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Theme 1: Affected communities and sustainable territorial development programme encompassing Radioactive Waste Management

Brief 3: Community Benefits and Support Packages

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Executive Summary

This Research Brief is part of Cowam In Practice Theme 1:

"Affected communities and sustainable territorial development programme encompassing radioactive waste management".

The Brief introduces the concept of 'Community Benefit and Support Packages' following requests from a number of National Stakeholder Groups (NSGs) for more information on this issue. During the development of the Brief presentations were made to NSG meetings in Romania (June 2009), Slovenia (October 2009) and the UK (September 2008, September 2009). Some information specific to the UK from the Brief was also presented in Spain (November 2008).

All around the world an important safeguard generally offered to potential host communities (however such a community is defined) for radioactive waste management facilities is that the community should not find itself worse off than before the process began. This has in turn led to the development of a number of so-called 'impact mitigation' measures. It is these measures that are described in the Brief, together with additional information from similar situations associated with other contentious or related facilities.

The Brief includes a classification of the types of measures available around the world and an overview of their use in a range of siting processes around the world. It includes feedback from NSG members on information presented, including a SWOT analysis (Strengths, Weaknesses, Opportunities, Threats) in the UK (September 2009) and discussion on how funds might be managed within a host community in Slovenia (October 2009).

This cooperative investigation has been able to identify a number of key lessons with regard to the development and use of community benefits:

- It is becoming commonplace for facility siting processes to include a range of measures designed to encourage community participation. These can be financial, social and empowering, in various combinations.
- There is increasing evidence that benefit packages are being designed as integrated development instruments intended to not only support a community during the initial stages and through facility operation, but also into the long-term future, with special reference to the welfare of future generations. This supports the overall recognition in this Theme that 'Sustainable Territorial Development' is an essential component of any successful siting process.
- It is possible to observe a direct link between successful and acceptable implementation of a community benefits package and the definition of 'affected community'. If this is too narrowly defined there is a risk that adjoining communities and 'transport' communities through which any waste

must pass to the final repository, will become alienated from the process and cause programmatic delays and difficulties through objections and other actions.

- The application of rigid legal instruments to decide upon the scope, scale and purpose of benefits packages can be problematic in that they offer little scope for negotiation or adaptation to specific local needs and requirements and can result in gross inequalities between components of the affected population.
- In a growing number of examples the participating community is therefore becoming closely involved in development of the relevant benefit package through a process of negotiation. This is seen as an excellent way of involving the community in issues that directly affect its long-term development.
- Any package agreed should include transgenerational benefits to encourage long-term community support.
- It is important to ensure full government (or implementer) agreement that agreed benefits will continue in the long term and will be protected from future changes in legislation or policy.



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1. INTRODUCTION

This document has been produced by Galson Sciences Limited as a Research Brief of the COWAM in Practice (CIP) project in pursuance of its role as member of the Methodological Task Force (MTF). It also includes a contribution from Westlakes Scientific Consulting Ltd (Section 5.3). The work carried out by both was co-funded by the European Commission and the UK Nuclear Decommissioning Authority (NDA). The objective of the Brief is to introduce the concept of ‘Community Benefit and Support Packages’ and bring together the information that has been provided to interested National Stakeholder Groups (NSGs) on this issue and place this in context.

Following the compilation of the proposed Research Briefs as indicated from the initial NSG meetings in the five CIP countries, discussions were held between the members of the Methodological Task Force (MTF) and the project Core Group to determine which of the Briefs should be developed, and to identify relevant areas for them to cover.

These discussions ultimately resulted in the identification of this issue area as being worthy of further effort, with a view to provision of basic background material and development of short presentations that could be made to subsequent NSG meetings during the course of the project. This report compiles the information presented.

Section 2 describes the research methodology that has been used in assembling this brief, which has involved general review of the available information and development of presentations and background for use at NSG meetings as requested. There has also been incorporation of any feedback from NSG participants where relevant. This has enabled the limited effort and time available to be better focused on the needs of the NSGs.

Section 3 introduces the concept of Community Benefits and Support Packages and explains briefly how they can be classified into a number of distinct types based on simple definitions, and provides some illustrations of how they have been used in other countries.

Section 4 outlines the results of a SWOT (Strengths, Weaknesses, Opportunities, and Threats) analysis that has been performed and which was reviewed by the UK NSG.

Section 5 introduces the three supplemental topic areas that have also been examined for the brief, these having been identified by discussions within the MTF and confirmed by the relevant NSG as being suitable for purpose regarding their wishes. The areas covered are:

- *Community benefits in other areas than radioactive waste management*
- *Success or otherwise of legalistic compensation schemes*
- *Management of Community Funds*
- *Development of involvement and support packages (higher-activity radioactive wastes current siting process) in the UK*

2. RESEARCH METHODOLOGY

As already stated, this Research Brief has been developed in response to requests from a number of NSGs for information concerning the use of community benefits and support packages in other countries and other situations. The output to date has been mainly in the form of PowerPoint© presentations with accompanying explanations of the background to the development of these packages and examples of how they have been implemented or proposed.

Relevant information to develop these presentations has been gathered from a range of sources including that already available to the authors, the general literature, and more specialised documents produced by several relevant organisations. These latter have included, for example, briefing papers prepared by the Nuclear Legacy Advisory Forum (NuLeAF) in the UK and others.

Presentations (in the form of PowerPoint© slides) have been developed for various NSG meetings as requested. These have included the UK NSG meetings in Manchester in September 2008 and September 2009, the Spanish NSG meeting in Madrid in November 2008, the Romanian NSG meeting in Cernavoda in June 2009 and the Slovenian NSG meeting in Ljubljana in October 2009.

In the spirit of collaborative research and consistent with the ethos of the CIP project, any feedback during NSG discussions following each presentation has been used to guide research into areas that have also been of use in subsequent presentations. Following the presentation of introductory material in September 2008, for example, the UK NSG was encouraged to suggest additional sources of information that might be informative. Several of these ideas and suggestions were followed up and relevant information has been incorporated in this brief.

3. BACKGROUND

All around the world an important safeguard generally offered to potential host communities (however such a community is defined) is that the community should not find itself worse off than before the process to site a radioactive waste management facility began. This has in turn led to the development of a number of so-called ‘impact mitigation’ measures. Not least amongst these has been the offering of specific benefits packages to the community, by way of compensation, not necessarily for bearing an increased risk, but simply for allowing itself to be considered. It is now generally the case that such benefits comprise a mixture of the purely financial and measures designed to assist the community to take part and ensure enhanced well-being beyond the lifetime of the facility in question.

Other benefits can be social and institutional. In some cases cash benefits are offered solely as an incentive to encourage participation in the process in the first place.

The issue of community identification is dealt with in a companion Theme 1 Research Brief developed for CIP by Westlakes Scientific Ltd [1], and, as explained there, the issue is fraught with potential difficulties. This reflects directly the current thinking within most national siting programmes, in that within any area, the ‘community’ is likely to be made up of many different interest groups, which will come together for a whole variety of reasons.

Previous work carried out to examine the use of community benefits in association with radioactive waste repository siting [2, 3] recognises a broad tripartite division: ‘Cash Incentives’, ‘Social Benefit’ measures and ‘Community Empowerment’ measures, although it should be noted that it is normal to offer packages containing payments and benefits of several different types, depending on where in the siting process the particular programme is. It is also important to appreciate that not all types of benefit or payment are included in every process [2]. A subsequent review was carried out by the Nuclear Decommissioning Authority (NDA) in 2007 as part of a wide ranging public consultation (discussed in Section 4) [4].

3.1. Cash Incentives

‘Cash incentives’ tend to be exactly what the phrase implies: they are an incentive to a community to either become involved in a process, or to allow a development to continue, or both. Some examples of this type are fixed and not subject to negotiation, having been laid down within some pre-existing legal instrument (Slovenia, Spain), whilst others are often open to negotiation after the initial expression of interest has been registered, as a way of maintaining community interest. Figures provided here were correct as of late-2009 unless otherwise stated, based on currency conversion rates at that time.

3.1.1. Lump Sums

These are payments made directly to the affected community in order to encourage participation. There may or may not be controls on what the money may be used for. Payments are often made in instalments, dependent upon achievement of project milestones (e.g. site exploration permits; construction and operation licences).

Examples:

- Canada ILW; €1.5 million, subject to local and regulatory approval
- France LLW; €5.5 million (at 1992 prices); facility operational
- France HLW; €20 million; site area selected
- South Korea LLW; €241 million; site selected
- Taiwan LLW; €114 million; no site
- UK LLW; approx €10 million; relates to facility extension

LLW-Low-level radioactive waste

ILW-Intermediate-level radioactive waste

HLW- High-level radioactive waste

3.1.2. Annual payments

In many cases agreements or incentive packages contain details of regular payments that are available, enabling local communities to estimate the benefit they could receive. The level of payments can vary depending on certain factors, such as the volume or activity of the waste emplaced, and whether regulatory approvals are forthcoming. In some instances the amounts are specified within legal instruments.

