

# Stakeholder Perspective Analysis: Factors for Sustainable Policy Development

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## Abstract

Sustainable development requires to identify and assess needs of all relevant stakeholders. For a construction industry stakeholder needs assessment is crucial as it is basis for long term development, as it is providing all infrastructure, while a construction project themselves are short term in long term planning perspective. Stakeholder needs assessment in the construction industry is a challenging aspect due the various stakeholder group time and needs perspective including wide time offset, what would have to be considered in policy development. Governance bodies define regulative norms for project planners and developers and project have to comply as direct requirements. Regulative norms and requirements would have to define norms long term perspective, while project focus is primarily short term due to the project nature. Problem: Construction governance and planning requires assessment of all relevant stakeholder needs, but due to the construction industry specifics, there are challenges to extract and reflect all relevant stakeholder needs. Purpose of current research is to identify policy development aspects for relevant stakeholder identification and need assessment for governance policy developers. Main results: Stakeholder identification aspects for planning analysis were identified. Conclusions: Sustainable development policy has to reflect long term needs, representing the interests of the Non-Stakeholder groups.

## Keywords

Circular economy, Governance, LCA, Stakeholders, Sustainable development

## 1. Introduction

Research is analyzing a Stakeholders identification as a challenge in construction policy planning. When considering any project including real estate developments, all of the relevant people, teams and organizations who would need to be involved are called stakeholders. A stakeholder analysis is a process of identifying these people before the project implementation begins. Purpose for stakeholder analysis on a project level is to identify relevant stakeholders. In construction industry specific challenge is that various stakeholder groups have rather indirect or no involvement in particular projects during planning, while development of concept and construction phases as project itself is focused on finishing the construction phase and handling maintenance. Thus, some relevant stakeholder groups with long term requirement are not included in project planning. Stakeholder is understood as a “holder of interests” with specific methods of analysis and identification of a “stake”, either representing the concept of a strong support. Construction has long term impact and various aspects are recognized after actual construction has been finished. Aspects connected with sustainability have direct impact on project costs to assure better sustainability which leads for conflicting stakeholder interests on project level. City planning requirements have to balance technical and infrastructure service aspects of the city with the environmental, life quality and economical sustainability aspects. Research analyses approaches, options and sample criteria of stakeholder identification aspects as part of basis for city data model for policy development. Project planning is required to comply with the development policy set by responsive governance bodies both on national and municipality level. Different stakeholders have various levels of impact on particular project with regards to how deep is relation and interest, representing momentum of action and actual impact on project. Modern understanding of stakeholders can be attributed to the Stanford University Research Center defined in 1963 (McGrath and Whitty 2017). Relevant stakeholder identification is also an important aspect of lifecycle assessments which is a critical part for application of ISO 14040:2006, as environmental aspects and impacts are related to long term planning (International Organization for Standardization, 2006).

Construction governance and planning requires assessment of all relevant stakeholder needs, but due to the construction industry specifics there are challenges to reflect to all relevant stakeholder needs. Objectives of the current research are following:

- Perform literature overview on stakeholder analysis for urban planning;
- Review identification of “relevant” as a stakeholder assessment method;
- Identify challenging aspects for appropriate definitions for urban planning;
- Discuss problematic aspects of stakeholder identification;
- Identify relevant stakeholder identification factors and develop conclusions.

Current research is aimed at identify factor groups for different stakeholder groups, enabling also identification of “excluded stakeholders”, what are considered as non-relevant.

## 2. Literature Review

Development of understanding in Management approaches, what according to “A Stakeholder Approach” as a strategy have emerged in the mid-1980’s as a critical reference milestone in management methods for Stakeholder analysis was the publication of R. Edward Freeman’s Strategic Management - A Stakeholder Approach in 1984 (Freeman and McVea 2005). Figure 1 illustrates main areas of analysis to identify interaction area of long term planning versus project approach as part of stakeholder typology is to emphasize stakeholder group, which for project are as Non-Stakeholders and which are excluded from project activity plans (Mitchell et al. 1997).

