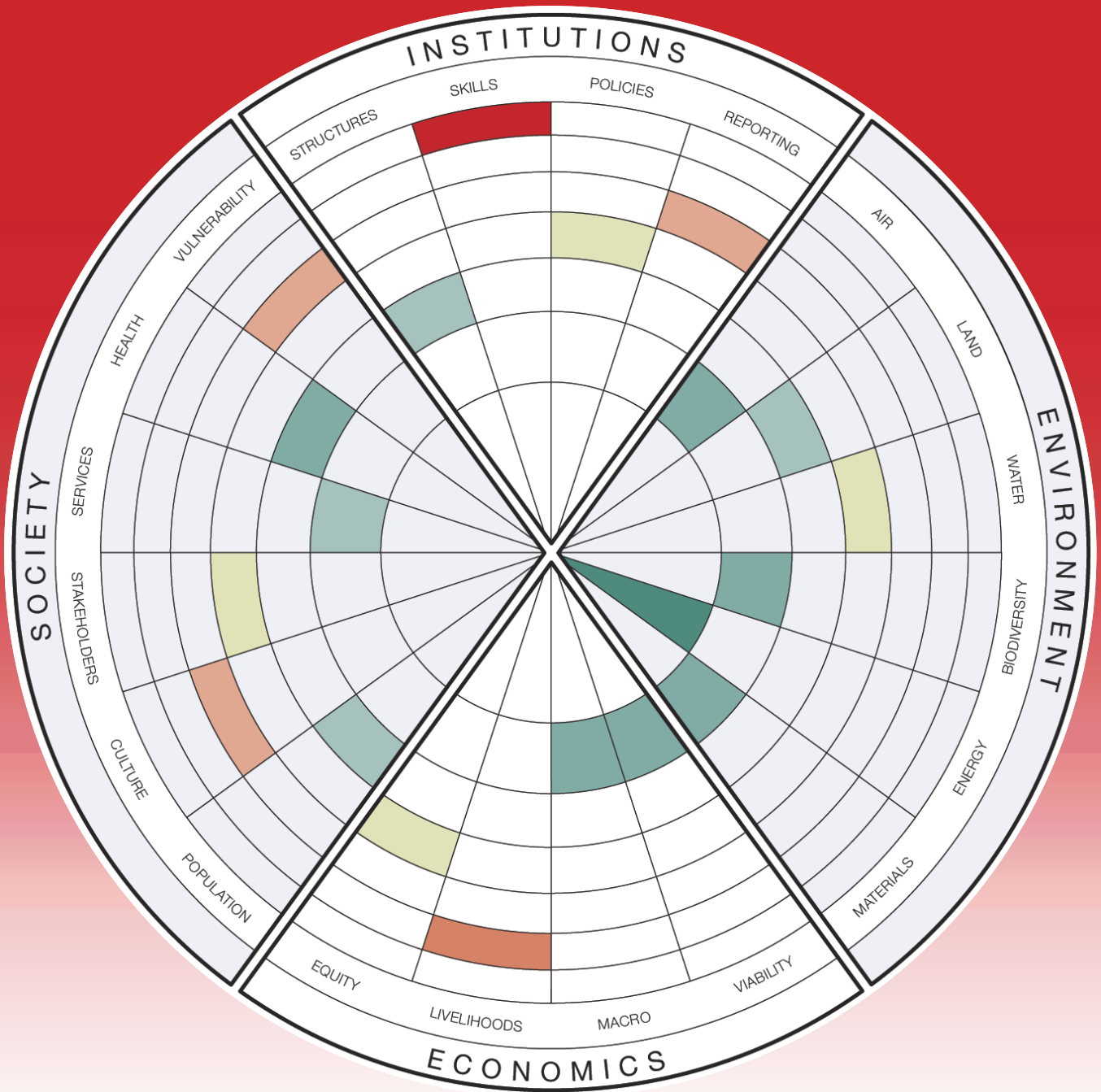


## User Manual



## CONTENTS

<b>1</b>	<b>INTRODUCTION TO ASPIRE .....</b>	<b>3</b>
<b>2</b>	<b>THE ASPIRE FRAMEWORK.....</b>	<b>4</b>
2.1	Conceptual Framework .....	4
2.2	The ASPIRE Software .....	6
2.3	Ethical Considerations .....	6
2.4	Potential applications.....	6
<b>3</b>	<b>USING ASPIRE.....</b>	<b>8</b>
3.1	Define Boundaries and Objectives .....	8
3.2	Identify Stakeholders .....	8
3.3	Review list of sub-themes .....	8
3.4	Policy and Regulatory Framework .....	9
3.5	Data Collection.....	9
3.6	Data Entry .....	9
3.7	Initial Outputs.....	9
3.8	Feedback to project team/stakeholders .....	10
3.9	Revise ASPIRE based on feedback .....	10
3.10	Final outputs and reporting.....	10
<b>4</b>	<b>NAVIGATING THE SOFTWARE .....</b>	<b>11</b>
4.1	Getting Started.....	11
4.2	Toolbar .....	11
4.3	Saving data .....	11
4.4	Entering data.....	11
4.5	Navigating between themes and sub-themes.....	12
4.6	Additional Information .....	12
4.7	Generating Outputs.....	13
4.8	Best Case/Worst Case Keystone Diagram .....	13
<b>5</b>	<b>SUPPORT SERVICES.....</b>	<b>14</b>
	<b>APPENDIX 1: ASPIRE ASSESSMENT CASE STUDY (Abbreviated).....</b>	<b>15</b>

# 1. INTRODUCTION TO ASPIRE

## WELCOME TO ASPIRE!

### What is ASPIRE?

ASPIRE is a software based tool for assessing the sustainability of infrastructure projects which recognises poverty reduction as an overarching objective. It provides a holistic appraisal framework encompassing the four key dimensions of environment, society, economics and institutions which generates an integrated qualitative assessment based on 96 sub-themes. This is presented graphically on the ASPIRE keystone diagram using a traffic light system (red-amber-green) to indicate performance against 20 key themes. See Figure 1. The software also generates a tabulated summary of the input data.

### Why ASPIRE?

ASPIRE has been developed by Engineers against Poverty and Arup in recognition of the fundamental role infrastructure plays in tackling poverty and contributing to sustainable development. Access to water, energy, healthcare, education and markets enable communities to move beyond survival to self sufficiency and participate in society. In addition, infrastructure projects act as a catalyst to economic growth by providing opportunities for employment, strengthening social networks and building institutional capacity. The current 'do no harm' approach based on carrying out social and environmental impact assessments to identify potential negative impacts of infrastructure projects so that they can be mitigated is insufficient. There needs to be greater recognition that infrastructure projects have the potential to enhance the environment, strengthen society, and promote economic vitality.

### Who is ASPIRE for?

Infrastructure projects tend to be delivered with the emphasis on technical performance and financial viability. ASPIRE has been developed to help those funding, commissioning and implementing infrastructure projects consider a

wider range of issues and stakeholder concerns. The software has been designed to be operated and understood by programme and project managers, engineers or monitoring and evaluation specialists who may not have specialist knowledge of sustainable development or poverty reduction. ASPIRE enables the user to have an impact on poverty reduction and sustainable development through their projects, programmes and interventions.

