Jep Sea Mining Bill

Impact Assessment (IA)

Date: 06/08/2013
Stage: Final
Source of intervention: Domestic
Type of measure: Primary legislation
Contact for enquiries: Chris Whomersley, 0207 008 3284

Lead department or agency:
Foreign and Commonwealth Office

Other departments or agencies:
Department for Business, Innovation and Skills
Department for Environment, Fisheries and Agriculture

Summary: Intervention and Options

<table>
<thead>
<tr>
<th>Cost of Preferred (or more likely) Option</th>
<th>Total Net Present Value</th>
<th>Business Net Present Value</th>
<th>Net cost to business per year (FANCB on 2009 prices)</th>
<th>In scope of One-In, Two-Out?</th>
<th>Measure qualifies as Zero Net Cost</th>
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<tbody>
<tr>
<td>£m NA</td>
<td>£m NA</td>
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<td>Yes/No</td>
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What is the problem under consideration? Why is government intervention necessary?
The Deep Sea Mining (Temporary Provisions) Act 1981, regulates companies located in the UK wishing to mine mineral resources found on the deep seabed in international waters. Under the 1981 Act a UK-located company must first receive a licence from the UK Government before making an application to the International Seabed Authority (ISA). The ISA then approves or rejects the application. The 1981 Act was passed before UN Convention on the Law of the Sea, and the subsequent Implementing Agreement relating to deep sea mining, and it is not consistent. Recent ISA regulations were also adopted for exploration other minerals excluded from the 1981 Act. As a result, the UK Government would not be able to sponsor a company to exploit these minerals, placing them at a competitive disadvantage.

What are the policy objectives and the intended effects?
To bring the 1981 Act into alignment with the UNCLOS.

Amend the 1981 Act to fully reflect the changes to international regulations covering exploration for and exploitation of polymeric sulphides and cobalt-rich crusts. The intended effect is to provide a level playing field for UK companies to explore and exploit the deep seabed, furthering the Government’s Prosperity Agenda and promoting that the United Kingdom is open for business.

What policy options have been considered, including any alternatives to regulation? Please justify preferred option (further details in Evidence Base)
Option 1 ‘do nothing’ - We rejected option 1 on the basis that it has been overtaken by developments in international law but more importantly, the Act only covers polymeric nodules and not other minerals on the deep seabed and therefore means we would be unable to sponsor British companies to explore other minerals. This would put UK companies at a disadvantage compared to their international competitors.
Option 2 [preferred option] - ‘update primary legislation’ to cover exploration for and exploitation of a limited range of named minerals - we concluded that option 2 is the preferred option and extends existing legislation to cover polymeric sulphides and cobalt-rich crusts and better alignment to newly adopted international regulations. This would permit UK based companies to invest in the exploration and exploitation of these minerals if there is a commercial case to do so.
Option 3 ‘use secondary legislation’ - this option was rejected on the basis there are no available powers.

Will the policy be reviewed? Yes, once exploitation of the deep sea resources begins. If applicable, set review date: 2017 at the earliest

<table>
<thead>
<tr>
<th>Does implementation go beyond minimum EU requirements?</th>
<th>N/A</th>
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<tr>
<td>Are any of these organisations in scope? If Microsold exempted set out reason in Evidence Base.</td>
<td>Micro: Yes</td>
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<td>What is the CO₂ equivalent change in greenhouse gas emissions? (Million tonnes CO₂ equivalent)</td>
<td>Traded:</td>
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I have read the Impact Assessment and I am satisfied that (a) it represents a fair and reasonable view of the expected costs, benefits and impact of the policy, and (b) that the benefits justify the costs.
Signed by the responsible Minister:  

Date: 9/9/13
### Summary: Analysis & Evidence

**Policy Option 1**

**Description:**

**FULL ECONOMIC ASSESSMENT**

<table>
<thead>
<tr>
<th>Price Base Year</th>
<th>PV Base Year</th>
<th>Time Period Years</th>
<th>Net Benefit (Present Value (PV)) (£m)</th>
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<tr>
<th>COSTS (£m)</th>
<th>Total Transition (Constant Price) Years</th>
<th>Average Annual (excl. Transition) (Constant Price)</th>
<th>Total Cost (Present Value)</th>
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<td>High</td>
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<td>Best Estimate</td>
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**Description and scale of key monetised costs by ‘main affected groups’**

**Other key non-monetised costs by ‘main affected groups’**

Any mining activity is likely to have potential environmental costs. However there are several stages of environmental impact scrutiny at domestic and international level before mining could actually take place. The UK Government expects the highest environmental standards to be met and the relevant NGOs involved in the engagement in the development of the mining regulations. Costs to business include obtaining a licence and potential levies but these are not yet finalised. At present it costs US$500,000 to obtain a licence at the ISA but this is subject to change.