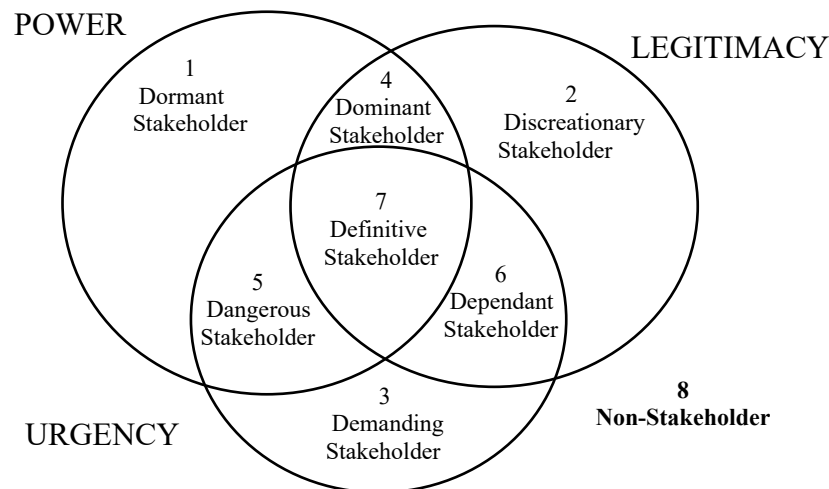


Figure 1. Stakeholder Typology: One, Two, or Three Attributes Present (Mitchell et al. 1997)

Stakeholders have different momentum of time frame to construction project during construction object lifecycle. An approach principle, what is identified in “Toward a Theory of Stakeholder Identification and Salience: Defining the Principle of Who and What Really Counts” as “Stakeholder salience will be positively related to the cumulative number of stakeholder attributes - power, legitimacy, and urgency perceived by managers to be present”, represent functional conflict of interests for a sustainable development (Mitchell et al. 1997). Managers, who make decisions on project level differ from governing institution decision maker with primary business oriented short-term focus on profit. Also, decision making on governance and project levels is split in different time periods, as project planning duration compared to governance and life cycle approach is short term, while defining a governance aspect as policy is long term by the nature of decisions.

Project approach corresponds to a several models which are applicable. Stakeholder analysis assessment is a control centered model. Stakeholder identification according to control centered stakeholder management model is done in one of starting phases of project. It is often done together with financial feasibility analysis and have conflicting aspects, as long-term aspects usually mean reduced project profitability. Stakeholder identification and requirement identification is main criteria for checking that the product at the end of the project, including construction object, which is being made, fulfilled defined specifications in the implementation phase, and that the project progressed with

deliverables on time and within specified budget (Bonnal et al. 2002). Mandatory requirements have been assessed and analyzed after stakeholder identification. Next step is grouping of stakeholders according to their levels of participation, interest and influence in the project; then continuing to define how to involve and communicate each of these stakeholder groups for project delivery purposes. Proper stakeholder identification is considered as one of the most difficult aspects of a project. Stakeholder identification forms framework of the requirements of a project, encouraging understanding and extraction of documented format for decision making. Sustainability requirements are defined in normative documents as legal requirements. Project might define higher requirements than minimum acceptable quality set in regulative requirements. Project decision makers may also enforce higher sustainability meeting criteria.

Project based stakeholder categories for real estate development projects are with identified focuses on: shareholders, employees, clients, suppliers and financiers/creditors as primary and most direct impact groups. Other identified stakeholder groups in real estate projects traditionally are: local and national authorities, social/political organizations, land owners, environmentalists, nearby residents and media (Caputo 2013). Such approach is convenient for project-based approach with focus on short term benefits, while long term impacts are reviewed indirectly together with strategic goals approved by project managing organisation.

In order to include sustainability aspects into governance dimension more systematic approach should be considered where long term perspective is recognized as Systems Theory and Organization Theory applications, focusing more on long term perspective. Systems theory has complex roots, but the basis that is relevant to stakeholder theory was pioneered by Russell Ackoff and C. West Churchman in 1947. These ideas were applied to organizational systems in the early 1970s. Systems theory emphasizes the external links that are part of every organization (Freeman and McVea 2005).