Examples:

- Slovenia LLW; €5 million during operation
- South Korea LLW; €7.5 million (dependent on volume of wastes emplaced) during operation
- Spain LLW; €1.6 million average (dependent on volume of wastes emplaced) during operation
- UK LLW; approx. €1.5 million during operation

3.1.3. Expert Support Packages

In some programmes, support packages are offered to assist communities to commission reviews by independent experts. This is seen as an important way of demonstrating transparency in the way in which information is supplied to the community during a project. In many cases these funds are paid as part of the support provided as ‘Community Empowerment’, described in more detail below.

Examples (these figures include social empowerment measures):

- Canada ILW; Consultants, reviewers and experts can be hired as part of €23 million of available support over the next 35 years.
- France HLW; €300,000/yr for the Bure CLIS [Comité Local d’Information

et de Suivi] (the local review group receives financial support to carry out independent studies).

- Sweden HLW; €217,000/yr. Local community review groups received funding from the National Waste Fund, which is managed by the regulator.

3.1.4. Tax Revenue

In some cases, special taxes are payable to the local community as an additional incentive for involvement. Sometimes these are only available if a definite impact on local economic development can be demonstrated.

Examples:

- Finland L/ILW; Local Property Tax increased following request to government; this decreases through facility lifetime
- France HLW; to fund the two Public Interest Groups [Groupement Intérêt Public (GIP)] for Meuse and Haute-Marne Départements, €10 million /yr 1999-2006, for each, corresponding to the tax due for two nuclear reactors. The 2006 law introduced the Economic Development Tax and Technology Diffusion Tax, together worth €20 million /yr to each GIP from 2007 until the repository site is confirmed. Split between local and regional activities.

3.1.5. Trust Fund for Future Generations

These are funds which are intended to support the community in the long-term, in case the facility operation affects local economic development. Funds can also be established to provide capability to carry out any necessary potential remediation in the future in situations where the original site operator is no longer in existence. In the nuclear field there are so far few examples of these funds, but they are starting to feature in local negotiations.

Examples:

- US LLW; EnviroCare (now EnergySolutions), Clive, Utah €22 million Bond and Perpetual Care Fund with €310,000/yr during facility lifetime
- Belgium LLW; –not quantified to date, but were part of conditions laid down by the selected host community, and will be subject to future negotiation

3.1.6. Profit Sharing

It has been proposed in some instances to allow the host community to benefit from facility operation by some form of profit-sharing scheme. In some cases this is paid as a levy directly to the relevant local government entity.

Examples of actual practice:

- US LLW, Barnwell, South Carolina; €9 million levy on annual fees in 2006
- US LLW, Clive, Utah: €3 million as levy on annual fees



3.2. 'Social Benefit' measures

These are any compensatory measures, financial or otherwise, intended to offset any stigma, perceived or actual, regarding either the community's participation in any stage of the siting process, or associated with the actual location, development and operation of the facility within the community or area.

Included within this group are measures such as guaranteed property prices and guarantees of majority local hiring. Improvement to infrastructure such as roads and other services can also come under this heading, although there is sometimes a blurred distinction about where such developments become pure incentives designed to attract a community in which such things may be absent or poorly developed, rather than offset a perceived or actual impact. In many cases some details of benefits and payments are available from the start because they are laid down within legal instruments, and these include things such as emergency preparedness training, and payments-equal-to-taxes (PETT). As before, some only become available after disposal operations actually begin.

3.2.1. Employment

In many cases the enhanced employment opportunities that will result from repository development are advanced as potential benefits designed to encourage communities to become involved. This has to be carefully balanced so as not to appear as if a proposal is targeting an area with high unemployment. It can also be perceived as a major disruption to an established employment profile. If suitably qualified workers are not available in the community, an influx of outsiders can be seen by some as a major detriment, although in many cases the opposite can be true.

Examples:

- Canada ILW; 300 jobs are expected during repository construction
- France HLW; 350 jobs have been created at the Bure URL, as well as more from the associated economic development programmes
- Finland Spent Fuel; Posiva predict creation of up to 150 jobs during operation of a repository at Olkiluoto
- According to a 2005 study for the Committee on Radioactive Waste Management (CoRWM) in the UK, estimated employment figures for the various development stages could approach the following [5]:
 - Site investigation; 200
 - Construction and underground research; 370
 - Waste emplacement; 500
 - Backfilling and closure; 120

3.2.2. Infrastructure Improvements

It is generally recognised that development of a radioactive waste repository will have a number of impacts upon a local community, especially one where no nuclear facilities have previously existed. In many cases these impacts are perceived, rather than actual,



especially at the beginning of a siting process. There is sometimes a blurred distinction about where such developments become pure incentives designed to attract a community in which such things may be absent or poorly developed, rather than offset a perceived or actual impact.

Example:

- US the Waste Isolation Pilot Plant (WIPP): €14 million/yr from 1998-2012 to improve local roads and support infrastructure developments [6]

3.2.3. Property Value Protection

There is a common perception during a siting process that the presence of a radioactive waste facility can reduce house prices and even encourage an influx of lower income families to the immediate vicinity who could reduce the overall economic profile of a region. It is therefore not uncommon for benefit packages to include some form of property price protection, whereby funds are put aside to compensate claimants for demonstrable decreases in value. Experience, however, does not appear to support these perceptions, and it is significant to note that there are few examples of where large payments have been made under such schemes. In most cases incoming families tend to be high income and the local economy benefits from development of related industries.

Example:

- Canada LLW; The Port Hope Agreement contains a scheme whereby property owners who can demonstrate that financial loss or mortgage renewal difficulties occurred between October 2000 and the termination of the program, expected in 2012, are eligible to claim compensation.

3.2.4. Integrated Development Projects and Miscellaneous Facilities

It is fast becoming the norm for community benefit packages to comprise integrated projects designed to benefit the community not only during the immediate siting process and subsequent facility operation, but long into the future (similar to Trust Funds). The development of structured development plans, comprising support industries, specialist services and linked research facilities can be seen in numerous programmes. Again, whilst the actual monetary value of these projects can not always be clearly quantified, the associated benefits in terms of jobs, taxes, improvement in local services and standard of living are expected to be appreciable. It is normal that such benefits only become available following local agreement to host a facility and the granting of the necessary construction permits and regulatory authorisations. In some cases funds are distributed through a local management board set up to involve community and operator representatives.

Examples:

- Belgium LLW; as part of the integrated projects developed by the local community required for accepting a repository, Dessel called for a Community Digital Network and a Radioactivity Science Park and

Communication Centre. In addition, they called for a Sustainability Fund, financed by the federal government, to support or implement projects that will contribute to improving the quality of the living, housing and working conditions of the Dessel population. The projects can cover various areas: social, economic, cultural, environment-oriented, health and welfare. The value of this Fund is currently the subject of negotiation.

- France HLW; Around €180 million from EDF, AREVA and CEA for an economic support programme for Meuse and Haute-Marne Districts.
- Spain Interim Spent Fuel Store (ATC); it is proposed to locate a Technological Research Centre adjacent to the facility, together with an Enterprise Park, with an overall total of some €700 million, of which around €50 million is envisaged beyond the cost of the ATC [7,8].
- United Kingdom LLW; Approx. €10 million has been paid to initiate a fund for projects around the national disposal facility in west Cumbria, dependent on permission being granted for an additional storage vault. Annual sums of around €1.5 million will also be paid during the operating life of the vault. The fund, which is now in existence, will support local projects approved by a management board.

A similar fund will support projects in the area around the planned near-surface LLW repository at Dounreay in northern Scotland. In this case, approx €1 million will be paid initially with around €300,000 per year during facility operation.

3.2.5. Relocation of Developer

As part of the benefits offered to local communities for agreeing to host a repository, it is becoming increasingly common for the facility operator to offer to relocate its main operational headquarters to the locality. Whilst this can be seen as a potential benefit in terms of increased local taxes, improved employment opportunities and similar, the commitment is also often seen as a vote of confidence in the safety of the facility itself.

Example:

- Finland Spent Fuel; Although few other major benefits (cash, infrastructure, community support) are being offered to the local area, the main offices of Posiva Oy, the developer of the proposed repository and the ONKALO Underground Research Laboratory, have been moved to the area.
- When the Waste Isolation Pilot Plant (WIPP) in the US began operations to dispose of ILW in 1999, the operator opened offices in the adjacent town, as did several government research laboratories.