<table>
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<tr>
<th>BENEFITS (£m)</th>
<th>Total Transition (Constant Price) Years</th>
<th>Average Annual (excl. Transition) (Constant Price)</th>
<th>Total Benefit (Present Value)</th>
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<tr>
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<td>Best Estimate</td>
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**Description and scale of key monetised benefits by ‘main affected groups’**

Maximum of 5 lines

**Other key non-monetised benefits by ‘main affected groups’**

The amendments will allow UK companies to potentially access a new commercial opportunity. If mining takes place there are likely to be benefits to the UK from employment gains, corporation tax receipts, knowledge spillovers and shareholder profits, amongst others.

Enhanced ability to influence the future development of ISA regulatory frameworks for exploitation, including on environmental aspects. This may mitigate against some of the risk of environmental impacts from mining.

<table>
<thead>
<tr>
<th>Key assumptions/sensitivities/risks</th>
<th>Discount rate (%)</th>
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There is a risk to marine biodiversity but it is difficult to estimate what these environmental costs will be currently. However, to address this stringent environmental safeguards will be put in place. For example, the ISA regulations for exploration mean that a pilot scale mining phase will in itself require an Environmental Impact Assessment, prior to any full scale industrial mining and the monitoring of this will be the basis for evaluating environmental impacts and costs of full scale industrial mining. In addition, by sponsoring a company to apply for a licence at the ISA, it will allow the UK government to influence and improve environmental standards in mining at a global level.

**BUSINESS ASSESSMENT (Option 1)**

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<th>Direct impact on business (Equivalent Annual) £m:</th>
<th>In scope of OIOT?</th>
<th>Measure qualifies as</th>
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<td>Costs:</td>
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<td>Zero net cost</td>
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<tr>
<td>Benefits:</td>
<td></td>
<td></td>
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<tr>
<td>Net:</td>
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Evidence Base (for summary sheets)

Problem under consideration

- The United Nations Convention on the Law of the Sea (UNCLOS) provided for the establishment of the International Seabed Authority (ISA), which became fully operational in 1994. The ISA organises and controls all mineral-related activities in the international seabed area. This is the area beyond the limits of any national jurisdiction, in other words at least 200 nautical miles from the coast of any State. The ISA has developed regulations for the exploration of various mineral deposits and has subsequently issued licences to applicants for this activity. Applicants must be sponsored by a State party, which serves to ensure the State party is able to exercise national control over the company or organisation concerned. There is currently no commercial deep-sea mining (actual exploitation) in UK or international waters that has taken place so far.

- Existing legislation, the Deep Sea Mining (Temporary Provisions) Act 1981, regulates UK based companies wishing to explore for or exploit mineral resources found on the deep seabed. Under the 1981 Act a company must first receive a licence from the UK Government before making an application, sponsored by the Government, to the ISA. Government sponsorship is required by the ISA for all companies submitting an application. The ISA then approves or rejects the application and if they reject the application then the company will not be able to undertake the exploitation or exploration authorised in the UK Government licence. Earlier this year, HMG went through this procedure with UK Seabed Resource Ltd.

- The 1981 Act was however passed before procedures for dealing with deep seabed mining were codified in the UN Convention on the Law of the Sea. Whilst the then Government took the view that provisions of the 1981 Act were sufficient to enable us to ratify the Convention, there are some inconsistencies between the Convention and the 1981 Act. There are therefore a number of amendments to the 1981 Act which need to be made to make it fully fit with the provisions of the Convention. In particular the problem has been exacerbated in recent years because the Act only covers polymetallic nodules (potato sized rocks that cover much of the sea floor with the highest concentrations being found in the ocean between 4,000 and 6,000 m) whereas the ISA has recently implemented their regulations for dealing with exploration for polymetallic sulphides (deposits on the seafloor at 500-4000m) and cobalt-rich crusts (minerals on rock outcrops in water depths of 400 to 4,000 m). The result is that we could not sponsor an application by a British company to explore for polymetallic sulphides or cobalt-rich crusts, because the 1981 Act does not extend to them. This potentially means that UK based companies could be disadvantaged compared to companies in other countries; or would be forced to establish themselves in other regulatory regimes which may offer weaker social or environmental protection.