Governance dimension covers long term aspect while there is number of challenges which rises the complexity of the stakeholder domain. The processes of stakeholder identification and management is complex since the domain of project stakeholders is characterized by a multilevel complexity, what Pirozzi lists as:

- the stakeholders are persons, or groups of persons, that have complex systems;
- the stakeholders are different, they can use different “languages” (communication protocols), and they have diversified interests;
- the stakeholders are numerous;
- the relations among stakeholders are context sensitive and influence each other;
- all relations among stakeholders are important and must be monitored;
- the relations among stakeholders can be evolutionary over time (Pirozzi 2019).

Long term interests for the construction and area development directly links with overall quality of life aspects as construction if provisioning of infrastructure for living. The Stiglitz-Sen-Fitoussi Commission highlighted that well-being and quality of life are inherently multidimensional concepts. An indicative list of quality of life indicators, grouped in the following categories, is given: air quality, water quality, soil quality, nature, conditions and hazards, shelter quality, urbanization, communications, nutrition, health, education, economic conditions, security, social conditions and leisure/recreation opportunities (Eurostat 2017).

Sustainable policy definitions and terminology reference two groups of terminology: Circular economy and Smart city, also supported in article “Crossroads of the Concepts of Circular Economy and Smart City” (Zvirgzdins and Geipele 2020). Circular economy approach could be defined as approach in Policy/Planning phase, while smart city approach - as method for maintaining and controlling actual implementation (Implementation and Maintenance phases). Both approaches would have to be considered in planning phase, while defining policy for development. Time and differences in stakeholder needs introduces situations, when project stakeholders have conflicting interests. Project management responsibility is to identify conflicts of interests and requirements, analyze and define approaches to resolve them. A part of the project management responsibility is to manage stakeholder expectations. The practical implementation challenge is to properly identify relevant stakeholders for project decision making, especially for evolutionary complexity aspect with high complexity and scope construction projects like infrastructure. The analysis for time dimension and main policy development as part of stakeholder management aspect is carried out in the article by Varvasovszky and Brugha “A Stakeholder Analysis” (see Figure 2).