### When is ASPIRE applicable?

ASPIRE has been developed so that it can be used to monitor and evaluate project performance and support informed decision making throughout the project life cycle. Early on in a project it might be used to carry out a baseline assessment, gap analysis, or identify key performance indicators. During the design stage it can be used to compare and assess the pros and cons of various design options, identify key risk areas, guide decision making and stakeholder participation, or assess the implications of design changes. It can also be used to undertake evaluation on completion and during operation which can inform organisational learning and approaches to future projects.

ASPIRE is designed to cover all forms of infrastructure sectors, namely transport, public health, ICT, etc. Where a project is focused on a single sector (e.g. a water supply project), it is still important that the analysis takes a broad perspective of service provision. For instance power or water supplies installed for construction might also serve local communities.

Further background and information on using ASPIRE is provided in subsequent sections as well as information on the support services that are available.

## 2. THE ASPIRE FRAMEWORK

### 2.1 Conceptual Framework

The ASPIRE conceptual framework recognises that our planet has limited carrying capacity to support an increasing global population aspiring to a higher quality of living. This results in a tension between the creation and maintenance of societal assets and environmental impact. In order to achieve sustainable development, it is critical to find the balance between the needs of society and the natural environment both globally and locally. This is particularly acute in developing countries where the basic needs of millions are unmet and there is a more direct reliance on ecosystems. The built environment plays a key role in brokering this relationship together with the fundamental enablers of robust institutional structures and processes and well-balanced economic development. Hence ASPIRE is presented as four interconnected dimensions: environment, society, economics, and institutions. See Figure 2.

**Environment** is considered in terms of enhancing and minimising impact on natural assets: air, land, water, biodiversity, and materials. Energy is included as a sixth theme

recognising the increasing importance of renewable energy sources and energy efficiency.

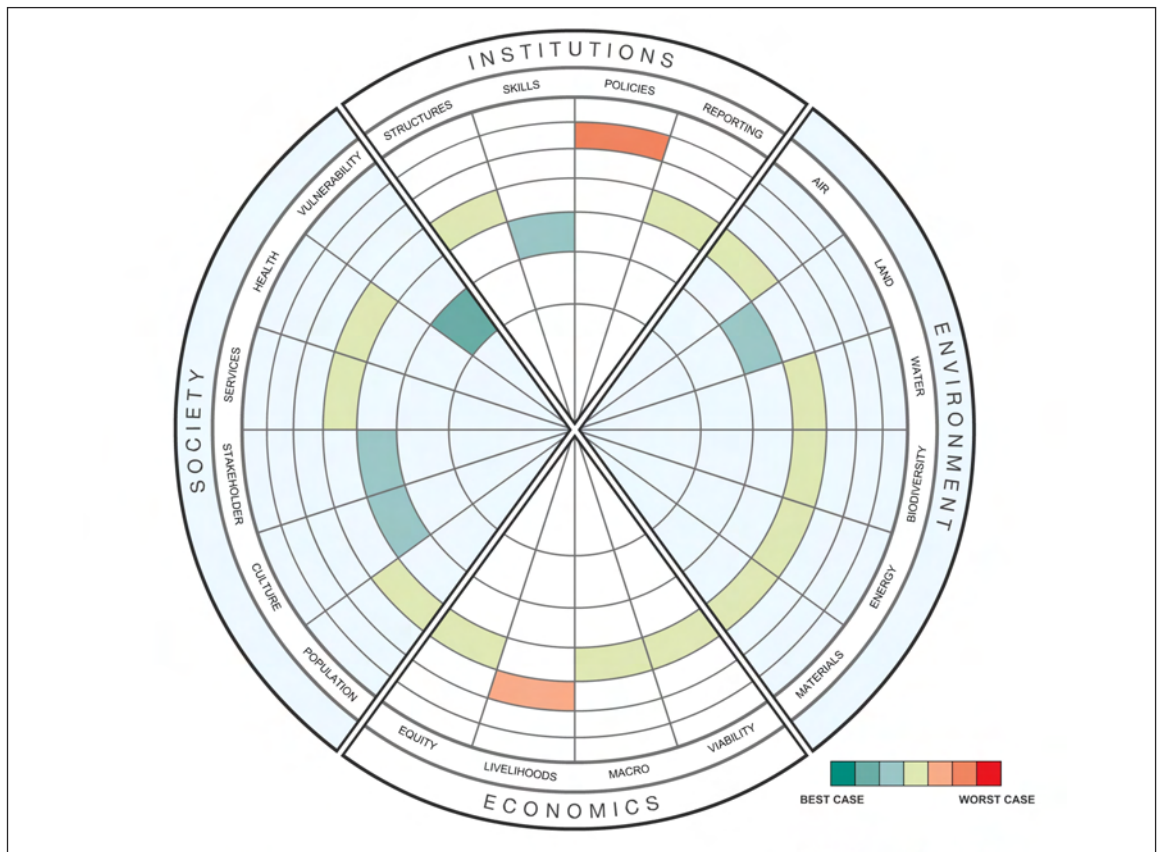
**Society** is considered in terms of four themes, representing assets required to meet needs equitably, unlock human potential and alleviate poverty through: access to services, public health, culture, and stakeholder participation. Two additional themes - vulnerability and population - include issues such as conflict, exposure to natural hazard, and displacement.

**Economics** encompasses four themes which contribute to economic vitality: project viability long term, macro-economic effects (such as inflation and competition), livelihood opportunity and equity of economic opportunity.

**Institutions** includes four themes which consider the capacity and effectiveness of the institutional environment to support the delivery of infrastructure that contributes to sustainable development: policy, governance, skills, and reporting.

A number of indicators have been identified for each theme as summarised in Table 1.

