication protocols. CNS members also agreed that a separate sub-committee of relevant stakeholders would likely need to be formed to serve as the primary coordinating body for the NSSC, although the sub-committee would still report regularly through CNS to the NSA on activities and decisions related to the NSSC.

In terms of coordination and collaboration with external stakeholders, Centralia has bilateral agreements with Westland, Eastland, and Northland that allow for exchange of information related to ongoing investigations of nuclear security events, investigative and forensics collaborations, and personnel exchanges. As outlined in Section 1.1.1, Centralia will also continue to cooperate on nuclear security with the IAEA, using the INSSP as a primary framework for identifying needs and priorities. Cooperation with and support from the IAEA and with other NSSCs through the NSSC Network will be essential as Centralia continues with the systematic process to establish and operate an NSSC. And lastly, based on needs that Centralia identifies through the systematic process, cooperation and support may be needed from other bilateral providers of assistance to develop and acquire resources for the centre, which may not be feasible for Centralia to carry out solely based on internal funding.

2.3. CONCLUSION

Based on the identified needs and cost-benefit analysis conducted, CNS members have agreed by consensus to propose establishment of a decentralized NSSC, to be coordinated and led by CNRA (institutional model 4 in Section 2.1 above) and with the following primary stakeholders as Centralia moves into the Planning Phase of the center:

- CNRA
- CBG
- CNP
- CMI
- CCG
- CNPP
- CNEA
- NTUC

This proposal was submitted to and subsequently approved by the NSA. As such, the following next steps will be pursued, per REF [1]:

1. Establish a new, dedicated NSSC coordination sub-committee under the CNS to provide an effective framework to support cooperation among the primary NSSC stakeholders;
2. Establish formal memoranda of understanding between NSSC stakeholders to include documenting roles and responsibilities, agreed-upon scope of programmes and activities, and administrative arrangements such as resource- and cost-sharing among the stakeholders;
3. Begin strategic planning for the NSSC with a focus on national needs and integrated management systems to ensure an effective organizational structure;
4. Develop the strategy that defines the direction for the NSSC and establishes its programmes and activities;
5. Develop a strategy map that is informed by the organization's context and values to form the basis of the NSSC's mission, strategic objectives, and framework; and
6. Develop a strategy implementation plan aligned with the strategy development process and to prepare for project initiation.

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