

Required data	<ul style="list-style-type: none"> • Hazard maps covering the NBS site showing the hydro-meteorological hazard(s) as a function of return period before and after the NBS is introduced. Typically this will be in the form of raster of shape files in a GIS environment. • Value maps covering the NBS site showing what assets can be exposed and what cost is associated with exposure, typically as a function of e.g., inundation depth, (water) velocity, duration of exposure, etc. This data should be available in the same format as the hazard maps. • Land use map
Data collection frequency	
Synergies with other indicators	Flood hazard
Connection with SDGs	
Additional information	
References	

24.11 Social Return on Investment (SROI)

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Social Return on Investment (SROI)		New Economic Opportunities and Green Jobs
Description and justification	This indicator seeks to capture the value of improvements in social well-being (in monetary terms) arising from nature-based solutions. It should be used only in cases where additional information relating to the notional monetary value of one or more social well-being indicators is needed for the purpose of funding applications, investor requirements (see	

	<p><i>Indicator 12.2.5 Private Finance / Private Investment in NBS / Bioeconomy</i>) or comparing the value of different projects for which there are a range of different impacts.</p>
Definition	<p><i>Social Return on Investment (SROI)</i> is generally reported as a ratio between the monetary value of outputs/outcomes and the monetary value of inputs. As such, it provides both a quantifiable cost-benefit analysis of a given project / programme, as well as a tool for comparing different investments either as a forecast or a post investment evaluation. Proponents of the SROI measurement approach claim that it takes a more ‘holistic’ view of the various impacts that a given project/programme has on beneficiaries, but this is a matter of debate – and also depends on the specific choices made by and resources available to the SROI assessment team.</p> <p>Calculating SROI can only be done if there are clearly identifiable social well-being output/outcome indicators of value arising from the target project/programme, and credible SROI reporting generally requires the services of a qualified SROI expert.</p> <p>While the product of an SROI assessment is a quantifiable and comparable measure of expected or achieved return on resources deployed, the <i>process</i> of conducting an SROI assessment is also seen as a valuable activity as it explicitly involves stakeholders and beneficiaries in the assessment process. This is generally thought to increase the credibility of the measurement and also to raise the awareness of all stakeholders of the aims and value of the project. The specifics of this process are described in the measurement and procedure section below.</p>
Strengths and weaknesses	<ul style="list-style-type: none"> + The indicator is a meaningful and comparable at multiple levels of aggregation and across different projects; + It is a powerful tool for assessing ‘value for money’ (VfM) of projects with a range of social benefits; + It is widely supported by a range of social investment NGOs, think-tanks, impact investors and associations, the EU and the WHO. - It is time-consuming and often quite expensive to conduct an SROI assessment; - it requires significant expertise to calculate, to explain and to evaluate its significance; - SROI – along with other approaches to social value measurement - has been widely criticised for incorporating estimated attributions of value, ‘heroic’ assumptions of causality and over-simplifying the unique and heterogeneous impacts of social innovation (see references section)
Measurement procedure and tool	<p>Details on the procedure for measuring SROI are widely available through any number of public websites and associations. The website for the EU initiative “Responsible</p>

Research and Innovation (RRI)" is a good place to start when looking for further information. The RRI 'Toolkit' has a link to a seminal SROI guidebook from the UK, "[A guide to Social Return on Investment](#)", from which the summary procedure included here is drawn.

SROI is a 6-stage process that begins with the definition of scope for the assessment and identifying the stakeholders who will be involved and the main outcomes (impacts) to be measured. If the work of defining the NBS project's 'theory of change' has already been done (as part of the development of another indicator measurement), then this should provide a good starting point for Stage 1: scope and stakeholder definition – which includes those expected to benefit from the project (beneficiaries) as well as those providing any maintenance or other services related to the NBS and those funding the project. Work on other social well-being indicators will also provide useful input to Stage 2: Mapping Outcomes. Each stage is outlined below – however this factsheet does not substitute for detailed step-by-step guidance available from the recommended sources if an SROI assessment is to be undertaken.

Stage 1: Establishing scope and identifying stakeholders.

There are three steps in this stage: 1) establishing the scope of the analysis; 2) identifying stakeholders and 3) deciding how to involve stakeholders. In this stage the purpose of the SROI should be explicit – not only whether it is a forecast or a post-investment evaluation, but also defining (and agreeing) the goal of producing the measurement and the resources that are available to undertake the assessment. The 'audience' for the resulting measurement(s) should also be defined in this step. This may simply be the group of stakeholders – or may go beyond that group if there are objectives that require this – such as policy influence and/or knowledge sharing.

It is important to decide which of the various activities or components of the NBS will be included as it may be possible only to examine a subset of all possible value producing components due to time / resource constraints. When considering the stakeholders, be sure to include those who might be negatively affected as well as those who are expected to be positively affected. Lastly, the decision about how to involve stakeholders is critical to ensure that the SROI includes those impacts that really matter to stakeholders and you can be completely transparent about how the valuation was developed and calculated.