3.2.6. Discounts (free electricity etc; ongoing health and environmental monitoring)

In some countries it is recognised that when a community fulfils a role considered to be in the national interest, there should be some tangible compensation, often in terms of reduced utility fees etc. In addition, schemes to incorporate regular monitoring of

community health and environmental well-being are becoming more common. This is a feature in some countries with regard to siting and operation of nuclear power plants (NPPs), a feature which is now being adopted in other areas.

Example:

- Lithuania LLW; In November 2007 it was agreed that communities in Visaginas Municipality, surrounding the proposed repository site near the Ignalina NPP, would benefit from reduced prices for electricity from the plant.

3.3. ‘Community Empowerment’ measures

These types of measures can also be regarded as a form of incentive, designed as they are to allow a community to develop a degree of control over the siting, development and even operation of the facility. They usually include such things as establishment of local monitoring or review groups, especially where the community is a volunteer participant, but vary as to the extent of real power that is actually available.

Also included within this group of measures are the payments made to enable local people, elected representatives, national and local journalists etc. to visit existing waste management facilities either nationally or internationally, usually as part of a proponent’s ‘information and education’ programme.

Examples now exist of siting processes where these various payments and support structures are developed in partnership with the prospective host community. Both local representatives and proponent join together in a formal or semi-formal partnership which examines the potential of the community to site a facility, and develops integrated socio-economic projects designed to benefit the community in the long-term. A good example of this can be seen in Belgium, as detailed in Laes et al. [9].

3.3.1. Local Involvement in Decision Making

It is now becoming common for community partnerships to be established, involving local elected bodies, interest groups, citizen groups etc. and which are given the opportunity to influence the details of the project, sometimes (rarely) including technical design, but more frequently regarding associated integrated economic development projects.

In many cases the local community possesses a right of withdrawal from a process, or a veto at certain defined points in the decision-making process. This can sometimes involve referenda or other forms of plebiscite.

The local community partnership often receives financial support to allow it to oversee the project and ensure that local views and concerns are taken into account throughout.

Examples:

- Belgium LLW; The local partnerships established in three communities were provided with various forms of support:
 - €247,000 /yr to run a local office
 - €74,000/yr to carry out socio-economic studies
 - €74,000/yr to ‘visualise the project’ (assist in design consideration)
 These payments have continued for the combined site partnership following site selection.
- France HLW; The local CLIS (information and review group) has an annual budget of €300,000

3.3.2. Capacity Building

This is somewhat similar to the above, but includes measures designed to allow the oversight group or partnership to become more knowledgeable about the issues involved. This can include organisation of meetings, discussions with independent experts, and visits to operating facilities. It can also assist a community to develop the capability to cope with additional demands on health and other services that may be required. It can also include support for other groups to allow them to be involved.

Examples:

- Sweden Spent Fuel; the Review Groups established in the two potential host communities were funded directly from the National Waste Fund. The amounts varied as the process advanced.
 - €214,000/yr during feasibility studies (5 years)
 - €430,000/yr during site investigation (7 years)
 In addition, since 2004, Swedish NGO’s have been able to receive support to enable them to take part in the siting process. A lump sum of €320,000/yr is available for all eligible groups to share, depending on their membership.

3.3.3. Development of a Local Partnership to Oversee Project

As mentioned elsewhere, it is becoming common for community partnerships to be established in a repository siting process, in order to allow a degree of ownership and control to be developed locally. They are usually based on a contractual agreement between the local community and either national government or the implementer. The contractual agreements normally specify the amount of resources available to allow participation (see various above and below).

3.4. Involvement Support Packages

The various payments and funding arrangements described above are sometimes amalgamated into a single agreement, designed to allow local communities to take part in a siting process without being financially impacted. These packages can therefore include items discussed already, such as secretarial support, use of experts, management costs for partnerships etc.

Examples:

- Belgium LLW
 - €250,000/yr was available to support the partnership during the initial feasibility work, followed by €125,000/yr following agreement to site a facility (subject to current review)
- Canada LLW
 - All costs incurred by taking part in the process are covered by the federal waste management office
- Canada ILW
 - Consultants, reviewers and experts can be hired as part of €23 million of available support over the next 35 years.



4. SWOT ANALYSIS

In addition to compilation of the descriptions of the various types of community benefits available, with examples, a SWOT (Strengths, Weaknesses, Opportunities and Threats) analysis has been performed and has benefited from small group discussions at the NSG meeting in the UK in September 2009. This analysis is presented below.

Cash Benefits:

Strengths	Weaknesses	Opportunities	Threats
Lump Sums			
<ul style="list-style-type: none"> • Can encourage early participation from many communities • Allows easy recognition of benefits from involvement • Brings immediate benefits to the community 	<ul style="list-style-type: none"> • Could encourage multiple communities to volunteer simply in order to receive funding • Can appear as if poorer communities are being targeted • Opens the process to accusations of bribery • Can introduce questions regarding safety, as in 'why is it necessary if it's really so safe?' • Does not demonstrate a long-term commitment to the community if not offered as part of package • May set a national and industry precedent • Can be difficult to transparently justify the level of funding • Linkage to legislation can inhibit capacity for local negotiation 	<ul style="list-style-type: none"> • Enables initial discussions to be initiated, leading to a greater potential understanding of the issues and willingness to participate • Can tailor the amounts on offer to suit local requirements, unless these are contained in legislation • Can link payments to project and licensing milestones to help maintain progress • Can specify uses to which money is put, thereby assisting transparency 	<ul style="list-style-type: none"> • A community could 'take the money and run', if no controls are placed on use or it is not linked to project and licensing milestones • A community may never be satisfied with the available resources and demand more for continued involvement, especially if volunteers are few • Disputes can arise within a community over the management of monies • Without equitable distribution proposals and agreement on 'affected community' definitions, there could be resentment amongst surrounding communities impacted by transport etc. that do not receive any benefit
Annual Payments			
<ul style="list-style-type: none"> • Allows a community to calculate the benefit of participation over time • Demonstrates a long term commitment to the community and to the project by the developer • Allows the developer to calculate costs 	<ul style="list-style-type: none"> • The community may become dependent on these and suffer if the site is eventually proved to be unsuitable • Can make the community economy dependent on future facility development and affect the credibility of local review • Annual payment may diminish if linked to emplacement volumes • May set a national and industry precedent • It may be difficult to transparently justify the level of funding • Linkage to legislation can inhibit capacity for local negotiation 	<ul style="list-style-type: none"> • Develops a bond between the host community and the facility • Local people may become champions for the development, especially if payments are linked to project and licensing milestones • Can develop an equitable and transparent distribution scheme based on proximity to the facility 	<ul style="list-style-type: none"> • Delays in the process could cause excessive cost overruns due to continuing payments, unless linked to project and licensing milestones • Without equitable distribution proposals and agreement on 'affected community' definition, there could be resentment amongst surrounding communities impacted by transport etc. that do not receive any benefit • Changes in government policy can stop payments and destroy fragile community support

Strengths	Weaknesses	Opportunities	Threats
Expert Support Packages			
<ul style="list-style-type: none"> Allows the community to seek advice from experts not associated with the project Allows the participation of even those communities with little local competence or industry experience Demonstrates independence from developer to opponents 	<ul style="list-style-type: none"> Could encourage multiple communities to volunteer, especially those with poor economies, simply in order to receive funding, unless tight conditions are imposed 	<ul style="list-style-type: none"> Encourages local involvement and demonstrates a commitment to impartiality If the case for facility development is strong, independent review can assuage local perceptions and help develop support 	<ul style="list-style-type: none"> Opens up the debate to opposition bodies with a wider agenda
Tax Revenue			
<ul style="list-style-type: none"> Provides a regular income for the community Will be seen to be more transparent if levels are determined by new or existing legislation 	<ul style="list-style-type: none"> Can make the community economy dependent on the facility Unless specifically allocated to visible projects, the benefit to the community may not be readily apparent 	<ul style="list-style-type: none"> Special conditions to assist siting in particular areas could be included in new legislation, so as to encourage community involvement Can allow a local authority to reduce other local taxes 	<ul style="list-style-type: none"> Future changes in tax legislation could remove income from the community after repository operation has begun A local authority may 'swallow up' the revenue unless they are specifically allocated in a local agreement Could cause resentment amongst surrounding communities impacted by transport etc. that do not receive any benefit
Trust Fund for Future Generations			
<ul style="list-style-type: none"> Demonstrates a clear long-term commitment to the community Counters accusations that locals are accepting benefits at the cost of future generations Allows continued benefit to the community when repository-related income stops 	<ul style="list-style-type: none"> Does not provide a tangible benefit to the current generation who will make the decision on siting Insufficient funds may be made available due to legal or budgetary constraints 	<ul style="list-style-type: none"> Involvement of the community in fund design can allow choices to be made to benefit particular groups or projects 	<ul style="list-style-type: none"> Changes in legislation could stop payments into the fund after repository operation has begun Disputes can arise within a community over the management of the fund Future fund managers could misappropriate money and thereby sully the project's image
Profit Sharing			
<ul style="list-style-type: none"> Allows the community to clearly see the benefits from facility siting Assists the community in preparing for a smooth transition to other economic activities in the future 	<ul style="list-style-type: none"> Can be difficult to quantify in discussions with the community during facility development Requires careful identification of where funds will go, or local rivalries may develop between groups or local authorities 	<ul style="list-style-type: none"> Generates funds that can be used by the community in any way it sees fit 	<ul style="list-style-type: none"> Future waste arisings may decline and result in lower revenues than anticipated There could be opposition from shareholders if the facility is operated by a private company Could allow individuals to gain personal benefit