Figure 1: ASPIRE Keystone Diagram Output



	Air	Land	Water	Biodiversity	Energy	Materials
Environment	<ul style="list-style-type: none"> <li>Ambient Air Quality</li> <li>Direct Emissions</li> <li>Dust &amp; Particulates</li> <li>Ozone Depleters</li> <li>Indirect Emissions</li> </ul>	<ul style="list-style-type: none"> <li>Site Location</li> <li>Planning Intent</li> <li>Diversity/Mixed Use</li> <li>Contaminated Land</li> <li>Soil Conservation</li> </ul>	<ul style="list-style-type: none"> <li>Drainage Systems</li> <li>Water Pollution</li> <li>Sewage Treatment &amp; Disposal</li> <li>Water Availability</li> <li>Water Efficiency</li> </ul>	<ul style="list-style-type: none"> <li>Protected Area</li> <li>Nature Conservation</li> <li>Aquatic Ecosystems</li> <li>Forests</li> <li>Drylands</li> <li>Environmental Risk Management</li> </ul>	<ul style="list-style-type: none"> <li>Energy Efficiency</li> <li>Energy Sources</li> </ul>	<ul style="list-style-type: none"> <li>Materials Efficiency</li> <li>Responsible Sourcing</li> <li>Whole Life Analysis</li> </ul>
	Population	Culture	Stakeholders	Services	Health	Vulnerability
Society	<ul style="list-style-type: none"> <li>Vulnerable Groups</li> <li>Population Change</li> <li>Community Cohesion</li> <li>Conflict Sensitivity</li> <li>Displacement</li> </ul>	<ul style="list-style-type: none"> <li>Socio-cultural Identity</li> <li>Cultural &amp; Religious Facilities</li> <li>Local Heritage &amp; Archaeology</li> <li>Use of Environment</li> <li>Intergenerational &amp; Gender Practices</li> </ul>	<ul style="list-style-type: none"> <li>Identification &amp; Analysis</li> <li>Consultation &amp; Participation</li> <li>Accountability &amp; Grievance Mechanisms</li> </ul>	<ul style="list-style-type: none"> <li>Energy</li> <li>Mobility &amp; Transport</li> <li>Telecommunications</li> <li>Education</li> <li>Communal Space</li> </ul>	<ul style="list-style-type: none"> <li>Water</li> <li>Sanitation</li> <li>Solid Waste</li> <li>Drainage</li> <li>Healthcare</li> <li>Shelter</li> <li>Nutrition</li> </ul>	<ul style="list-style-type: none"> <li>Climate Change Resilience</li> <li>Location &amp; Environmental Resources</li> <li>Physical Exposure &amp; Shelter</li> <li>Institutions &amp; Social Networks</li> <li>Access to Livelihoods &amp; Finance</li> </ul>
	Structures	Skills	Policies	Reporting		
Institutions	<ul style="list-style-type: none"> <li>National / Local Government Effectiveness</li> <li>Project – Government Coordination</li> <li>Corruption</li> <li>Civil Society</li> <li>Rule of Law</li> </ul>	<ul style="list-style-type: none"> <li>Local Government</li> <li>Private Sector</li> <li>Civil Society Involvement</li> <li>Research &amp; Innovation</li> </ul>	<ul style="list-style-type: none"> <li>Regulatory Quality</li> <li>Human Rights</li> <li>Health &amp; Safety</li> <li>Quality Assurance</li> <li>Intellectual Property Rights</li> </ul>	<ul style="list-style-type: none"> <li>Information Disclosure &amp; Reporting</li> <li>Monitoring &amp; Evaluation</li> <li>Media Channels</li> <li>Knowledge Exchange</li> <li>Replication</li> </ul>		
	Viability	Macro	Livelihoods	Equity		
Economics	<ul style="list-style-type: none"> <li>Value for Money</li> <li>Risk Management</li> <li>Carbon Pricing</li> <li>Operation &amp; Maintenance</li> <li>Alignment with National/Regional Strategies</li> <li>Appropriate Technologies</li> </ul>	<ul style="list-style-type: none"> <li>Vitality &amp; Regeneration</li> <li>Value Added / Multiplier Effects</li> <li>Debt</li> <li>Inflation Effects</li> <li>Ethical Competition</li> </ul>	<ul style="list-style-type: none"> <li>Local Sourcing</li> <li>Access to Finance</li> <li>Distortions to Local Economy</li> <li>Employment Creation</li> <li>Labour Standards</li> <li>Training</li> </ul>	<ul style="list-style-type: none"> <li>Equal Opportunities</li> <li>Affordability of Services</li> <li>Accrual of Benefits</li> <li>Land Tenure</li> </ul>		

Table 1: ASPIRE Themes and sub-themes

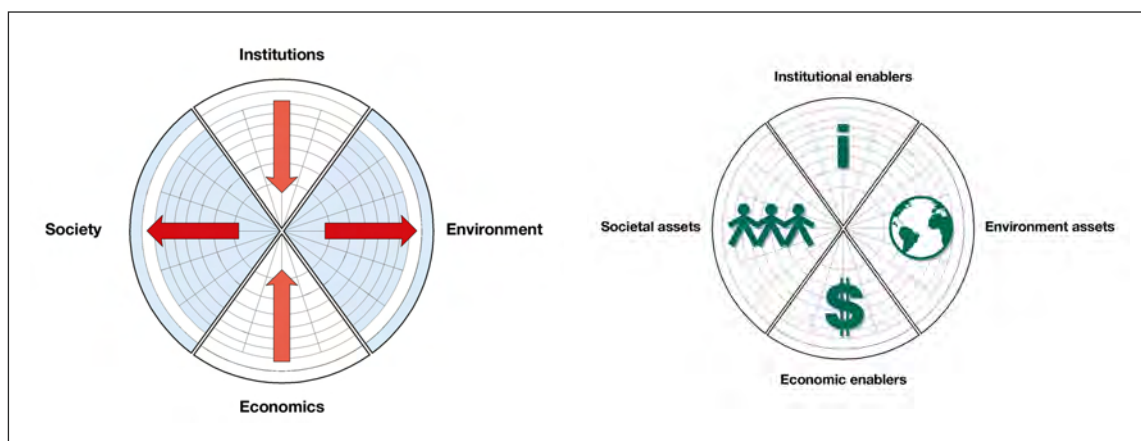


Figure 2: ASPIRE Conceptual Framework

## 2.2 The ASPIRE Software

The software interface leads the user through a series of questions which assist in allocating a non-weighted score to each of the tool's sub-themes. The user enters a short justification for each score allocated. These scores are then aggregated for each theme to provide a high level, graphical output. The software can also generate a more detailed report on each of the sub-themes in Microsoft Excel™ format. If the user requires more information to help with decision making, ASPIRE also provides ready access to background information for each sub-theme through the software.

More information on using the software is provided in Section 3.

## 2.3 Ethical Considerations

ASPIRE is designed primarily for application in the developing country context, recognising the important role infrastructure plays in contributing to development and reducing poverty. Conventional thinking about development has been primarily concerned with such things as economic growth, raising agricultural productivity and building infrastructure. But more recently it has also become concerned with values, attitudes and a focus on people rather than things recognising also that the process is as important as the product. ASPIRE responds directly to a more

people-centred approach to development. It requires that users consider how technical design decisions impact on people's fundamental rights and well-being, and adheres to the view that ethical practice requires that these impacts are considered in detail in decision making processes.

ASPIRE is a tool for promoting a positive development outcome, and those using it are agents of change. Users are encouraged to give explicit consideration to ethical issues in their evaluation and scoring of projects with ASPIRE. This includes ensuring that it is objective, rigorous, evidence based and avoids unintentional inflation of performance against each indicator. Whilst the ASPIRE assessment process involves scoring, the intention of the assessment is to understand strengths and weaknesses on the project and address them effectively. Therefore, achieving the highest score in each theme should not be the key driver in the assessment. Users are encouraged to refer to the "More Information" sections in the software and the ASPIRE Research and Development Report which provide more detailed background information on the thinking and research behind the development of ASPIRE, and will assist users to evaluate their projects ethically within the ASPIRE framework.