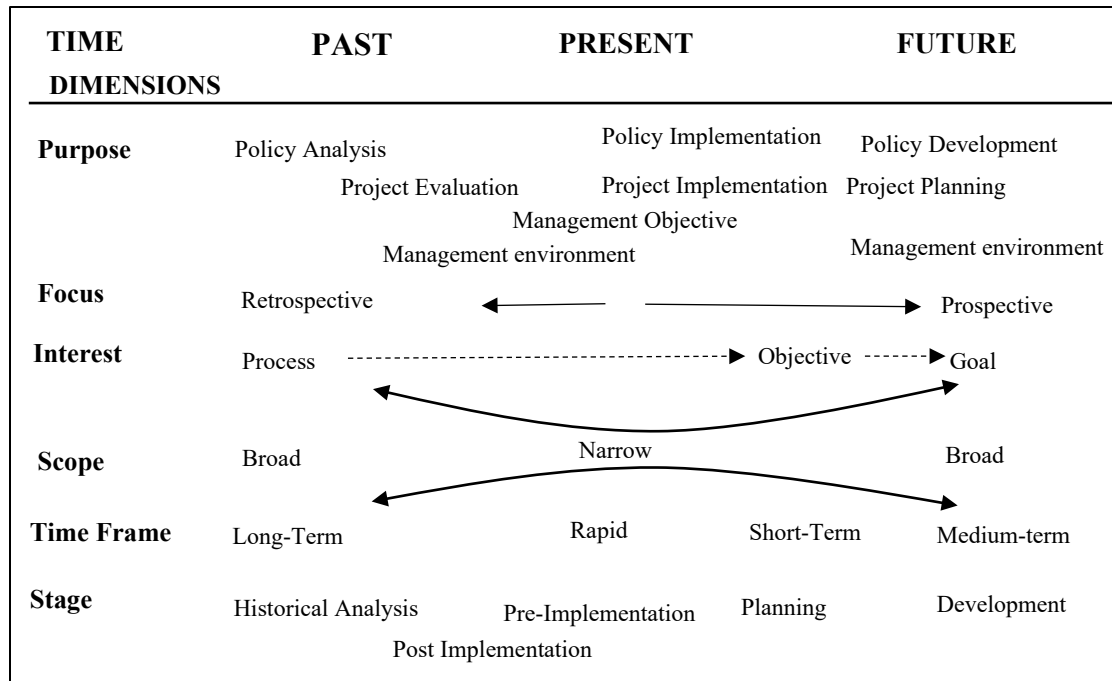


Figure 2. Time focus of stakeholder analysis (past, present or future) by key dimensions to be considered in conducting analysis (Varvasovszky and Brugha 2000)

Basic challenge is to include all aspects for particular project with limited resources including all possible and probable future requirements. It is not feasible and leads to so called functional conflict area, what can be identified as the conflict of interests, where project decision makers have to select applicable alternative as the solution. To achieve long term sustainability, a synergy between interests of both approaches would yield greatest effect. Combining business needs with ecological impact assessments along with supporting infrastructure would keep ecological footprint of construction and related economic activities to a sustainable level. Environmental protection as substantial aspect of synergy is discussed in article “Synergy in Circular Economy” (Geipele et al. 2018).

Literature review reveals different aspects for industry and policy makers. It should be stated that analyzed literature sources focus on specific aspects of situation. Authors of articles included in literature review focus on long term and project-related aspects.

### 3. Methods

To assess research topic and understand the relevant concepts of sustainable policy development, a literature overview was carried out. Research area included property development, governance, stakeholders and urban development planning. Research object is city governance aspects for the stakeholder identification for sustainable long term planning. Literature overview was used to identify articles relevant for the given context. Literature overview provides a theoretical framework for the research, tackles research problem and ensures the basis of current research.

Initial search also revealed that there is an ambiguity in the usage of the terms “stakeholder”, “relevant” and “dimensions”. Thus, further selection criteria were specified. Keywords used for the selection of literature were narrowed down to: “circular economy”, “governance”, “life cycle assessment”, “stakeholder” and “sustainable development”. After the use of key words title, abstract and full text sifts were performed to narrow down the research sample. After that full text assessment and article analysis was performed to determine general gaps related to research problem and to form the backbone of current research.

Identification of stakeholder relevance factors were performed. To develop model presented in Figure 3 several iterations of modeling were performed.

#### 4. Results and Discussion

Sustainable development requirements for various stakeholder groups can be also identified as input for the policy development aspects. Governing requirements, covering various aspects linked to sustainability should be also verifying relevance of factors. City planning have to balance technical and infrastructure service aspects of the city with the environmental, life quality, economical and sustainability aspects. Legacy of previously built infrastructure also should be integrated in city planning.

An assessment sample for dimensions of the stakeholder analysis for governance aspects are presented in Figure 3. Developed model is sample and for particular analysis scoping has to be performed as part of model setup for analysis. Grouping also enables to evolve analysis for specific aspect and presents categories for later analysis with the defined aim. Factor dimensions are identified as primary categories in Figure 3. They are directly related to interest type and momentum of interests in time. For assessment and verification of inclusion of relevant stakeholders in practical applications, the identified dimensions in Figure 3 can be used to establish criteria for impact assessment regarding decisions of different stakeholder groups.