Rationale for Intervention

- There is increasing international interest in deep sea mining. The United Kingdom government sponsored an application by UK Seabed Resources Ltd at the ISA last July; and subsequently the company has submitted a further application for this year’s session. We may find that a company approaches us to ask for sponsorship of an application to explore for polymetallic sulphides or cobalt-rich crusts and as things stand we would have to turn them away. Changing the 1981 Act to prevent that happening would be more consonant with the prosperity and growth agendas.

- If we do not give the Secretary of State the power to issue licences then we may be creating a potential for regulatory failure. The amendments outlined in this impact assessment reduce the scope of Government regulatory control and therefore constitutes a deregulatory measure. The UK needs to ensure that our regulatory environment keeps pace with the technological developments and emerging opportunities in new mining ventures. Without licences UK companies would not legally be able to mine on the deep sea bed, which could put them at a disadvantage compared to their international competitors. For example the ISA has granted several licences for deep-sea exploration to companies sponsored by Russia, Japan, China, Belgium, Germany and France, amongst others. By having the ability to issue licences we would ensure that UK companies can be one of the first movers in this new industry and may allow us to build up a comparative advantage in deep-sea mining. This is because at present no commercial deep-sea mining (exploitation) activity has taken place in international waters.
UNCLOS provides that a sponsoring State has no liability in respect of the activities of companies sponsored by it, provided that it has exercised effective control. The UK can do this through the issue of licences under the 1981 Act as amended by this Bill.

In the absence of Government intervention, there remains a risk that we would lose potential business to other States who have already adopted the new international regulations covering other minerals.

There are currently other states that are applying for licences with the ISA. If the UK does not have the power to sponsor companies then it may diminish the influence that the UK has over international agreements on deep-sea mining. This would include the opportunity to influence global environmental standards affecting international waters that are being agreed by States at the International Seabed Authority council meetings.

Policy objective;

- To enhance the UK's existing deep sea mining regime by fully implementing the recent changes to newly adopted international regulations arising under the deep sea mining system, in particular the exploration and exploitation of additional minerals (polymetallic sulphides and cobalt-rich crusts) which were not previously available. This is to be achieved primarily by providing opportunity to competent commercial interests whose applications are approved by the ISA.

- To amend the existing legislation governing deep sea mining so that it is fully compatible with UNCLOS.

- To ensure the UK is able to exercise effective control and management over the company and as far as possible provide that a contractor shall carry out its activities in the area in conformity with the terms of its contract, its obligations under UNCLOS and any environmental safeguards, thereby avoiding any liability on the Government arising out of deep sea mining activities.

- To demonstrate the UK's support, both domestically and internationally for deep sea mining, undertaken in accordance with strict environmental standards, to further its Prosperity agenda and show it is open for business.

Description of options considered (including do nothing);

We considered three possible ways forward: i) Do nothing; ii) update primary legislation; iii) use secondary legislation.

We rejected i) on the basis that if the UK would be unable to sponsor an application from a British company to explore the range of minerals thus creating for British companies to be disadvantaged compared to their international competitors.

We are unable to use option iii), secondary legislation, as there are no powers to licence for the exploration and exploitation of any minerals in the deep seabed beyond national jurisdiction other than polymetallic nodules, which the 1981 Bill was limited to.

We therefore concluded that option ii) is the only option which provides the necessary powers, ensures consistency with internationally adopted regulation and opens emerging opportunities in new mining ventures.