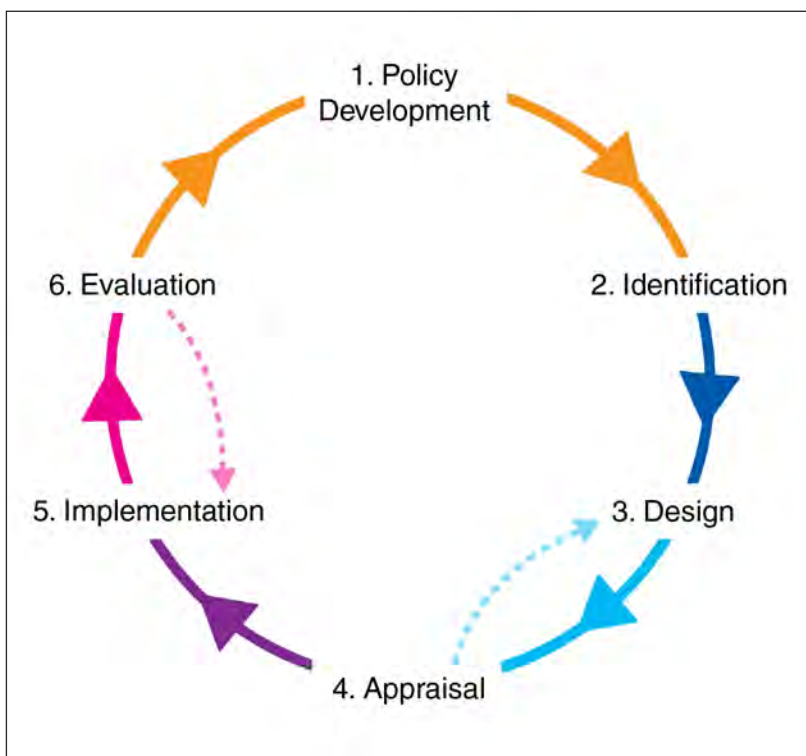
## 2.4 Potential applications

ASPIRE has been designed as a flexible assessment platform that will allow a range of applications depending on the specific needs of users. The generic project lifecycle used in the development of ASPIRE identified six key stages of project development. See Figure 3.

For instance, a typical school reconstruction programme might use ASPIRE as follows:

1. **Policy Development:** at the outset ASPIRE might be used to carry out a baseline assessment of existing school infrastructure and delivery of educational services in order to identify where changes to policy and/or facilities are needed.
2. **Identification:** at project initiation ASPIRE can be used to ensure that a pro-poor sustainability agenda is incorporated in the project concept and brief. It can be used to carry out appraisals of initial option(s) to identify key gaps, risks and/or opportunities. It can also be used to identify key performance indicators which might form the focus of future monitoring and evaluation.

Figure 3: Generic Project Life Cycle



**3. Design:** during the design process, ASPIRE can be used to identify gaps for further exploration, guide decision making and stakeholder participation, and provide an initial project assessment against which to benchmark alternative options. It can also be used to support social and environmental risk identification and mitigation.

**4. Appraisal:** an ASPIRE assessment can inform a decision to proceed on a sound economic basis, cognisant of the social and environmental implications and opportunities to strengthen institutional capacity. Additionally, ASPIRE can serve as an ongoing monitoring and evaluation tool to assess project performance and to promote wider organisational learning.

**5. Implementation:** part way through implementation, an ASPIRE assessment can be used to verify that construction practices are aligned with overall objectives for sustainability performance and poverty reduction.

**6. Evaluation:** comparative assessments might be undertaken of similar projects, or individual projects may be evaluated upon completion and during operation to identify strengths and weaknesses which might inform future programmes.

Further examples of potential applications at key project stages are summarised in Table 2.

Stage Number	Project cycle stages	Activities/Analysis	Can ASPIRE be used?
1	Policy Development	Baseline assessment	✓
		Raising awareness/training	✓
2	Identification	Master planning	✓
		Feasibility study	✓
		Options evaluation	✓
		Risk identification and analysis	✓
		Gap analysis	✓
		Stakeholder analysis and mapping	✓
		Identification of key performance indicators	✓
3	Design	Concept design review	✓
		Stakeholder consultation	✓
4	Appraisal	Design review	✓
		Stakeholder consultation	✓
5	Implementation	Monitoring	✓
		Stakeholder consultation	✓
6	Evaluation	Time series evaluation	✓
		Comparison of projects	✓
		Auditing	✓
		Whole life project monitoring	✓
		Post project evaluation	✓
		Raising awareness/training	✓

*Table 2 – Potential Applications of ASPIRE through the Project Life Cycle*

### 3. USING ASPIRE

This section discusses the sequence of steps that users negotiate, which together constitute a road map for carrying out the ASPIRE assessment. The key steps of an ASPIRE assessment are summarised in Figure 4. A more detailed description of each step is provided in the following sections.

Figure 4: Key Steps of ASPIRE Assessment

Initiating the assessment	<b>Step 1: Define boundaries and objectives</b> <ul style="list-style-type: none"> <li>Understand the scope of the project and define objectives</li> <li>Define the assessment boundary</li> </ul>
	<b>Step 2: Identify stakeholders</b> <ul style="list-style-type: none"> <li>Identify the primary and secondary stakeholders</li> <li>Identify the stakeholders to be consulted</li> </ul>
	<b>Step 3: Review list of sub-themes</b> <ul style="list-style-type: none"> <li>Review list of sub-themes for relevance</li> <li>If a sub-theme needs to be removed then provide justification</li> </ul>
	<b>Step 4: Policy and regulatory framework</b> <ul style="list-style-type: none"> <li>Understand the regional or national policies and regulations</li> <li>Assess the impacts of policies and regulations on the project</li> </ul>
Data collection and entry	<b>Step 5: Data collection</b> <ul style="list-style-type: none"> <li>Collect data through primary and secondary sources</li> <li>Verification of data</li> </ul>
	<b>Step 6: Data entry</b> <ul style="list-style-type: none"> <li>Enter data in the ASPIRE software in the data entry menu</li> <li>Justify all the indicators – ‘sub-themes’</li> </ul>
Review	<b>Step 7: Initial Outputs</b> <ul style="list-style-type: none"> <li>Keystone diagram</li> <li>Excel Report</li> </ul>
	<b>Step 8: Feedback to project team/stakeholders</b> <ul style="list-style-type: none"> <li>Initial outputs to be communicated with team/stakeholders</li> <li>Agreement on areas requiring review or modification</li> </ul>
	<b>Step 9: Review ASPIRE based on feedback</b> <ul style="list-style-type: none"> <li>Update ASPIRE based on feedback from team/stakeholders</li> <li>Carry out further rounds of iteration and feedback if required</li> </ul>
Reporting	<b>Step 10: Final outputs and reporting</b> <ul style="list-style-type: none"> <li>Generate final outputs</li> <li>Write the assessment report</li> </ul>

#### 3.1 Define Boundaries and Objectives

The first stage in the assessment is to understand the overall scope of the project and its objectives in order to define the boundary for the ASPIRE assessment (i.e. what is included and what is not included).

The definition of the assessment boundary may be not straight forward as it may be different from the project boundary. Infrastructure developments result in both direct and indirect impacts and benefits and often have broader social, ecological and economic footprints. The more broadly the assessment boundary is defined, the more likely the analysis will reflect the full impacts and opportunities associated with the project. The trade-off, however, is that a broader boundary makes the analysis more complicated.

Some key considerations when defining the assessment boundary are:

- **Geographical coverage:** What are the physical boundaries of the project?
- **Sphere of influence:** What is the potential sphere of influence environmentally, socially and economically?
- **Scale:** Is the assessment at a project/programme level or is it at settlement, regional or even national level?
- **Time:** Does the project comprise several phases or is it intended to be replicated or scaled up in the future? If so, will the assessment address only the current project phase or both the current and future phases?