Social Benefits:

Strengths	Weaknesses	Opportunities	Threats
Employment			
<ul style="list-style-type: none"> Provides support for sustainable community development Encourages young people to remain in the community Encourages other related companies to relocate into the area 	<ul style="list-style-type: none"> Can make the host community overly dependent on the facility Can disrupt the existing local employment profile and salary levels due to influx of expert staff May not be a significant factor if the area already has good levels of employment Local workforce may not be sufficiently qualified Construction workforce may be brought in from outside Repository work force not likely to be huge 	<ul style="list-style-type: none"> Operator can guarantee local hiring where practical Employees can develop pride in the facility and become champions The local skills base can be enhanced through training and subsequent employment Increased local spend will enhance community well-being 	<ul style="list-style-type: none"> An influx of outsiders can destroy community spirit, especially in small communities Divisions may develop in the community between those employed at the facility and those not Local companies may relocate away from the repository due to perceived stigma, thereby impacting existing jobs If there is significant local opposition the community can become isolated and young people be unable to move away for employment Legislation may prevent preferential hiring of local people or firms
Infrastructure Improvements			
<ul style="list-style-type: none"> Provides support for developments that would otherwise not take place Produces highly visible benefits to the local population 	<ul style="list-style-type: none"> Local opposition can result due to negative impacts on the local environment Can irreversibly alter the local community and its self-image 	<ul style="list-style-type: none"> Improved communications can lower transport costs to the facility Improved infrastructure can encourage other related companies to relocate into the area 	<ul style="list-style-type: none"> Opposition to new roads, rail lines etc can increase opposition to the facility in surrounding communities if the benefits are not shared equitably Local and national government may cease existing developments
Property Value Protection			
<ul style="list-style-type: none"> Generates confidence in the local population that no financial losses will be incurred due to facility development 	<ul style="list-style-type: none"> Difficult to assess impact Difficult to define the potentially affected area 	<ul style="list-style-type: none"> If there are a low number of claims, this can be used to demonstrate the low real impact of the facility over time 	<ul style="list-style-type: none"> Can cause division within the community unless all potentially impacted properties are included in a transparent way May need to introduce similar schemes for corridor communities
Integrated Development (or related) Projects			
<ul style="list-style-type: none"> Allows the community to become involved in its own sustainable future Demonstrates recognition of community service to the nation as a whole Demonstrates a long-term commitment on the part of the developer 	<ul style="list-style-type: none"> May be in conflict with existing local, regional and national economic development planning 	<ul style="list-style-type: none"> Encourages the community to enter into discussions with developer Allows mutual trust and confidence to be established 	<ul style="list-style-type: none"> Opposition can arise from other adjacent communities if they are not included in the planning Difficulties may arise concerning project funding over time if segregated funds are not provided Plans may conflict with other local, regional and national visions



Strengths	Weaknesses	Opportunities	Threats
Relocation of Developer			
<ul style="list-style-type: none"> Provides additional benefits to the community in terms of jobs, tax revenue, skills base etc. Demonstrates a long-term commitment to the community by the repository developer Demonstrates confidence of the developer in repository safety and environmental impacts 	<ul style="list-style-type: none"> Identifies the community with the project in the mind of opposition groups and other communities who may not be in favour 	<ul style="list-style-type: none"> Community or region can be developed as a 'centre of excellence' and attract support industries and other high-tech development Personal contacts between the developer's staff and local inhabitants can be strengthened, thereby integrating the facility into the community 	<ul style="list-style-type: none"> Increased development may alter the social fabric of the community and lead to resentment There could be resentment over property deals if these are made with individuals rather than the community May lead to loss of implementer staff who do not wish to relocate, causing local concern over reasons
Discounts and Services			
<ul style="list-style-type: none"> Allows the community to see a tangible benefit from its actions and to feel recognition of performing a national service 	<ul style="list-style-type: none"> Community can become reliant on these and suffer when the repository is closed May set an industry and national precedent 	<ul style="list-style-type: none"> Can be associated with other benefits and be used to attract other related developments into the community 	<ul style="list-style-type: none"> Must continue in perpetuity unless an end-date is agreed at the beginning of the process. Otherwise the developer would have an open-ended liability

Community Empowerment Measures:

Strengths	Weaknesses	Opportunities	Threats
Local Involvement in Decision-Making			
<ul style="list-style-type: none"> Encourages local participation and allows a community to control the pace of the development 	<ul style="list-style-type: none"> May not be possible under existing national legislation Can be difficult to obtain agreement as to who makes the final decisions If decisions are seen to be actually being made elsewhere, hard-won trust can be lost overnight Can be open to manipulation by opposition forces 	<ul style="list-style-type: none"> Local knowledge may result in hitherto unexpected improvements to particular aspects of a project 	<ul style="list-style-type: none"> Involvement is subject to continued political support May take a considerable time to reach decisions, which in turn causes stakeholder fatigue and implementer frustration Divisions amongst the community could prevent any decisions being made Opposition forces may take over the process in some cases
Capacity Building			
<ul style="list-style-type: none"> Develops local expertise, allowing members of the community to understand the issues and to discuss them in a reasonable way Supports community control of the project going forward 	<ul style="list-style-type: none"> Can open the process to manipulation by pro or anti groups. Can cause delays in progress as the project can only move at the pace of the community Can give the impression that the community will be responsible for facility security and safety following closure 	<ul style="list-style-type: none"> Development of local expertise allows input of developer's viewpoint in a reasoned fashion Allows development of relationships between actors; allows opportunities for balanced discussions Allows people to visit operating facilities and gain confidence in the technology 	<ul style="list-style-type: none"> May take a considerable time to reach decisions, which in turn causes stakeholder fatigue and implementer frustration Those involved become associated with the project and can sometimes be seen by some in the community as being too close to the implementer

Local Partnership to Oversee a Project			
<ul style="list-style-type: none"> • Demonstrates local involvement and control • Provides a sense of confidence that the project will progress. 	<ul style="list-style-type: none"> • Placing control in the hands of non experts could slow the progress of the project • Can be difficult to obtain agreement as to who makes the final decisions 	<ul style="list-style-type: none"> • Allows mutual trust and confidence to be established. • The project can be tailored to address local fears and aspirations 	<ul style="list-style-type: none"> • Could allow the development of a 'clique', which may be perceived as unrepresentative of local opinion
Involvement Support Packages			
<ul style="list-style-type: none"> • Allows the community to take a full part in project deliberations from the very start, exploring the issues and increasing understanding, without excessive cost in terms of time or money 	<ul style="list-style-type: none"> • The local authority may be perceived by constituents as being in support of a project by accepting payments • Provision of support could be seen as the developer 'buying agreement' • May need some form of control or oversight mechanism in order to avoid misuse of funds 	<ul style="list-style-type: none"> • Allows the implementer to develop a legitimate presence in the community without a sense of a surprise by the public 	<ul style="list-style-type: none"> • Provision of support can be divisive if not allocated to surrounding affected communities • Management of the funding could cause concerns that local authority actions are actually being unduly limited • National policy changes may remove the funding support before any siting decision has been made, thereby 'stranding' the community

Whilst such an analysis cannot of itself produce a suggested 'best practice', it does allow identification of factors that should be taken account of in the design of a benefits package. These are summarised below, in no particular order:

- If legislation is involved, this should allow maximum scope for local negotiation.
- Wherever possible, allow full community involvement in package design and identification of associated integrated projects; no two communities are identical and each will have differing aspirations.
- Ensure full government (or implementer) agreement that agreed benefits will continue in the long-term and will be protected from future changes in legislation or policy.
- Wherever possible work through local partnerships, involving all parts of the community.
- Build local capacity to allow full understanding of the proposals and ensure that community activities are fully funded to the extent necessary.
- State clearly how benefits will be allocated, including all affected populations (host and transport), using legal agreements if necessary.
- Incorporate transparent fund management processes involving the whole community.
- Include trans-generational benefits to encourage long-term community support.
- Support local businesses and workforce whenever possible.
- Encourage involvement of local youth through training and support schemes.
- Incorporate property value protection schemes to indicate confidence in low impacts.