Stage 2: Mapping Outcomes. As in the previous stage, this stage may be informed by work done in other indicator

development exercises – particularly those that addressed social well-being impacts arising from the NBS. However, to do a proper SROI, the definition of outcomes must be co-produced with the identified stakeholders, so if this was not done in other impact indicator activities it will need to be done here. 'Mapping outcomes' involves figuring out what each stakeholder contributes (inputs) and/or receives (outputs / outcomes) from the various activities included within the scope of the SROI assessment. Identifying these is best done with the stakeholders as they are most likely to know about the actual inputs / outputs affecting and important to them. If the SROI is a forecasting exercise, then it may be possible to find estimates from previous / similar activities, relevant research and/or databanks produced for this purpose. Note that there may be 'chains' of outputs, outcomes arising over time from the NBS – which will need to be identified here. For example, an accessible park may provide greater opportunities for exercise for older people, which are taken up by some proportion of the population, and as a result these individuals are fitter and happier – which results in less healthcare expense and feelings of social isolation. Each of these outcomes will need to be defined and valued as appropriate. It is in this stage that a monetary value is assigned to inputs as this is the less complex of the valuation steps. Valuing a volunteer's time or the expected effort required by beneficiaries to generate outcomes can, of course, be complicated, but by and large, this aspect of valuation is generally much less challenging than the next stage of valuing outcomes.

SROI manuals recommend creating an 'Impact map' for the project being assessed, which is essentially a list of stakeholders, impacts (inputs/outputs) and activities that generate each impact for each stakeholder. Other approaches to measuring impact more generally begin with a 'Theory of Change' model, which supports SROI as well as other approaches to measuring social impact. A theory of change (ToC) model explains in a graphical way the causal links between inputs, activities, context and outcomes. Mayne (2015) provides a useful overview of Theory of Change models, which may be helpful in developing a wide range of impact indicators for NBS.

Stage 3: Evidencing and Valuing Outcomes. While the previous stages may be quite challenging for the assessment team to decide among the various alternatives for defining activities, stakeholders and outcomes, it is this stage that is the most complex stage of the SROI methodology and the one that creates the most controversy (although Stage 4 has its

own unique challenges). Essentially this stage is about deciding how outcomes will be demonstrated and what represents their 'fair' value.

Again, if there are already processes for gathering evidence of social well-being outcomes, then it would be advisable to 're-use' the data from these processes for assessing SROI.

However, at a minimum, these indicators must be confirmed with the stakeholders identified in stages one and two and some effort needs to be made to balance objective and subjective indicators. More on this may be found in the Guide to Social Return on Investment (Nicholls et al 2012). Once the indicators of impact are agreed with stakeholders, the next step is to assign monetary values.

While it is likely that the monetary values assigned to each non-monetary input/output will be specific to the project, stakeholders and context, there are some efforts at creating standard monetary values for widely produced social outcomes in a given country. An example of a monetary value databank for social outcomes in the UK is the [HACT Social Value Bank](#) – for activities related to housing - and a paper explaining the relationship between this databank and SROI may be found [here](#). The methodology behind these valuations is found in Trotter et al (2014) and Fujiwara (2013). Most NBS projects, however will need to develop their own monetary values through using benchmarks, published or proprietary cost data or tools specifically developed for this purpose. An overview of tools for this purpose may be found on the '[Sopact](#)' site.

It should be noted here that the SROI ratio is generally formulated as the net present value of outcomes divided by the net present value of inputs. So it will be necessary to gather or estimate the ongoing delivery of outcomes over an agreed time period in order to fully align with the SROI approach (see Stage 5).

If the purpose of the SROI assessment is to deliver a post-investment / implementation evaluation, the next step will be to collect the data required to 'evidence' the outcomes of interest. It will be up to the evaluation team to decide how many periods of data are required and this should be related to the expected time frame of the impact.

Stage 4: Establishing Impact. This stage draws on the decisions and data collected in previous stages and then applies a calculation model that draws heavily on economics and social policy evaluation approaches to 'adjust' the raw impact figure for issues of deadweight, displacement, drop-off and attribution. As noted above, the steps for accomplishing this are detailed in Nicholls et al (2012) or any number of SROI guidebooks.

At the highest level, the SROI calculation multiplies each instance of an achieved outcome by the monetary value determined in Stage 3 and then adjusts this 'gross' valuation by estimates or evidence of:

- 5) *Deadweight* – a concept from economics that represents the outcomes that would have happened over time even if the activity being assessed had not taken place. This is generally measured via reference to control groups (or other benchmark measures) of people who were not beneficiaries of the activity / NBS;
- 6) *Displacement* – a concept from social policy (and economics) that represents the extent to which outcomes generated by the activity being assessed eliminated, shifted or replaced other outcomes. A typical example of displacement is when a benefit (e.g, job, access to services) is made available to one individual/group that would have otherwise gone to a different individual/group;
- 7) *Drop-off* – this concept comes from education / training policy analysis and is a measure of the decrease in impact over time of a given activity. An example of drop-off is decreasing impact of a sustainability awareness programme on an individual's likelihood of changing their consumption patterns. This adjustment would only be used in cases where the expected impact of an NBS extends over multiple years;
- 8) *Attribution* – this is an assessment of how much of the outcome achieved was caused by the contribution of the NBS as opposed to other organisations / individual choices. Nicholls et al (2012) provides a good example: "alongside a new cycling initiative there is a decrease in carbon emissions in a borough. However, at the same time, a congestion charge and an environmental awareness programme began. While the cycling initiative knows that it has contributed because of the number of motorists that have switched to cycling, it will need to determine what share of the reduced emissions it can claim and how much is down to the other initiatives (p.59)"