#### 3.2 Identify Stakeholders

A stakeholder is any individual, community group or organisation with an interest in the outcome of a project. The ASPIRE assessment process needs to consider both the primary stakeholders (stakeholders who are directly affected by the project) and the secondary stakeholders (other stakeholders who are not directly affected but have a stake or interest in the project or area being considered). Identifying stakeholders is critical for understanding the impacts, risks and opportunities generated by an infrastructure development. It is not possible to conduct an

effective ASPIRE assessment without identifying who the key stakeholders are and mapping the relationships between them.

The following prompt questions can help identify stakeholders:

- Who will benefit from the project other than the project sponsor and investors?
- Who will be affected by potentially negative environmental or social impacts of the project, both on- and off-site?
- Who will be responsible for implementing measures designed to avoid, mitigate, or compensate for the project's negative impacts?
- Who is responsible for the design, the delivery and/or the subsequent maintenance and operation of the infrastructure?
- Who supports or opposes the changes that the project will bring?
- Whose cooperation, expertise, or influence would be helpful to the success of the project?
- Whose opposition could be detrimental to the success of the project?
- Who are the most vulnerable, least visible, and voiceless who may be affected by the project and for whom special consultation efforts may have to be made?

The methodology for carrying out the assessment needs to be clear as to the extent to which views, opinions and perspectives of all stakeholders are considered.

### 3.3 Review list of sub-themes

For some infrastructure developments, not all the ASPIRE sub-themes will be relevant. It is possible to remove up to ten sub-themes from the analysis by clicking on the 'green tick' symbol adjacent to the sub-theme. The software will prompt for a justification for why the sub-theme is being removed from the analysis. Sub-themes should only be removed if there is a specific justification for doing so.

It is important to note that:

- Removing too many sub-themes reduces the robustness of the analysis.
- Many infrastructure developments have

important indirect benefits and impacts that may not be immediately obvious. If in doubt, do not remove the sub-theme.

### 3.4 Policy and Regulatory Framework

The local, regional and national regulatory frameworks and legislation should be considered during the design and delivery of infrastructure projects. In order to carry out the ASPIRE assessment, there needs to be a clear understanding of the relevant legislation to ensure that the project meets or exceeds requirements. Compliance with local regulations is deemed to be a minimum requirement, and reference should also be made to local and international standards, guidance and best practice. A theme should only achieve the highest score if it exceeds international best practice and is an exemplar.

### 3.5 Data Collection

Data gathering is a crucial step and fundamental to the quality of the assessment. Wherever possible, data should be cross-referenced to key project documentation or validated by data collected from third party sources. The data can be collected (or verified) through literature searches, desk study, review meetings, site visits and consultation with key stakeholders. Data collected from socio-economic surveys and other assessments should be checked to ensure that the data collection was methodologically and statistically sound. Where it is available, environmental and social impact assessment (ESIA) documentation can be a very useful source of input information. The amount of time needed for data collection would vary, depending on the information readily available and background literature review required for the project.

The ASPIRE assessment could identify gaps in data in the initial stages and also give an indication of specialist skill sets needed in the team to provide data for the sub-themes. The assessment could be carried out by an individual or could be strengthened through inputs by a team.

### 3.6 Data Entry

Once the data has been collected, an initial assessment should be undertaken, considering inputs and views from all relevant stakeholders to allow a balanced view of the project. Each sub-theme should be considered in turn and allocated a score following the process outlined

in section 4. Narrative should be provided to justify the score selected, referring to relevant documentation, site observation and consultation.

### 3.7 Initial Outputs

The output of the assessment is an ASPIRE keystone diagram which is a graphical representation of the scores of themes with a colour coding system. See Figure 1. The software also produces an Excel spreadsheet report of the sub-theme and theme scores, and justification notes so that the user can make an assessment of strengths and weaknesses of the project.

### 3.8 Feedback to project team/stakeholders

The ASPIRE keystone diagram provides a platform for identifying strengths and weaknesses of a proposed or existing development. The quality of the analysis is likely to be strengthened if the initial outputs of an assessment are communicated to members of the project team and project stakeholders who are then able to comment and provide additional information. This iterative process will improve the quality of the analysis, support informed decision making and help generate shared ownership and agreement on the potential areas of the project which need modification or review.

### 3.9 Revise ASPIRE based on feedback

Ideally, the ASPIRE assessment should be a continuous process, with assessment carried out at key stages of the project cycle and feedback from stakeholders progressively incorporated in each subsequent assessment. If changes are made to the project as a result of the initial assessment and feedback stages, the scores and justification notes should then be updated in the ASPIRE software to ensure the relevance of the analysis to the next stage of the project.

Note: this updating process can be readily accomplished without the need for completing a whole new assessment. The user should open the original assessment file, make necessary changes, and then save the updated assessment as a new file (using the "Save As" command). See 4.3.

### 3.10 Final outputs and reporting

The final outputs are generated by following the instructions in Section 4.7. It is recommended that the user produces a concise written

summary of the ASPIRE assessment and the key findings. Such a report would typically contain the following:

- **Introduction:** State the purpose of the assessment and who it has been carried out by, and at what stage in the project lifecycle.
- **Project brief and scope:** Briefly describe the overall objectives and scope of the project, identifying key stakeholders
- **Methodology:** Background to what ASPIRE is and how it works. If applicable, include justification for omitting sub-themes. Describe the methodology/approach taken for the project. List the stakeholders involved, the consultations undertaken and any workshops held. Discuss the information which was used as the basis for the assessment.
- **Discussion:** Include the ASPIRE keystone diagram, and, if necessary, illustrate particular issues with best/worst case diagrams. Analysis of the assessment should discuss the strengths and weaknesses of the proposal, highlighting any information gaps. We suggest that this is undertaken as a selective discussion of significant issues where scores are strongly positive or strongly negative, or focus on themes/sub-themes that are particularly important for the project.
- **Recommendations:** This section is a vital part of the assessment. It should provide details on where improvements can be made to the proposal to make the project more sustainable and strengthen its contribution to the enhancement of well-being and livelihoods of the poor.
- **Appendix:** Include the tabulated output from the ASPIRE assessment

The above list is for guidance only, and it can be altered to suit the project requirements.

## 4. NAVIGATING THE SOFTWARE

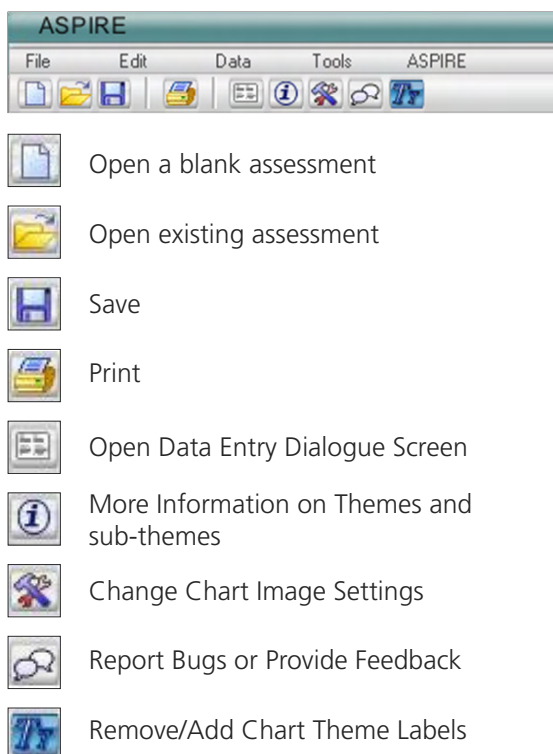
### 4.1 Getting Started

Once the software has been opened, the user will see the main software interface (Figure 5):

A new assessment can be initiated by going to "File" and selecting the Option "New". To open an existing ASPIRE assessment, select "File" and "Open" or "Recent Files". A dialogue box will allow the user to select the file. To add the project name and details select 'Data' and 'Job details' as shown in Figure 6.