5. SUPPLEMENTAL TOPIC AREAS

Three supplemental Topic Areas were identified in Core Group discussions for brief examination to support the basic information presented here. These Topic Areas were not intended to be major research projects in their own right.

The Topic Areas identified were:

- *The use of community benefits in other areas (than radioactive waste management)*
- *Success or otherwise of legalistic compensation schemes (e.g. former coal mines in the UK)*
- *Development of involvement and support packages (higher-activity radioactive wastes current siting process) in the UK*

As described in Section 2, these areas were investigated and the initial findings presented to the UK NSG, when members were invited to make comments on the data and to suggest any additional sources that could be utilised. There was also an exchange of information between Galson Sciences Ltd and NuLeAF to inform both parties on information in this area. NuLeAF prepared a Briefing Document for its members, which has been used as additional input here [10]. The NDA also prepared a review of similar instruments in 2007 [11].

5.1. The use of community benefits in other areas (than radioactive waste disposal)

The intention of this Topic Area was to highlight examples of where the various types of community benefits, as described above in Section 3, have been used in association with siting or developing contentious facilities other than those associated with radioactive waste repositories.

A presentation of this information was made to the September 2008 NSG meeting held in Manchester. This introduced the classification of benefits and support mechanisms as described in Section 3 and invited participants to discuss these and suggest other sources of information and examples that could be included in further work and subsequent presentations if required.

Summary information was presented regarding the use of community benefits in two other nuclear areas (information as presented at NSG meeting):

NPPs:

- Canada:
 - Energy Alberta is looking for volunteer sites to develop NPPs for steam and power for tar sand development. Benefits will enhance community well-being etc. but so far no negotiation has taken place.



- Japan:
 - Several laws in 1974 specified the level of grants available to local communities. Additional laws passed in 2001 to allow these payments to continue throughout facility lifetime. All grants were amalgamated in 2004 to a single payment (€1m/yr; €7m; €0.5m/yr) (siting- EIA; EIA+10yrs; -up to operation) and again in 2007.
- Switzerland:
 - Payments are made to local communities around operating reactors (Gösgen -€730,000; some get nothing). Aargau canton has offered to upgrade infrastructure in return for new NPP.
- US:
 - The 2005 Energy Act offers benefits to NPP developers. These include debt guarantees, production tax credits etc. No benefits to potential host communities have been identified as yet.

Interim Storage Facilities

- Belgium:
 - A Municipal 'reglement' is paid to the local council (€900,000/yr).
- Japan:
 - 1974 laws were extended to include storage in 1988. These provisions were included in a single payment from 2004. Local communities can also levy taxes for storage at existing NPPs.
- Spain:
 - Payments to local community will be calculated according to rules laid down in 1998 legal instrument (currently being amended). These could be as much as €11m/yr; a volunteer process is currently in progress.
- Switzerland:
 - €900,000/yr is paid to the communities around the 'ZWILAG' facility.

In addition to these examples from the nuclear field, information was presented on the use of benefits in other areas.

Wind Farms

This information was based on a review of the benefits that have been offered or accrued to local communities to encourage acceptance of wind energy projects, carried out by the Centre for Sustainable Energy in the UK. This compared the situation in Denmark, Germany, Ireland, Spain and the United Kingdom [12]. It examined what were considered to be 'benefits' that might be made available or be the result of development. These can be summarised as follows:

- Jobs and local taxes are seen as major incentives.
- National and regional benefits do demonstrably accrue from wind farm developments.
- Except in the case of the UK, benefits are built in to the fabric of wind power development in those countries where extensive deployment exists.
- Local ownership, or at least share ownership, is an important feature



ITER (International Thermonuclear Experimental Reactor)

ITER is the international fusion experiment, currently under development at the CEA facility in Cadarache, France. Negotiations with a number of potential siting regions/countries began in 2001, with Cadarache being chosen in 2005. A raft of benefits, both from the local community (to support the facility) and from the facility (in terms of local and regional development) was identified [13]. They were used during the negotiation process to put the case for siting the facility in the Provence-Alpes-Côte d'Azur (PACA) region of France.

The associated benefits can be summarised as follows:

- From the State/community: increased housing stock for ITER staff; improvements to roads and construction infrastructure (~ €105 million);
- From ITER to community: Local spend; encouragement of local tendering; facility will attract numerous specialised contractors to the area; 1400-2500 jobs; total project spend of €100 million/yr during construction and €135 million/yr during operation; development of related research centres in universities etc.

Sullom Voe Oil Terminal (Scotland) [14] (original monetary amounts at 1975 values in £ unless stated; current values in € as of 2005)

The Sullom Voe Agreement, formalising arrangements between the then Zetland County Council and the companies wishing to pipe oil ashore from the North Sea in the 1970's, is a prime example of control over the progress of a project being placed under local management. This was unique at the time in the UK and required a special Act of Parliament so as to allow decisions to be controlled locally.

A private members Bill was promoted by the local MP which provided special powers to the local authority, now Shetland Islands Council (SIC), to compulsorily purchase large areas of land on the northern part of the Shetland Mainland. It also allowed the SIC to become the Harbour Authority, thereby allowing them to control movements of vessels and goods in and out of that part of the island. The Bill received little opposition on its passage through parliament.

Under the Agreement, the Sullom Voe Association Limited (SVA) was established in 1975 as a jointly-owned consortium of the Shetland Islands Council and the Brent and Ninian pipeline system partners in the North Sea. At the same time, in the knowledge of the agreements contained in the Bill and signed with the industry, SIC began £150 million investment in new housing, schools and around £90m on new harbour facilities.

In addition to gaining control of development issues through the Act of Parliament, SIC negotiated a number of income streams from the industry:

- The Harbour Authority Reserve Fund (currently stands at ~€86 million)
- The Repairs and Renewals Fund (currently stands at ~€90 million)
- The Capital Fund (currently stands at €104 million)
- All money is from the oil industry to SIC and is operated for local benefit



The Agreement came to an end in 2000, by which time some £81 million had been received in total, which had, through investment over the years, allowed around €300 million to be distributed, while some €180 million is still available.

5.2. Success or otherwise of legalistic compensation schemes

The intention of this Topic Area was initially to examine examples of where compensation schemes for siting contentious facilities or for community regeneration have been enshrined in law, and to assess whether the approach was successful or not in encouraging participation or assisting improvements in community wellbeing, with special reference to the UK. The output of this study was to develop a bulleted summary for use in a presentation.

As work began on this Topic, a slight change in approach was made; comments regarding success or otherwise of the legally mandated benefit schemes for communities surrounding radioactive waste facilities have been included as part of the background information used in assembling the presentations associated with Topic Area 4.1 (above).

These schemes include the following overseas repository siting programmes:

- **Canada** (L/ILW); the benefits enshrined in the Kincardine Agreement were developed in conjunction with the local communities and were instrumental in gaining community acceptance. *-Successful*
- **France** (HLW); The benefits and support to the communities around the existing URL and proposed repository were laid down in the 1991 and 2006 Waste Acts. *-Successful*
- **Slovenia** (L/ILW); The 2003 Compensation Law caused intense competition between a number of potential host communities, with problems about who was able to receive what and in what amounts. A 2009 amendment has greatly increased the monies available and appears to have assisted in the final siting decision. The amounts were linked to the price of electricity production, and when this rose significantly over a short period, the amounts available grew astronomically, leading to serious arguments over benefits management amongst local stakeholders, although a site has been identified. *-Successful*
- **South Korea** (L/ILW); the benefits were clearly defined in the 2006 Siting Act prior to referenda in the three final candidate sites. The selected site community voted in favour by over 85%. *-Successful*
- **Spain**; A 1998 legal instrument provides a complex algorithm for calculating payments to communities around nuclear facilities. An additional package of benefits has been developed to encourage communities to volunteer to host a spent fuel storage facility, but none has yet come forward. *-Unsuccessful to date*
- **US** (HLW/spent fuel); The 1987 Nuclear Waste Policy Amendment Act laid down a major package of benefits that would be available to the State of Nevada and affected communities when the Yucca Mountain facility began operation. The State never agreed to the site designation and would not



discuss the benefits. Several local county administrations were prepared to accept, but facility development was discontinued in 2009. -*Unsuccessful*

In addition to these examples various community regeneration schemes are available to former Coalfield Communities in the UK and provision of funds through provisions in the UK planning legislation.

As regards sources of funding that exist to help communities blighted by activities associated with the extractive industries, the following funds are in existence.