In summary the measures of the Bill are:

- a provision to ensure that a licence is specific to a type of mineral such that different licencees could hold licences for the exploration or exploitation of different types of mineral in the same area;

- a provision to ensure that a licence for exploration or exploitation issued by the UK Government can only come into force when a corresponding licence is issued by the ISA;
- a provision to make compliance with UNCLOS and the rules of the ISA a condition of a licence granted by the UK Government;

- a measure to prevent the UK Government from offering a licence for the exploration and exploitation of the specific minerals in an area where the ISA has entered into contract with another company for exploration/exploitation of the said mineral;

- recognition of the authority of the decisions of the Seabed Disputes Chamber of the International Tribunal for the Law of the Sea (which was established under UNCLOS), and of the awards of an arbitrator, where that refers to the binding commercial arbitration provided for under UNCLOS;

- the removal of reference to a Deep Sea Mining Levy and a Deep Sea Mining Fund, which were meant to operate as a temporary measure until an international organisation dealing with deep sea mining had been established. Under Part XI of the UNCLOS, contractors make direct payments to the ISA once exploitation of mineral resources commences.

- restrictions on disclosure of information

In addition the Bill widens the scope of minerals for which an exploration or exploitation licence can be issued. The 1981 Act was limited to polymetallic nodules, which were the only mineral resource of the deep sea bed for which mining was considered potentially economically viable. Now that the ISA has issued Regulations for the exploration of polymetallic sulphides and for cobalt-rich crusts, and it is not inconceivable that regulations for other mineral types may issue in the future. Thus the Bill also includes a new, broader definition for what mineral resources may be subject to a licence, namely "a solid, liquid or gaseous mineral resource".

Territorial extent and devolution

The Bill applies to England and Wales, Scotland and Northern Ireland. There are no devolution issues for Wales and Northern Ireland. [The Scottish Government have agreed in principle to the Bill applying in Scotland - we should have a confirmed response next week on the Scottish position so we will finalise this section on receipt of that response].
rationale and evidence that justify the level of analysis used in the IA (proportionality approach); It has not been possible in this Impact Assessment to monetise any of the costs or benefits of the proposed amendments to the bill. At present there have been several licences issued by the ISA for the exploration of polymetallic nodules but no licences for exploitation. Therefore there is no precedent of what the exact costs and benefits of mining polymetallic sulphides and cobalt-rich crusts may be in the future.

In addition it is not clear exactly what would be mined, although the minerals contained on the deep sea bed with most economic interest include copper, nickel, zinc, gold, silver, cobalt and rare earth elements. The benefits of this change would allow UK companies to have potential access to these minerals. Ideally we would examine the benefits to the UK accruing from the licences granted, but this is not possible in this instance because of the uncertainty of what may be mined – if mining ever takes place at all.

It is also not possible to quantify the costs of this change. Much of the potential costs of this decision involve the environmental impact of allowing deep sea mining. As no mining has taken place in this environment before, there is no scientific consensus on exactly what the potential costs of allowing deep-sea mining may be. Also the environmental costs will also depend crucially on whether mining ever takes place, how much mining is undertaken, the method of extraction used and in which marine ecosystems mining takes place. These factors cannot be known at this time.

However ISA regulations for exploration are aiming to include a small scale phase, prior to full scale mining. This initial exploration and related monitoring would allow the ISA to evaluate the likely impacts and costs of full scale deep sea mining before awarding rights to mine to companies.

Monetised and non-monetised costs and benefits of each option

Option 1 – do nothing
Benefits:
The benefits of the do nothing option are that there is no risk that UK deep sea mining of polymetallic Sulphides and Cobalt-rich crusts would cause environmental damage in any form.
Costs:
The main cost of doing nothing is that it would not allow UK businesses the opportunity to potentially access this new source of minerals. Costs of not allowing licences to be issued to UK companies could include a loss of competitiveness against other overseas business that are given licences and a loss of strategic options for future work in this industry. This is on the assumption that other governments obtain and distribute licences for exploitation.

Option 2 – update primary legislation
Benefits:
As has been mentioned in the proportionality section, it is not possible to quantify all of the potential benefits that may occur from allowing UK businesses to access deep-sea mining opportunities in the future. At present no companies from any country have commercially mined the deep-sea and mining activity is not expected to occur before 2016. It is therefore extremely difficult to state exactly how large this new industry could be and what the benefits to UK businesses may be. It will depend on how many countries and companies participate, what minerals are mined, what quantities of those minerals are mined, the costs of mining compared to conventional sources and how valuable those minerals are. To give one example, a mineral that could be exploited is Cobalt. At present estimates suggest that there is 100 years supply of Cobalt deposits on land but this would increase to 200 to 300 years if deep-sea supplies are included (CDI research paper, 2011). The main minerals of economic interest that we would expect to find in crusts and polymetallic sulphides are manganese, nickel, copper, cobalt, iron, gold, zinc, silver and rare earth elements. An increase in available stocks of these types of minerals should increase competition in the global market, reduce the price faced by consumers and help ensure we have sufficient future supplies to satisfy rising global demand.
There is currently a lot of international interest in this new industry, as extraction technology has
advanced and mineral prices have risen, largely as a result of increases in demand. This increase in
demand, especially from emerging economies such as China and Russia, and reduction in cost from
technological improvements, has led companies around the world to consider the opportunities that
deep-sea mining may bring.