### 4.2 Toolbar

The toolbar can be also used for quick access to some of the menu buttons. See the list below for details:



### 4.3 Saving data

Before entering data, the new assessment should be saved by going to "File" and selecting "Save As". A dialogue box will allow the user an option of selecting the name and location for saving the assessment.

As data is entered, it can be saved at any time by clicking on the "Save" button on the dialogue box. Once saved, the assessment can be closed and recommenced at a later time.

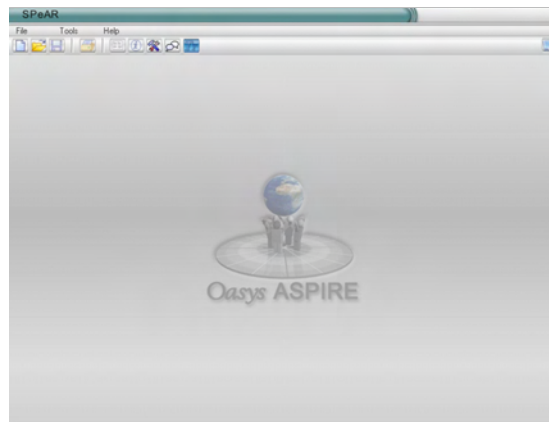


Figure 5: ASPIRE main interface

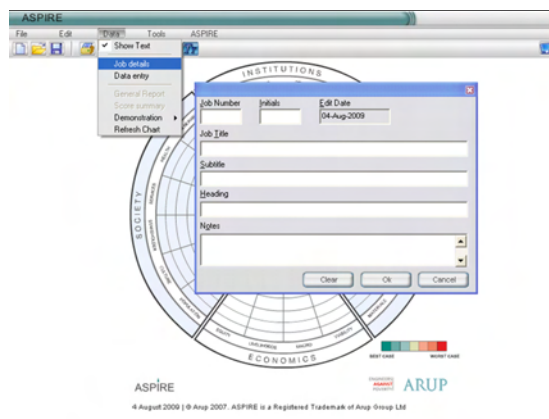



Figure 6: ASPIRE job details screen

### 4.4 Entering data

Data can be entered by going to "Data" and selecting "Data Entry". This initiates the main ASPIRE data entry dialogue screen (Figure 7). Alternatively, clicking on the  icon on the toolbar will also open the data entry dialogue screen.

The data entry dialogue box will display one theme (in this case, Institutions-Structures) and its constituent sub-themes (National/local government effectiveness, Project-Government Coordination, etc.) listed as headings. To enter data, the user clicks on the desired sub-theme heading.

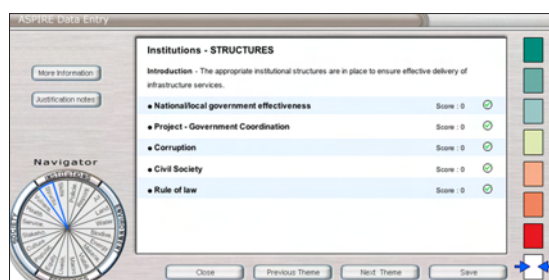
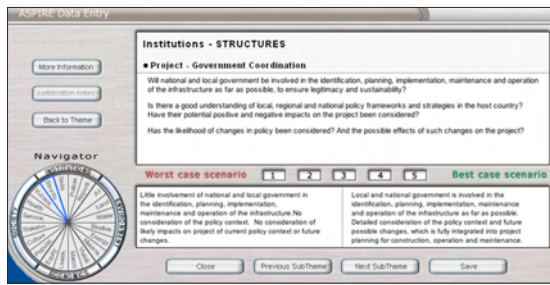


Figure 7: Data Entry Dialogue Screen

This brings up the specific sub-theme scoring screen (Figure 8).

Figure 8: Sub-theme Scoring Screen



For each sub-theme, several questions are asked to focus users on the particular topic and help them to arrive at an appropriate score for the project or option being assessed. Not all questions will be directly applicable in every case.

The user selects a score from (1) to (5) where (1) represents the worst case and (5) represents the best case. The score for a particular sub-theme is determined by the relative performance of a project or proposal against a pre-defined best case and worst case. The best case is a qualitative statement that typically represents the best possible outcome of a sub-theme on an infrastructure project in relation to sustainability and pro-poor development. Similarly the worst case typically represents a negative outcome and it is hoped that the worst case would never occur on a project. Typically standard industry practice or 'business as usual' will lie in the middle of these two 'end points'.

After a numerical score has been selected, the user will be asked to justify the score. This justification is entered by typing into the 'Justification notes' dialogue box (Figure 9).

Figure 9: Justification Notes Screen



It is possible to move to another sub-theme without justifying the score. However, it is highly preferable to provide a justification as this strengthens the quality of the analysis and will appear in any reports the user generates for future reference. If a justification note is not entered, a dialogue box will appear reminding the user to provide one. If the user proceeds without a justification, the sub-theme will be listed with an exclamation mark (!) next to it

in the main theme menu as a reminder that the scoring is incomplete for that sub-theme.

Users are recommended to save the analysis regularly and before moving to a new theme by clicking 'Save' at the bottom of the screen.

#### 4.5 Navigating between themes and sub-themes

Once a score and justification is entered for a sub-theme, the user can move to the next sub-theme by clicking "Next SubTheme" on the scoring dialogue box. Likewise the user can to go back to a previous sub-theme by clicking 'Previous SubTheme'. To go back to the main theme menu, click "Back to Theme" (Figure 10).

The easiest way to move between different themes is to use the "Navigator" wheel (Figure 10) on the data entry dialogue box. The Navigator wheel is a simplified version of the ASPIRE keystone diagram and allows the user to click on any particular theme of interest. By holding the cursor over a theme in the navigator, a small box will appear which lists the constituent sub-themes of that particular theme.

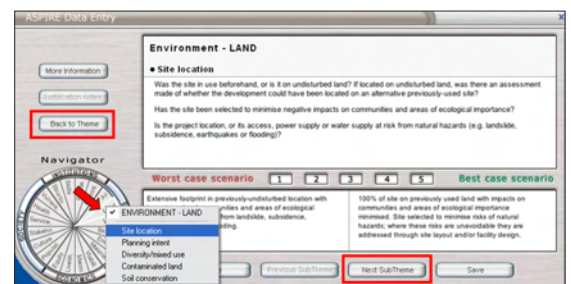








Figure 10: Navigation buttons

#### 4.6 Additional Information

If the user requires additional information or clarification on a particular theme or sub-theme, a more detailed description of each theme and sub-theme is provided by clicking on the "More Information" button.

It is recommended that first time users review this additional information to ensure that they have sufficient understanding of the issue to complete the assessment of each sub-theme.


To navigate through the "More Information" screens, please use the buttons at the top of the window.