- **The Aggregates Levy Sustainability Fund** – this aims to reduce the environmental impacts of the extraction of aggregates and to deliver benefits to areas subject to these impacts. Funding is allocated to projects that meet the objectives of the Fund through nine national delivery partners and eighteen local authorities. Since its inception in 2002 the Fund has supported over 2000 projects across a wide range, from the purchase of large pieces of machinery to the recycling of demolition waste, from habitat mapping of the eastern English Channel to the upgrading of play areas and village halls in communities affected by quarrying [15].
- **The Landfill Community Fund** – this was set up in 1996 to allow landfill operators to donate funds towards local community and environmental projects. Its primary aim was as a means to reduce the amount of landfilled waste and to promote a shift to more environmentally sustainable methods of waste management. There are restrictions on the type of projects schemes can fund; mostly schemes involve restoration or refurbishment of existing buildings or habitats.

Other sources of funding exist to help communities blighted by past activities, in particular those where coal mining has ceased. These include:

- **The Coalfields Regeneration Trust (CRT)** – this is a charitable grant-giving body, established in September 1999 to support community initiatives in coalfield areas. It is independent of both central and local government, and was given around €75 million to disburse over its first three years of operation and received almost €75 million more from government for the period March 2008 - March 2011. The types of project included in its portfolio include one-stop advice shops, credit unions, lifelong learning schemes, community enterprises, help for ex-miners in returning to the labour market and environmental improvements [16].
- **The Coalfields Enterprise Fund** – this is a commercial venture capital fund set up to support the growth of businesses and encourage entrepreneurship in England's former coalfields. The Fund is intended to bring over €25 million of new investment into these areas and finance new-start companies, established businesses seeking to expand, acquisitions and mergers, and buy-outs/buy-ins. In addition to finance, the Fund offers a broad range of support and guidance in assisting companies with their strategic, market and operational development, and generally in achieving their potential.

- **The National Coalfields Programme** – this assists former coalfield communities across England by creating new employment, homes, leisure facilities and public space [17]. The National Coalfields Programme is on course to create:
 - New uses for around 4,550 ha of former coalfield land
 - 42,000 new jobs
 - 2 million square metres of commercial floor space
 - 8,000 new homes
 - Over €1 billion of private-sector investment and

It was clear from the discussions during the UK NSG meeting, where details of these funds were presented, that they were of interest to the participants and, in many cases, provided information hitherto not available to them. Their responses to the issues raised illustrated that there appears to be little experience in the UK with the use of comprehensive benefit packages similar to those outlined, other than through the use of various planning instruments (see below) and the regeneration funds listed above. Indeed, the ongoing development of the Managing Radioactive Waste Safely Community Benefit Framework, as discussed in Section 5.3, illustrates that there remains much to be done in this regard in the UK.

As highlighted by the discussions in the UK NSG meeting and subsequent examination of available information, several mechanisms exist in the UK whereby communities may receive support in relation to facility development [10, 11].

- **The Energy Act 2004** – This requires the NDA to consider the socio-economic impacts of its activities (in particular decommissioning) on local communities and gives it a function of giving ‘*encouragement and other support to activities that benefit the social or economic life of communities*’ living near NDA sites. In addition, the Act gives the NDA the ‘*power to make grants or loans to persons undertaking activities that benefit the social or economic life of communities*’ near NDA sites.
- **The Town and Country Planning Act 1990** – Section 106 provides that a developer may enter into a ‘*planning obligation*’ enforceable by the local planning authority. Planning obligations are private agreements negotiated between planning authorities and the developer that can include a commitment on the part of the developer to make payments to the authority for unspecified purposes.

In addition, the Planning Act (2009) includes provision for what is referred to as the Community Infrastructure Levy which will enable local planning authorities to charge developers a fee for contribution to necessary improvements in local services that may be required in association with a major development. The proceeds of the levy must be spent on local and sub-regional infrastructure to support the development of the area and the local authority must be able to provide matched funding.

A recent example of the use of the joint capabilities under the 1990 and 2004 legislation has been the Section 106 Agreement with respect to development of Vault 9 at the Low Level Waste Repository (LLWR) near the village of Drigg in Cumbria [18]. Following



extensive negotiations with the local planning authorities, the UK Government and the NDA agreed to the establishment of a fund in recognition of the contribution that the local community will provide to the nation by continuing to host the LLWR. Vault 9 is an extension of a facility that has been in operation since 1959, but the fund only refers to this extension.

The NDA agreed to contribute approx €10 million to the fund to be paid in two stages, (50% when planning permission was granted and 50% in late 2009), plus around €1.5 million per year, for the period of operation of Vault 9 (expected to be around 10 years). This only concerns the use of the vault for storage, and further discussions will be necessary should an application be made to dispose of the emplaced wastes. The income or capital from the fund will be available to be spent on initiatives that are consistent with the NDA's socio-economic policy. These can include employment, education and skills, economic and social infrastructure and economic diversification, and are thus equivalent to a number of the types of community benefit described in Section 3. Further details of the Fund management are provided in Section 5.4 below.

An agreement has also been reached to establish a similar fund in association with the proposed LLW disposal facility at Dounreay in northern Scotland. Local authority planning approval for the facility has included the condition that such a fund be developed. The 'Caithness and North Sutherland Fund' will receive an initial payment of approx. €1 million when facility construction begins (currently planned for 2011 but still under negotiation) with instalments of around €300K per year as soon as the facility becomes operational (currently expected to be 2014), until closure in 2025. The total value of the Fund could therefore be around €4 million. A management board has yet to be appointed [19].

The community benefits described earlier in respect of wind farm development in the UK can also be negotiated as Section 106 Agreements, but the scale of the payments tends to be much less than those in west Cumbria and Caithness and are paid by the facility developer rather than the national government (through the NDA). In many cases they have only been provided as 'good will' payments outside the planning process, and as such are also open to much debate, and some community organisations have suggested that they are far too small in comparison with the profits available to wind farm developers [20]. Other examples of benefits paid to communities impacted by other activities have been described by the NDA, including payments to communities around airports, to communities bordering road schemes by the Highways Agency and to communities that will be impacted by developments associated with the 2012 Olympics in London [11].

5.3. Development of involvement and support packages (higher-activity radioactive wastes current siting process) in the UK (contribution from Westlakes Scientific Consulting Ltd)

The Managing Radioactive Waste Safely (MRWS) process in the UK is an ongoing programme for the management of higher-activity radioactive wastes. This text provides a brief overview of how the issue of Community Benefits has been developed within the context of the MRWS site selection process. Given the fact that this process is still active, it is only possible here to illustrate the expected methodology as envisaged in 2009. The final outcome may be different depending on events.

MRWS began in 2001 following earlier attempts in the 1990s to identify a site for a deep geological repository for intermediate level wastes. The earlier work culminated in a public inquiry in 1995/6, following which permission to develop a Rock Characterisation facility at a site adjacent to the Sellafield complex in west Cumbria was refused by government.

As part of MRWS, the independent Committee on Radioactive Waste Management (CoRWM) was established to determine the most suitable management options for all UK higher activity radioactive wastes. In order to fulfil this task, CoRWM undertook a wide ranging public and stakeholder engagement programme, involving local communities, NGOs and technical experts.

CoRWM published its final report and recommendations to government in July 2006 [21], and proposed that a siting process based on voluntarism should be implemented in order to identify a site for a deep geological repository, which was identified as the best available technical solution, following a period of robust interim surface storage.

Regarding the issue of Community Benefits, CoRWM specifically recommended the following [21]:

***‘Recommendation 11:** Willingness to participate should be supported by the provision of community packages that are designed both to facilitate participation in the short term and to ensure that a radioactive waste facility is acceptable to the host community in the long term. Participation should be based on the expectation that the well-being of the community will be enhanced.*

In the light of overseas experience CoRWM has concluded that communities are unlikely to come forward or agree to engage unless a comprehensive Involvement Package will be provided, which will, in turn, allow the negotiation of a Community Package. The scale and scope of the funding will need to be determined nationally and agreed beforehand in discussion with relevant parties. For the process to be fair, a local community hosting a facility should be better off after siting than before. This reflects and acknowledges the service that is being provided for society at large.’

This was further specifically explained in the specific CoRWM recommendations on Benefit Packages [21. p136-137]:

'12. On the basis of its investigations, CoRWM has concluded that communities are unlikely to come forward or agree to engage unless a comprehensive Involvement Package is provided, which will, in turn, allows the negotiation of a Community Package. The Involvement Package must provide the necessary resources to enable participation. CoRWM therefore concludes that the agreement of an Involvement Package should be regarded as a condition of proceeding with the partnership.

13. In developing Involvement Packages it is important to demonstrate that all communities are on an equal footing and that certain areas or regions are in no way being targeted because of their relative economic status.