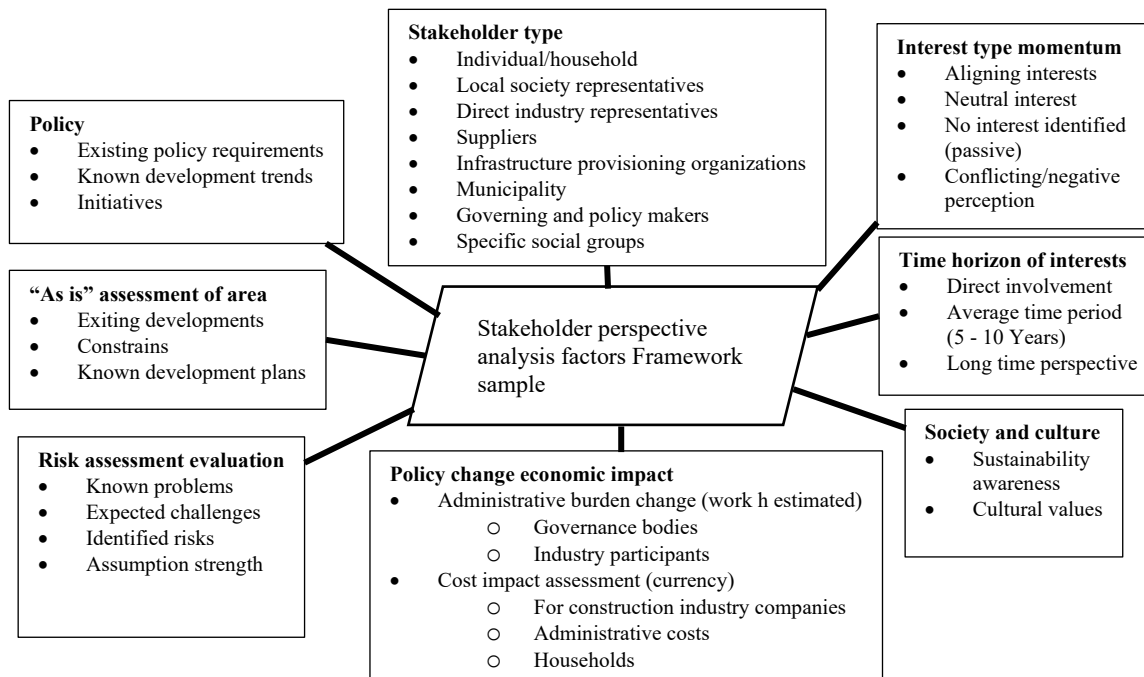


Figure 3. Stakeholder factor assessment sample identified for governance policy makers (developed by authors)

Research identified several factor groups with different impacts on situation and development. Main dimension for analysis of decision is stakeholder group itself. It is presented as “Stakeholder type”. Each type would have different decision-making criteria and process. Policy maker analysis and impact of policy change have to include all relevant stakeholder groups. Two groups “Interest type momentum” and “Time horizon of interest” are linked but due to the nature of dimensions these categories would be applicable for dynamic scenario analysis to differentiate development scenarios for model. Categories “Policy” and ““As is” assessment of area” represents factors of current situation including legacy aspects. Current polices are basis of planned projects, while maintaining previously built legacy is part of infrastructure. Model also considers the area, which is being modeled for decision, thus providing means for scaling.

Supporting dimension groups – “Society and culture” and “Risk assessment evaluation” reveals dimensions for societal response and awareness and assessment of aspects. Risk assessment would assess model boundaries to form criteria for model evaluation.

Dimension “Policy change economic impact” groups several factors which were identified as important for stakeholders. This category represents also a result of modeling. Therefore, iterative approach can be utilized to reach convergence for model stability. If modeling aim is scenario analysis, then iterative approach can be used to present modeling result.

Stakeholder factor dimension analysis identifies and represents a categorization or parameters for in depth analysis approach. Factors for decisions can be expanded with additional criteria for particular analysis, specifics can be added. Stakeholder approach can be applied to various areas of project management including construction projects of modern high-rise timber buildings and other relevant areas (Tupenaite et al. 2021).

Specifics on governance levels also need to cover some external aspects as competitors, terrorists, blackmailers, fraudsters and thieves, which are usually outside project level assessment. Those specific stakeholder groups have an interest and, therefore, could be reflected in the stakeholder assessment, but on project level typically are recognized rather as elements in risk management than relevant stakeholders and elements of stakeholder management. (McGrath and Whitty 2017). Those domains have to be viewed as overall entrepreneurship or social environment covered in general normative legislation.