-  Go back one page
-  Go forward one page
-  Stop loading this page
-  Reload current page
-  Print this page
-  Print preview

### 4.7 Generating Outputs

Once all of the data has been entered, the following outputs can be generated:

1. **Keystone diagram:** The ASPIRE keystone diagram on the screen will update automatically as the data is entered. A picture of the ASPIRE keystone diagram can be generated as a .JPG file. This file is generated by selecting "File" and "Save Chart". A dialogue box will prompt the user for a name and a location to save the file.

The default for the Chart is set to a high resolution 2400 x 2400 pixels, which would be appropriate for colour printing. To adjust the settings to a smaller size, go to the "Tools" menu and select "Preferences" or click on the  icon. Users can then select "Low" or "Medium" size for their .JPG charts.

2. **Tabulated Data Report:** A report of the data can be generated in Microsoft Excel™. The reporting function is initiated by selecting "File" and "Generate Report". A dialogue box then gives the option of generating a concise report of the entire ASPIRE assessment (Figure 11), or a detailed report for each quadrant. The concise report lists the averaged theme scores, individual sub-theme scores as well as justification notes for each sub-theme. The full report provides more detail on a specific quadrant by detailing the questions and best/worst case scenarios which were used to score the sub-themes.

### 4.8 Best Case/Worst Case Keystone Diagram

The ASPIRE keystone diagram shows the colour-coded result for each theme as an average of

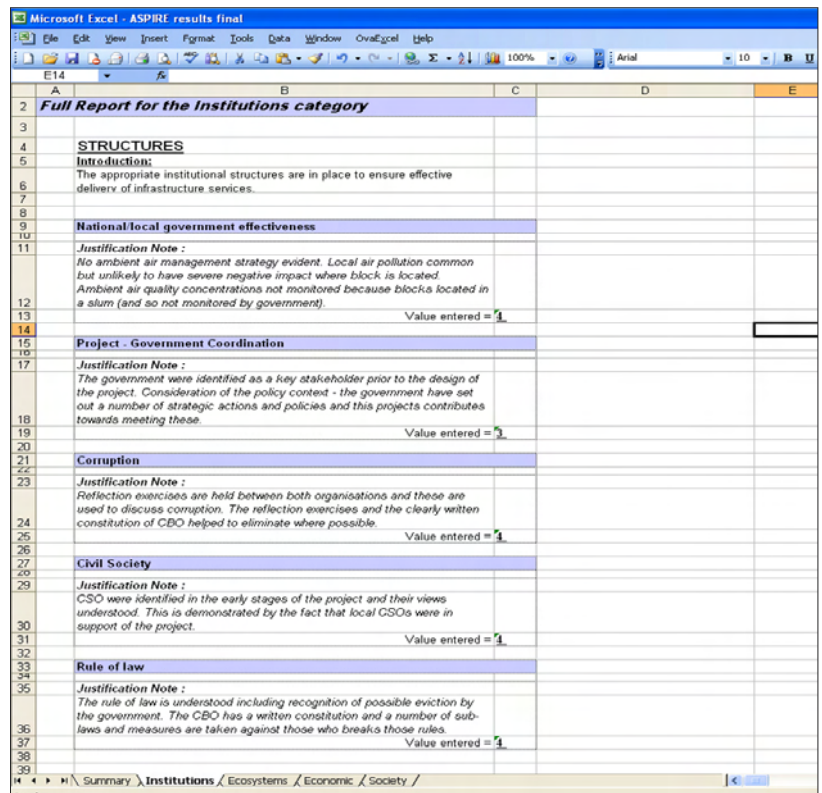


Figure 11: Excel report output

the scores of the individual sub-themes. This average score is very useful but can sometimes mask very good or very bad performance in individual sub-themes.

For this reason, it is possible to generate modified keystone diagrams which show either the best sub-theme score or the worst sub-theme score in each theme. These modified diagrams are generated by going to "ASPIRE" and selecting either "Best case chart" or "Worst case chart". See Figure 12.

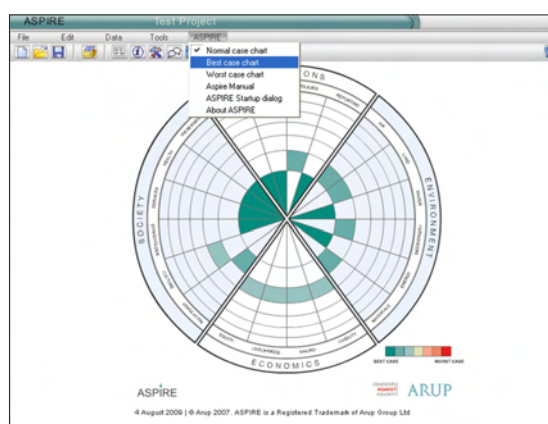


Figure 12: Generating Best Case and Worst Case Chart Scenarios

The chart can be returned to the standard 'averaged' view by going to "ASPIRE" "Normal Case Chart".

## 5. SUPPORT SERVICES

EAP and Arup International Development are offering a range of services to help users get the most out of ASPIRE.

We provide a one day training programme that will enable participants to become proficient in its use. We can carry out independent assessments and/or work with organisations to review and certify their assessments. We can also customise the functionality of ASPIRE to align with specific reporting requirements for various organisations.

If you are interested in finding out more, please contact:

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## APPENDIX 1: Aspire Assessment Case Study (abbreviated)



**maji na ufanisi**

| water and development

[www.majinaufanisi.org](http://www.majinaufanisi.org)

**Maji na Ufanisi Community  
Water & Sanitation Project  
Nairobi, Kenya**



### Introduction

The ASPIRE Assessment was used to appraise a water and sanitation project in the informal settlement of Kiambiu in Nairobi, Kenya. This report summarises the outcome of an independent third party evaluation carried out by Arup. The report presents the outcomes of the ASPIRE assessment, including the visual output and an abbreviated summary of the project performance.

As part of the testing process for ASPIRE, a representative from Arup visited Kenya and met the project team in February 2009 to carry out the independent assessment. ASPIRE was used at the Evaluation stage of the project cycle, forming a post-project evaluation.

### Project brief and scope

The project involves the construction of shower and latrine blocks with a single water kiosk constructed alongside. Five blocks have been constructed since 1999, and they provide clean water, safe sanitation and shower facilities for approximately 70% of the 60,000 people living in the settlement. The project is supported by a Kenyan based Non-governmental Organisation (NGO) called Maji na Ufanisi (Water and Development). Maji initiated the project by consulting with the local community to identify the key water and sanitation needs of the settlement. Once the project became operational, Maji handed over the project to a community based organisation (CBO), known as Kiambiu Usafi Group, who now have complete ownership of the project.

### Methodology

#### Initiating the Assessment

A desk based study was carried out to review the key policies and strategies for the Kenyan urban water sector and information was gathered on the socio-economic context of the project. The list of sub-themes in ASPIRE were reviewed and a few sub-themes which were not applicable were removed. Also the project boundary and objectives were identified. The ASPIRE software was initially populated with the results from the desk study to frame discussions with stakeholders in Kenya.