14. An Involvement Package should contain enough support for the potential host communities during the site selection process to ensure that they have the necessary resources to be involved in a meaningful and effective manner. This should include the ability of the Partnership to engage effectively with the community and to obtain independent advice and review of the proposals made by the implementing body.

15. For the process to be fair, a local community hosting a facility should be better off after siting than before. This reflects and acknowledges the service that is being provided for society at large. A fair outcome requires, therefore, the local community's agreement on an acceptable Community Package. Research suggests that communities rarely regard monetary incentives alone as a means of offsetting the loss imposed by a newly sited facility where a potential hazard is posed.

16. Provision should therefore be made for the negotiation of a Community Package to support the well-being of the community in the short and long-term and it must take into account the well-being of future generations as well as that of the present.

17. International research shows that it is important that the host community has a sense of ownership of the facility that will be built and is therefore involved as early as practicable in the generic technical aspects of the design. CoRWM therefore concludes that representatives of the potential host communities should be involved in determining both the broad technical aspects of the proposed facility as well as the socio-economic aspects aimed at ensuring the well being of the community.

18. While the scale and scope of the funding to support the implementation process will need to be determined nationally in discussion with relevant parties, it is important that the Partnerships have the ability to determine how they make use of the resources included in the Involvement and Community Packages. They should have the freedom to determine the work programme, and the distribution of funds for the range of purposes agreed. It follows that the budget for the Involvement Package should be agreed with the relevant funding organisation before communities are invited to become involved. It must be accepted that safeguards will need to be incorporated into the process to avoid the misuse of funds'.

Following the recommendations of CoRWM, Government responded, prior to proceeding with development of the framework for the implementation stage of the MRWS programme. Regarding the community involvement and benefit aspects (Recommendation 11), the response was open and non-prescriptive:

“In developing this framework we will consider such matters as: What could be included in any possible participation and benefits packages, and when and how they would be defined and how we determine whether they are likely to be affordable or good value for money.”

In essence, and in the spirit of “not seeking to impose,” in responding to CoRWM on the issue of community benefits, the Government followed the approach to community issues that appears throughout the MRWS programme, that they not be prescriptive, but rather be tailored to the individual circumstances of different volunteer communities.

Following, and based upon, the government response to the CoRWM recommendations, and appropriate consultation, the draft framework for implementation was developed, to become the eventual MRWS White Paper, published in June 2008 [22] outlining how government proposed to take the MRWS programme forward in the light of CoRWM’s recommendations. A staged-decision making process will be followed, based on the voluntarist approach recommended by CoRWM and illustrated in Figure 1.

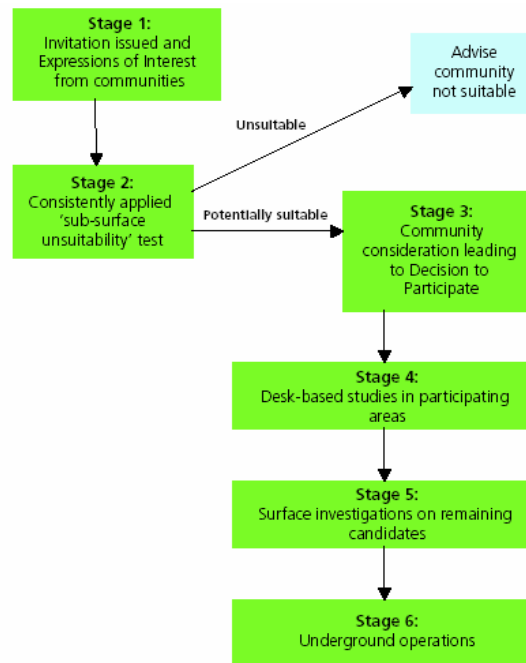


Figure 1. The UK site selection process [from 22].

As an important part of this staged process, the White Paper indicated that following a Decision to Participate (Stage 3 in Figure 1), the site selection process and in particular the development of the facility, will require considerable engagement with

communities. Government therefore favours development of a Community Siting Partnership (CSP). According to government, the mission of a CSP is to ensure that:

‘ all the questions and concerns of potential Host Communities within its area and its Wider Local Interests about the geological disposal facility siting, construction, operation, closure and post-closure are addressed and resolved as far as reasonably practicable; and that the project contributes to a community’s development and well-being’ [22].

The White Paper, as discussed, incorporates the CoRWM recommendations regarding Community Engagement and Benefit Packages which, along with most community issues in the White Paper, is not detailed in a prescriptive manner but rather it is left open to be negotiated at a later stage.

Indeed, the MRWS concept of Community Engagement and Benefit Packages centres on negotiations between potential Host Communities and Government [22]:

‘6.60 Government does not believe it sensible to specify at this stage what specific mechanisms could be used, or to define the level or nature of benefits. Government remains open-minded, believing that any Benefits Packages should be developed between communities, the Government and NDA as discussions progress, taking into account local needs, affordability and value for money considerations.

6.61 As potential host communities and Community Siting Partnerships work with the NDA and Government they should begin a dialogue about the local needs arising from hosting a geological disposal facility. Final agreement on a package that delivers appropriate investment in the Host Community may take time, and possibly some years, as the precise nature and means of delivery of the geological disposal facility becomes clearer’.

Whilst it is the case that Community Benefits in the White Paper are a matter for negotiation between the specific Host Community and Government, the White Paper does make suggestions regarding the nature and objectives of any Benefits Package. The first such suggestion regarding the nature of benefits associated with geological disposal is that *“hosting a geological disposal facility is likely to bring significant economic benefits to a community in terms of employment and infrastructure, maintained over a long period.”* This suggests that any benefits to the Host Community should be incorporated into the construction phase, through mechanisms such as the local supply chain and employment of the local population etc. This is in agreement with discussions at the NSG3 meeting in the UK in September 2008, where the stakeholders questioned how the construction of a facility could deliver benefit to the Host Community, asking *“how can the facility itself be sited to benefit the community, rather than relying on benefits packages?”*

Regarding the objectives of any benefits, the White Paper states that, while Government does not wish to “pre-judge” what any benefits may be, the objectives of a benefits package *could* be [22]:

- *Improved local training/skills development/education investment*
- *Increased business for local service industries*
- *Improved public services/infrastructure/housing/ recreational facilities*
- *Improved transport infrastructure*
- *Better local healthcare to meet the increased needs of the community*
- *Local environmental improvement*

At the present time there is no clear Framework for development of Community Benefits within the MRWS process. This will, as already suggested, be open to negotiation with the Host Community. This follows the comments in the White Paper: *'6.60 Government does not believe it sensible to specify at this stage what specific mechanisms could be used, or to define the level or nature of benefits. Government remains open-minded, believing that any Benefits Packages should be developed between communities, the Government and NDA as discussions progress, taking into account local needs, affordability and value for money considerations.'*

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This suggests that, indeed, negotiation is the route to agreement on any benefits. This allows any package to be tailored to the specific conditions existing in the Host Community at the time of construction. Any potential community will have any range of variant social, economic and environmental issues which could be addressed by a Benefits Package. Leaving the nature of these benefits open at this stage will allow the ultimate package to be uniquely tailored to delivering the best results for the greatest value.

CoRWM recommended that any community agreeing to participate should receive support for this prior to negotiation of any potential benefit package. The UK Government agreed with this and included the proposal in the White Paper:

'Communities that have taken a decision to declare an Expression of Interest and subsequently a Decision to Participate will incur costs in considering the issues and in setting up and operating a Community Siting Partnership. Government will assist communities in either partly or wholly meeting these costs through the provision of an Engagement Package. The level, coverage and the point at which funding is available, will be considered as part of the initial discussions between the community and Government' [22].

The discussions at the NSG4 meeting in the UK in March 2009 identified this point in the context of Community Engagement Packages, questioning to what extent communities should be engaged in the process, with reference to their pre-existing



characteristics. West Cumbria, for example, is a special case due to a high level of existing knowledge of nuclear and related issues in the local population. Engagement of this specific community could be of a different character to a ‘non-nuclear community.’ This is not to suggest that the West Cumbrian community does not require extensive and legitimate consultation, but that the ‘shape’ of engagement will change depending on pre-existing community conditions.

This dialogue would be between Government, NDA (the delivery organisation), the Partnership and the Local Decision Making Body (Local Authority). This would therefore have to take place after a Decision to Participate had been made as that is when a Partnership is formed. This is despite the fact that Copeland Borough Council and Allerdale Borough Council formed the West Cumbria MRWS Partnership to support the community decision to participate in 2008. Cumbria County Council subsequently joined in 2009.

Discussion at the NSG4 meeting identified the MRWS Partnership as a body that has no basis in the White Paper; however, it was felt that some structure was needed to take forward the move from an Expression of Interest to a Decision to Participate, which this provides for Copeland and Allerdale Borough Councils and Cumbria County Council. The Partnership is being funded by Government through the engagement package and is currently undertaking a public consultation exercise.