Changing the 1981 Act allows the Government to sponsor a bid and would therefore be consistent with
the UK’s prosperity and growth agenda and may even encourage a bid, by showing that the UK is keen
to pursue wider options in this market than are available in our current legal system. It is hard to know
how many British companies will benefit from this legislation because this is a new and emerging market.
However the UK, through the company we had sponsored at the ISA, received its first contract for
exploration of polymetallic nodules last year which was successful and another application was
submitted to the ISA this year. In theory the UK could sponsor more than one application at any given
time but even applying for two at a time is likely to raise protests from other sponsoring states at the ISA.
The ISA is keen not to allow one country to monopolise the seabed in international waters and has
established anti-monopoly provisions in its regulations. Since 1994 (the establishment of ISA), the
number of licences issued by the ISA to explore for minerals stands at 13 for polymetallic nodules (2
under review), 4 for polymetallic sulphides (1 under review) and 2 for cobalt rich-crusts (1 under review).
The ISA in July 2013 agreed to proceed with applications from China and Japan for cobalt-rich
manganese crusts.

Figures 1, 2 and 3 below outline the rise in World prices for nickel, copper and gold since 1990. These
minerals are found in cobalt-rich crusts or polymetallic sulphides and are some of the minerals that have
the greatest economic interest in deep-sea mining ventures. They are also representative of the general
increase in demand for a wide range of minerals, which has seen commodity prices rise sharply in the
period since 2000. Much of this price rise is as a result of increased demand from emerging economies
such as China and India. According to the United States Geological Survey, “China has advanced from
consuming less than 10% of the global market for metals to over 25% of the market in the past few years
and that trend is increasing; India is following on a similar path.” (USGS Pacific EEZ Minerals research
project, 2013). These price rises, coupled with technological advances, have lead to a large increase in
exploring deep-sea mining as an economically viable option in the last few years.

Figure 1: World Nickel prices 1990-2012, in 2005 US dollars

![Graph showing Nickel prices 1990-2012 in 2005 US dollars]

Source: World Bank GEM Commodity Database
If deep-sea mining were to take place, UK companies would be able to potentially exploit these and other economically profitable minerals. The amount of these minerals that can be mined in an economically viable way is not clear at the present time because of the lack of exploration that has been undertaken. However in the long term we would expect any significant increase in mineral supplies to lead to lower prices for consumers. Allowing companies to mine these new sources would increase the global reserves of the minerals and should ensure we have sufficient supplies to meet rising global demand for years to come. Hein et al (2013) estimate that there is more Manganese (a key element in crude steel production), Tellurium (a rare earth element used in alloys, solar cells and computer chips) and Cobalt available in deep-sea crusts than in the total global land-based reserves. An additional
UNCLASSIFIED

important consideration is that deep-sea mining could lead to a diversification in countries that supply any of these minerals. This should lead to an increase in global competition, ensure lower prices for consumers and ensures the global supply of certain minerals is not subject to individual countries' decisions on export restrictions. For example Price (2010) estimates that Congo produces 40% of global Cobalt, South Africa produces 79% of global Platinum and China produces 97% of global rare earth elements. Rare earth elements are an essential component of emerging and next generation high-tech and green technologies (Hein et al, 2013). It is important to note that compared to our "do nothing" option, allowing British companies to explore and exploit deep-sea minerals will probably have a limited impact upon total global mineral supply increases. This is because even if a UK company could not obtain a contract from the ISA for exploitation due to our legal restrictions, then it is likely that another company from abroad would take that contract opportunity instead and there is ultimately a fixed supply of deep-sea areas to mine. Our regulatory amendments in this bill will, in all likelihood not increase global mineral supplies compared to the counterfactual. However they would allow a UK company to contribute to the mineral supply increase and the subsequent benefits, if mining were to take place and UK companies had been awarded a contract for doing so.