**Data Collection and Entry**

A representative from Arup visited Maji na Ufanisi in Kenya in order to collect the remaining data for the assessment, as well as to ensure all stakeholders' viewpoints were reflected in the final results. Once in the field, the principle stakeholders were identified for consultation. An initial consultation was carried out with these stakeholders to identify the key strengths and weaknesses of the project. This involved engaging with committee members of the CBO, the community who were the end users, and participants for the water and sanitation facilities and project staff from Maji na Ufanisi. A series of more detailed discussions were carried out with specialists from the respective environmental, community, finance, and engineering teams in Maji na Ufanisi to collect data. The findings from the consultation

and discussions were verified through rapid visual verification and observations during the site visit.

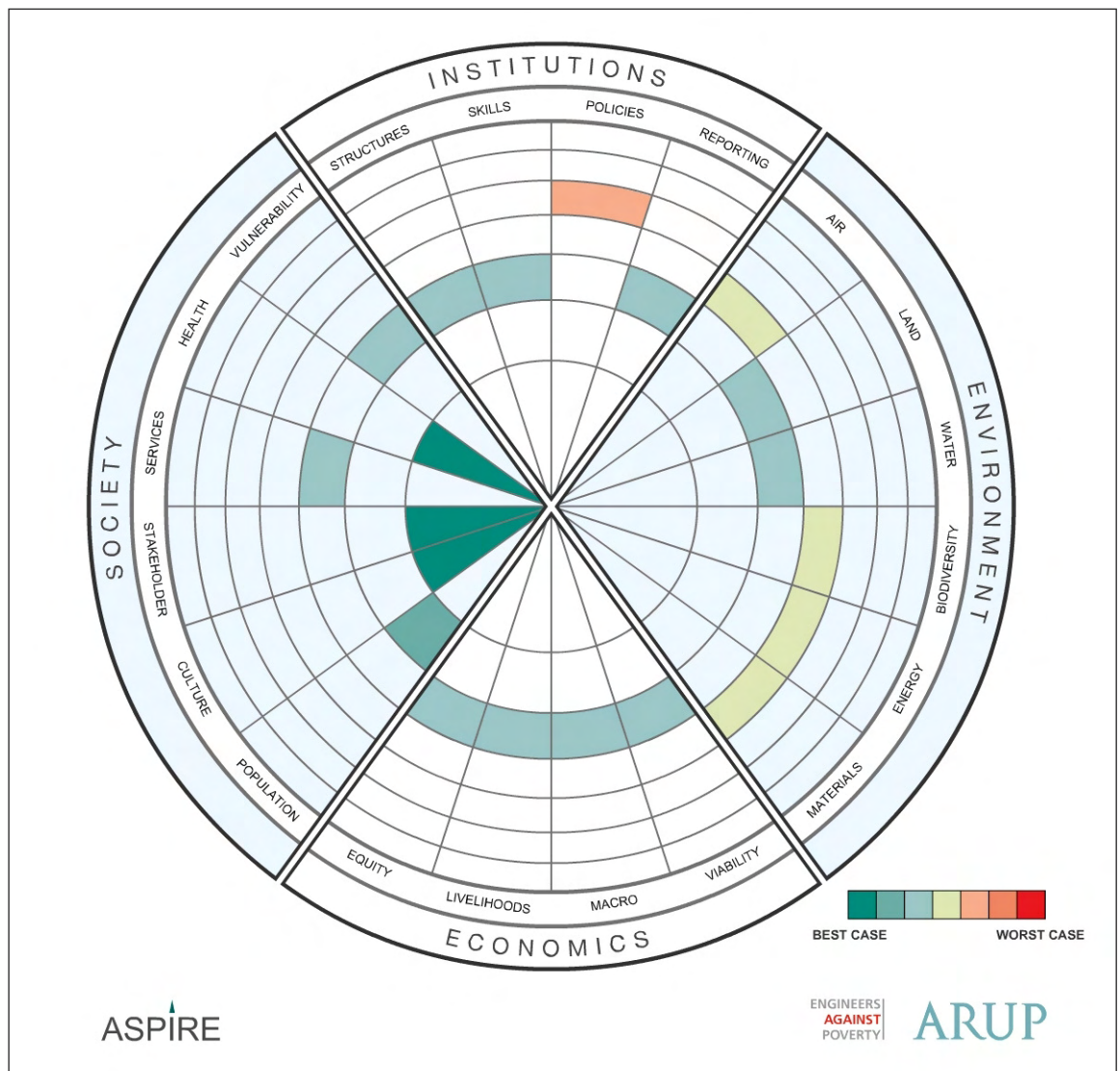
The final data and findings were then entered into the ASPIRE Assessment Tool and a visual output of the project's sustainability generated.

**Discussion and Recommendations**

Below is a graphical illustration of the Sustainability Assessment of the water and sanitation (watsan) blocks at Kiambiu (Figure 11). The key findings are as follows:

The project performs substantively well against all ASPIRE themes, making it an exemplar of small-scale construction projects in the developing country context.

Figure 13: Sustainability Assessment for the watsan blocks at Kiambiu



## Society

The direct impact of this project in relation to the provision of water and sanitation is reflected in the strong performance in the health theme. The unique approach of Maji na Ufanisi – the local NGO who initiated and constructed the water and sanitation infrastructure – of identifying the key community needs and engaging with the community from the project inception has led to on going community ownership, which is reflected in its particularly strong performance in the Society themes overall. The project has also led to wider community cohesion on a range of different developmental issues, beyond the limits of water and sanitation. The increased levels of community organisation and enterprise initiated by the project are helping to build a stronger case for the formal and legal recognition of the settlement by the local authorities.

## Economics

The project also performs strongly in terms of economic viability and equity and has also led to important multiplier effects, such as encouraging a variety of enterprises within the community. For example, the charges for water at the first kiosk generated sufficient income for the CBO to fund 75% of the following watsan blocks. In addition, as a direct consequence of the formation of the CBO to manage the watsan blocks, revenue generation activities have expanded. In the last three years, the CBO has brought office equipment and provided computing and printing services to the local community, and a proposal to buy a nearby plot in order to generate funds from the leasehold is now being considered.

## Environment

The assessment revealed that the project demonstrates good consideration of the impact on local ecosystems. In particular, sanitary waste from the toilet facilities is disposed of to a trunk sewer, as opposed to a local river, and there was minimal wastage of raw materials during construction. The assessment identifies the need for greater consideration of renewable energy sources.

## Institutions

In terms of institutional aspects of sustainability, the project performs well by conforming to the local regulatory policy such as being constructed outside of a 30m riparian zone. In addition, this project strategically aligns with the aims of a number of government initiatives, and the capacity of local government is well understood by the CBO and Maji. The key governance issue related to the project is the lack of legitimacy of the slums, and, although unlikely, the government could theoretically evict residents from the settlement at any time. Because Maji sit on the 'Land and Housing Policy Development Committee' and are in close contact with the local community, they can play an important role in advocating for land tenure with the local authorities.

Issues identified by the assessment for further development to improve sustainability include:

- Incorporating a risk management strategy for future Maji projects;
- Greater consideration of potential renewable energies;
- Greater awareness of the effects of climate change on the sustainability of the project;
- Consideration of Health and Safety guidelines for future projects; and
- Reducing water consumption at the blocks.

ASPIRE has been funded jointly by the  
Institution of Civil Engineers Research & Development  
Enabling Fund and  
Arup's Design Technical Fund

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