In this respect, it could be argued that dialogue surrounding geological disposal, including benefit and engagement packages, is already underway, even though by the letter of the White Paper these discussions do not gain full momentum until a Decision to Participate has been made.

Although not detailed here, an issue of consequence regarding the development and implementation of Community Benefit Packages in the context of MRWS site selection process in the future is that of community identification. This is explored further in another CIP Theme 1 MTF Brief [1].

5.4. Community Fund Management

Following a request from the NSG in Slovenia, a presentation was developed for their final meeting in October 2009 outlining the ways in which Community Funds resulting from various benefit schemes are managed in different countries. Those selected were Canada, France, Sweden and the UK.

The four countries were chosen as they represent a range of local control in terms of expenditure.

Canada

The Kincardine Agreement was signed in 2004 between Ontario Power Generation and Kincardine plus the three adjacent municipalities associated with development of a deep geological repository for ILW.

The Agreement mandates lump sum payments of €690,000 to Kincardine and €470,000 split proportionally between the other municipalities, plus additional annual payments of €400,000 and €250,000 respectively until facility closure around 2034.

There are no controls on expenditure, with the monies passing straight into local authority accounts and can be used for whatever purpose is decided.

France

Public Interest Groups (GIPs) were established in both Meuse and Haute-Marne Départements in 2000 under arrangements specified in the 1991 Waste Law, to manage funds paid in association with the siting of the Bure underground laboratory.

A management board has been appointed which supervises the allocation of funds according to a calculation per head of population amongst local communities within a 10km radius (this averages €400 per inhabitant).

Until 2005, up to €10 million/year was available for local projects. This increased to €20 million from 2007 from two new taxes under the 2006 Waste Law. EDF, AREVA and CEA have contributed an additional €150 million since 2005 for other related activities.

The objectives of the GIPs are:

- To assist the implementation and operation of the underground laboratory
- To perform any regional or economic development actions, particularly in the “proximity zone” of the underground laboratory or of the disposal facility (currently a radius of 10km around the laboratory; the so-called 250km² transposition zone reduces to 30km² from end-2009)
- To support training initiatives as well as actions relating to business development

The GIP Management Board consists of a range of local and regional representatives:

- **President:** President of General Council (Département)
- **Director**
- **Governing Board** members serve 3 year terms:
 - President of Governing Board (President of General Council)
 - Representatives of State/Government (Prefect)
 - President of regional council
 - Representative of 15 local town Mayors (10km radius)
 - Representatives of ANDRA
 - Representatives of EDF
 - Two department councillors designated by general meeting
 - Representative of “Pays Barrois” (community of municipalities within proximity zone, Law of 2006)
 - Representative of “Haut Val de Meuse” (community of communes within proximity zone, Law of 2006)

In addition, there is an Executive Committee comprising:

- President of Governing Board (casting vote)
- Representative of the State (1 vote)
- Representatives of General Council of Meuse and Haute-Marne (1 vote for each representative)
- Representative of Community of municipalities (1 vote)

There are also six permanent employees.

As regards the allocation of the funds to approved projects, the Board:

- Approves new membership
- Approves budgets
- Updates the development programme and approves possible amendments
- Deliberates upon reports concerning the administration of the Governing Board
- Approves financial accounts, financial and staff rules, etc.

The Executive Committee:

- Processes and prepares grant applications
- Has a limit of delegation: €40,000

Funds are allocated according to a set of strict guidelines. Project areas covered (community must supply 20% of total cost) include:

- Promoting economic development and employment
 - Sustainable Development
 - Alternative energy sources
- Improvements to local infrastructure
 - Roads
 - Water supply
 - Schools
- Strengthening of partnerships with industrial organisations
 - Assistance to local metallurgical companies

Sweden

In March 2009 the Swedish waste management organisation, SKB, announced a scheme to provide funds for infrastructure and other 'value added' schemes in the two municipalities that were being considered as potential sites for a deep repository for spent fuel (Östhammar and Oskarshamn). The total fund value is €200 million, of which 20% must be spent before 2015.

In June 2009 SKB announced that the repository would be sited near Forsmark, in Östhammar Municipality. It also announced that while Östhammar would receive 25% of the Fund, the remaining 75% would be given to projects in Oskarshamn Municipality. This recognises the fact that Östhammar, as host community, will gain significant direct and spin-off benefits from the development and operation of the repository.

A Joint Management Board was established in September 2009 by formal Agreement between SKB and the two municipalities, consisting of 5 members:

- Chair of SKB Board
- Vice-chair of SKB Board
- SKB president
- Chair of Östhammar Municipal Board
- Chair of Oskarshamn Municipal Board

Both communities will establish local organisations to support the board.

A number of specific projects and activities were envisaged in the Agreement:

- Relocation of the SKB head office (in Östhammar)
- Development of a visitor centre (in Östhammar)
- Various infrastructure improvements (e.g. a new ferry terminal in Oskarshamn)
- Support for local industries (surety up to €5 million)
- Support for new innovative industries to apply SKB knowledge
- Education in energy-related fields

Projects are to be funded according to their ‘*added value*’ to the community.

UK

As discussed above in Section 5.2, an agreement has been signed between the Nuclear Decommissioning Authority and local councils in West Cumbria in respect of the expansion of the national LLWR near the village of Drigg.

The Copeland Community Fund has been established into which £5 million was paid in 2008 when planning permission was granted for construction and £5 million in October 2009 when the first waste was placed in storage. £1.5 million will be added per year throughout the operation of the new facility, with £50,000 per year allocated to the immediate host community in the village of Drigg. In order to reduce tax liabilities, due to the nature of the Fund, monies are paid directly into local authority accounts according to a legal agreement between Cumbria County Council and NDA. As explained in Section 5.2, this is according to a so-called Section 106 Agreement under the Town and Country Planning Act (1990).

A Project Board was established in August 2008 by formal Agreement between NDA and the relevant local authorities in west Cumbria. There are seven members:

- Leader of Copeland Borough Council (host area)
- Leader of Opposition Party on Copeland Borough Council
- 2 members of Cumbria Country Council (host region)
- 1 member of Nuclear Decommissioning Authority (fund provider)
- 2 independent members (appointed after public invitation)

The objective of the Copeland Community Fund is to:

- make grants, loans or other payments
- carry on such other activities as all the Parties think fit ‘in accordance with the (NDA) Socio-Economic Policy but otherwise at the discretion

of the Project Board to assist in the provision of benefits to promote the social, economic and environmental well-being of the inhabitants and the area of the Borough of Copeland'

Likely projects to be supported are expected to include:

- employment,
- education and skills,
- economic and social infrastructure and
- economic diversification

These various fund management models formed the basis of small group discussions at the NSG meeting in Ljubljana, Slovenia in October 2009, following a presentation by Galson Sciences. These resulted in a series of possible ways forward for management of the funds that will be available to local communities around the Krsko NPP, following agreement to site a LLW repository close by. They will be passed on to the relevant authorities for their consideration.

6. COMMENTS

The information presented in this Brief clearly demonstrates that it is becoming commonplace for disposal facility siting processes to include a range of measures designed to encourage community participation. These can be financial, social and/or empowering. They are increasingly being designed as integrated development instruments intended to not only support a community during the initial stages and through facility operation, but also into the long-term, with special reference to the welfare of future generations. This supports the overall recognition in this Theme that 'Sustainable Territorial Development' is an essential component of any successful siting process.

There is a close link between successful and acceptable implementation of a community benefits package and the definition of 'affected community'. If this is too narrowly defined there is a risk that adjoining communities and 'transport' communities, through which any waste must pass to the final repository, will become alienated from the process and cause programmatic delays and difficulties through objections and other actions.

The application of rigid legal instruments to decide upon the scope, scale and purpose of benefits packages can be problematic in that they offer little scope for negotiation or adaptation to specific local needs and requirements and can result in gross inequalities between components of the affected population.

Experience from Slovenia, for example, illustrates the potential problems well. The legally mandated community benefits are linked to the price of electricity production, and when these rose significantly over a short period, the amounts of money available through the legislation grew astronomically, leading to serious arguments over benefits management amongst local stakeholders. However, review of other European practice has shown that other, less divisive schemes exist and are in the process of



implementation, in some cases leading to improved community coherence. For example, an alternative strategy has been adopted in Sweden where the ‘successful’ siting community will actually receive a smaller proportion of the overall benefits package compared to the community that was not chosen to host the facility. In this case both communities feel as if they have gained from the process.

Finally, in a growing number of examples, the participating community is becoming closely involved in development of the relevant benefit package through a process of negotiation, as is proposed in the UK. This is seen as an excellent way of involving the community in issues that directly effect its long-term development.

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