These adjustments to gross outcomes are usually expressed as percentages and, again, Nicholls et al (2012) contains a good example of how the adjustments may be applied to the outcome values to calculate net impact.

Stage 5: Calculating SROI .

Having completed all of the previous steps, the SROI assessor should now be in a position to calculate SROI. An overview is

provided here, but it is recommended that those undertaking an actual SROI calculation refer to Nicholls et al (2012).

The basic model is based on a net present value (NPV) calculation which is arrived at by estimating (or measuring – if it is a post implementation assessment) the amounts and number of years in which costs will be incurred and social value achieved and then applying a 'discount rate' for the time-value of money. For more on NPV and choosing a discount rate see HBR article [here](#) or to go to Nicholls et al (2012) for SROI specific examples.

The monetary equivalent value of social impact was estimated in Stage 3 and this value must be adjusted in each year by applying the adjustment percentages determined in Stage 4. The present value calculation for outcomes should only be done after the adjusted financial value of the social outcomes are calculated for each year. By applying the discount rate to the adjusted annual financial values for outcomes, the total present value of the NBS project is produced. This figure is divided by the total costs of the NBS to produce the SROI for the project as a ratio of benefits to costs. If the SROI is greater than 1, then the NBS creates value. If it is less than 1, then it does not.

SROI guidelines suggest that assessors undertake two additional analyses in order to provide further information about the SROI measurement produced. These are: 1) a *sensitivity analysis* – which provides information on the extent to which the result would change if the assumptions in any of the previous steps were altered, and 2) a *'payback period'* calculation – which gives an idea of how long it would take for the NBS to pay back the initial investment. Both of these are standard financial calculations that may be applied to the figures generated (see Nicholls et al 2012).

Stage 6: Reporting, using and embedding measurement.

This last stage is an important one to build into to any SROI project plan as it will ensure that the hard work of the previous steps. The first step in this stage is to review the results with stakeholders and get their feedback on the credibility and significance of the measurement. There is also a degree of accountability to stakeholders given their significant interest in and contribution to the measurement. Beyond stakeholders the use of the SROI depends upon the aim of the original undertaking, with a forecast generally reported to potential investors / funders and an evaluation reported to this group plus others with an interest in how the project is meeting its aims. It is important to note that one of the main indicators of a successful SROI is the extent to which it is used to inform

	<p>decisions and/or changes to the various elements of the NBS over time.</p> <p>Finally, it may be appropriate to get outside assurance of the validity of the SROI measure and this can be provided by an accredited SROI assurance provider. Information on assurance (or becoming an accredited SROI provider) may be found here – or by contacting SVI.</p> <p>“Social Value International” (SVI) is an association of member organisations that are interested and/or experts in approaches to valuing social outcomes and interested parties are encouraged to connect with their local SVI association for support in applying SROI in their location.</p>
Scale of measurement	Will be defined based on the scale of measurement for the underlying social well-being indicators
Data source	
Required data	<ul style="list-style-type: none"> - Amount (in monetary terms) of investment in the NBS being assessed for SROI - indicators of social well-being value created by the NBS - stakeholder-based attribution of monetary value to a unit of the social well-being indicator - evidence-based attribution of the proportion of social well-being created to the NBS – generally linked to a clear theory of change, and examined for ‘drop-off’ over time - evidence-based
Data input type	Qualitative and Quantitative
Data collection frequency	If being used as a planning / forecasting tool then data collection will occur at the planning stages of the project
Level of expertise required	Very High
Synergies with other indicators	SROI is highly dependent upon the collection of relevant <i>Social well-being indicators</i> to provide the underlying drivers of valuation. Synergies with <i>Benefit/Cost</i> and <i>Private Finance</i> indicators as data collected for SROI may be useful for these measures and vice versa.
Connection with SDGs	SDG 3 Good Health & Well-being; SDG 4 Quality Education; SDG 5 Gender Equality; SDG 8 Decent Work & Economic Growth; SDG 10 Reduced Inequalities; SDG 9 Industry, Innovation & Infrastructure; SDG 16 Peace, Justice & Strong Institutions
Opportunities for participatory data collection	A core element of SROI assessment is the involvement of beneficiaries and stakeholders in the defining of value and of attribution of effects (see procedure section above). This engagement with stakeholders is generally seen to be a positive feature of the methodology as it increases stakeholder

awareness of the project benefits and also accords beneficiaries with direct and meaningful input to the creation of the impact indicator.

Additional information

References

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