There is currently a lot of interest from companies in extending the potential commercial opportunities available from polymetallic Nodules to polymetallic sulphides and cobalt-rich crusts. Although we cannot be certain of exactly how valuable this new industry may be for UK businesses, we should not have a regulatory environment that prevents UK companies from having the option to access these new opportunities in the future. This is especially pertinent given the many applications that are being received by the ISA from organisations in Russia, Japan, China, Belgium, Germany and France, amongst others.

Some of the potential benefits for the UK economy, if mining were to take place in the future, could include:

- The additional corporate tax received from UK listed companies who are engaged in this industry.
- Employment rents from those who have been employed as a result of the new industry, minus displacement of existing employment.
- Additional UK shareholder profits from companies involved in this new industry. This includes additional business brought to companies in the wider mining industry and in the relevant supply chains.
- Spillover benefits to the UK from knowledge transfers from this new industry. This could include spillovers to academia, the supply chain and other related industrial activities.
- An increase in global mineral supplies should lead to a reduction in prices faced by consumers.
- Accessing new sources of minerals should ensure that there is sufficient supply to satisfy rising global demand for these elements.
- There may be first mover advantage from being involved now rather than delaying till later, when the industry may be more mature. This may well increase the benefits to UK companies and could potentially allow us to build up a comparative advantage in deep-sea mining.
- The UK would be at the forefront of the nascent seabed mineral industry and would have the opportunity to influence global environmental, royalty and mineral rights issues affecting the industry.

As this amendment is offering a commercial opportunity, it therefore represents a permissive measure. Although we cannot quantify the costs and benefits to UK businesses in this instance, it is reasonable to expect that business will only adopt these changes where they lead to net benefits for business.

Costs:

The key area where costs potentially arise if opportunities for deep-sea mining are extended to cobalt rich crusts and polymetallic sulphides is the impact upon the marine environment. This potential cost cannot be quantified in this instance because it would depend on whether mining ever takes place and how much mining was undertaken, as well as what technology is utilised. There is a lack of any scientific consensus on the potential environmental impact of deep sea mining because it has not been
done before on the scales envisaged nor in such a deep water environment. However, future technology improvements may well reduce the potential environmental impact of deep-sea mining.

Very little is known about deep-sea habitats in general because of the degree of difficulty associated with studying these areas. For example, Steffen (2011) estimates that "only 0.0001% of the deep seafloor has been subject to biological investigations". From the areas that have been studied, deep-sea ecosystems are recognised to be fairly unique in nature, contain a wide variety of biodiversity and are currently rarely disturbed by human contact. Species at these depths tend to be very slow growing and may be unique to their environment, meaning they are vulnerable to any disturbances and are at greater risk of extinction (Greenpeace, 2013). The slow growth exhibited by species in the deep-sea also increases the potential time horizons involved in any recovery of ecosystems after industrial activity has taken place.

Specific risks will differ by the type of mining and the environment in question. For example, many of the proposed mining methods for Polymetallic Sulfides involve removing all or portions of hydrothermal vents, which will have an impact upon the unique marine ecosystems that exist in and around those vents. There are potential environmental risks associated with mining in deep-sea ventures, including pollution, accidental discharges and the impacts of the machinery, noise and light of the mining itself upon the local environment (Morgan, 2011). Technological developments may mitigate environmental risk, however this also remains an uncertainty until technologies for deep sea mineral extraction are further developed.

The UK Government has made it clear that deep-sea mining companies should comply with the highest environmental standards. We have also urged the ISA that relevant stakeholders, such as NGOs, should be fully involved in the stakeholder engagement process that they undertake.

This Bill grants the Secretary of State for Business, Innovation and Skills only the power to award licences. It does not guarantee that licences will be awarded and any application will have to undergo environmental impacts scrutiny before any licence would be granted. There is an additional round of environmental impact assessments at the ISA stage, once the UK government sponsors a UK company. The current ISA regulations for exploration envisage a pilot scale mining phase (that would itself require an Environmental Impact Assessment) prior to full scale industrial mining and monitoring of that would be the basis for evaluating the likely environmental impacts and costs of full scale industrial mining. The information gathered will be used to assess the costs and benefits of granting a licence for full scale mining. A licence would not be issued if the EIA raised significant concerns about environmental standards not being met. By sponsoring a company to apply for a licence at the ISA, it will also allow the UK government the opportunity to influence and improve environmental standards in mining at the global level through the ISA. All of these steps should ensure that the environmental impacts of deep-sea mining are minimised. In addition the environmental impact of mining these minerals in the deep-sea needs to be counter-balanced against the environmental impact of conventional land-based mining, which is not subject to the same level of international agreement on regulations.

The costs to UK businesses would largely revolve around obtaining the licence to mine and any costs associated with complying with reporting and transparency initiatives, as well as familiarisation costs with the new regulatory system. It is not clear exactly what these new licences may cost at this time, although a licence application with the ISA currently costs US$500,000, for example. In addition to this initial fee, the ISA is currently proposing to charge an overhead annual fee of $47,000 to contractors. It is also not clear yet how the system may work in terms of royalties or levies if exploitation should take place in the future. However any costs are likely to be heavily outweighed by the benefits to UK businesses. Ultimately UK businesses will only apply for a licence if they firmly believe that their private benefits will outweigh the costs of a licence that they would incur. This would therefore constitute a "Permissive Change". Regulatory changes are permissive in nature where they allow, but do not force, businesses to do something. If there is a reasonable expectation that business will only adopt these changes where they lead to net benefits for business, it can be assumed that the benefits are at least equal to costs, even if it is not proportionate or possible to quantify or monetise the benefits. Ultimately this amendment to the bill offers UK businesses access to a commercial opportunity and they will only apply for a licence if they believe it is economically viable to do so.

There will be some costs to government associated with assessing bids and issuing licences. In particular there will be technical and legal expertise that is required to assess the validity of the bids and the environmental assessments. The scale of these costs cannot be ascertained at the present time.
because it would depend on how many licences are received, over what time scales and how complex they are to assess. However we do not expect these costs to be large relative to the commercial opportunities available.

The risk to the environment mentioned above will be minimised by our insistence that any company whom we sponsor will comply with the highest environmental standards and by engaging closely with all stakeholders.

Option 3 – use secondary legislation

This option was rejected on the basis there are no available powers. It would not be possible to achieve the desired policy outcomes with secondary legislation.

Wider impacts

- The Bill does not raise any incompatibility issues in relation to the European Convention on Human Rights - There are two rights that could potentially be engaged by the provisions of this bill. The first is Article 6 ECHR, flowing from decisions to revoke a licence, and the second is Article 1 Protocol 1 to the ECHR in relation to peaceful enjoyment of possessions.

In respect of Article 6, a decision to revoke a licence probably involves the “determination of civil rights and obligations” for the purposes of this article. However the availability of judicial review to challenge such a decision is deemed sufficient to ensure there is compliance with Article 6. In respect of Article 1 Protocol 1, the Bill will not restrict the use of property or infringe on the peaceful enjoyment of possessions. Rather, it will open up opportunities for property to be acquired. To the extent that that a licence can be regarded as a possession for the purposes of Article 1 Protocol 1, there are provisions which allow revocation in the Bill, so a licence holder only has an expectation that the licence will not be revoked otherwise than in accordance with those provisions.

- Environmental pollution – this is outlined in the costs section of option 2 and risks and assumptions below.

Risks and assumptions;

- The main risk of this amendment is the potential for impacts upon the environment if mining is allowed to take place. However, as outlined in option 2, there are several stages of environmental scrutiny that would be undertaken by both HMG and the ISA before any exploration or exploitation would occur in these new areas. No licences would be ultimately awarded by the ISA unless the company is able to demonstrate that they have sufficiently taken environmental and sustainability issues into consideration when undertaking their commercial activities.

Summary and preferred option with description of implementation plan

The conclusion of the impact assessment is that the Bill will have no additional net negative impacts upon business or government. It will enable business to exploit opportunities which would otherwise not be available, namely the possibility of exploring for and of subsequently exploiting mineral resources of the deep seabed which are not currently covered by the 1981 Act. This is also a permissive change, in that businesses will only apply for a licence if they believe that the benefits to their business outweigh the costs that they will incur.