Governance bodies also need time to reflect to different stakeholder group initiatives while developing policy changes. The factors of stakeholder perspective analysis for impact assessment have to be linked to aim of analysis and use case context. Selection of relevant factors for particular use case have to be context related to analyzed situation and relevant assessed specifics. Model is flexible in terms of potential addition of required factors. Implementation of overall approach proposed would enable comparison of different application instances, thus providing basis for comparison of scenarios.

## 5. Conclusions

Literature overview gave basis for synthesis of proposed stakeholder factor analysis model. Literature researched provided an overview on stakeholder analysis focused urban planning. During research it was identified that terms and keywords used for search of literature sources are leading to version scientific domains. Therefore, authors were doing iterations to select articles with specifics. Two main approaches were identified - project oriented and overall policy or general approach. There was a gap identified as project-oriented approach is primarily related to short term perspective due to the project nature, while policies are elements of long-term planning. Using synthesis approach linking aspects were identified as basis of model.

The term “relevant” was found as a potential risk to miss significant stakeholder groups, possibly by deeming them “non-relevant” or with low relevance. Some relevant stakeholder groups are outside direct stakeholder analysis of a project and have to be reflected in relevant governance policies due to the time offset. Problematic aspects of correct stakeholder identification factor also lead to recognition of time horizon recognition for decision impact analysis. Analysis of model dynamics represents impact assessment within defined boundaries and condition.

For overall aspects on stakeholder and policy planning, identifying long term stakeholder needs and including them in governance policies is critical for sustainable development as project level focuses on short term planning. Sustainable development policy has to reflect long term needs, representing the interests of “Non-Stakeholder” groups, which is not focus of project level planning. Policy makers, while developing policies, have to assess both short term (can be identified as project representing business) and long term (sustainability, society) aspects to comply with the interests of main stakeholder groups for overall sustainable development.

Problematic aspects of stakeholder identification are closely related with interests of particular stakeholder groups. Different stakeholder groups have conflicting interests (social and sustainability versus profitability), thus in same situation a decision might require analysis of decision impact as conflict level or tradeoff of interests to balance interests of different stakeholder groups. A critical point for application of analysis is to assess importance of selected categories, as this might directly impact selected alternatives supported with decisions.

Policies defined and/or known to become into force can be considered as infrastructure level for construction project planning along the technical landscape for project requirements. Infrastructure aspects which are identified in models

“As is” assessment of area” plays critical role in analysis. Legacy items with cultural or social value have to be considered in planning.

Relevant stakeholder identification factors were identified and presented as model in Figure 3. It should be noted that model is presented as a sample. Within particular analysis more specific factors might be identified and added to the model. In specific situations like analysis in polluted areas or with high seismic activity, relevant factors would be critical to be identified and added in analysis.

Overall stakeholder impact analysis model has a multi-level complexity covering stakeholders with complex and diversified interests. Numerous stakeholders are with conflicting interests. Therefore, policy has to provide weighted decisions for compromises. Impact analysis needs to be carried out to develop compromise-based decisions. For convenience results should be expressed in monetary terms, covering expected lifecycle of model to minimize overall expenses for society. Time period for analysis has to be at least 10 years (optimal - 20 years) long to potentially cover also long-term trends to the extent of model assumptions and boundaries.

Model also considers concepts of circular economy and smart city. Circular economy could be applied as approach in policy/planning phase, while smart city approach could be applied as method for maintaining and controlling actual implementation of project. Thus, model would support sustainable development policies to reflect long term needs, while defining requirements for projects and reflecting the interests of Non-Stakeholder groups.

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## **Biographies**

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work experience has been acquired both in the private sector and in public administration, including real estate tax administration for several years in the Riga City Council's Municipal Revenue Department. Her research interests are sustainability development problems of real estate market, household resource management, construction industry, including land use management and institutional economics. She is the author and co-author of more than 60 scientific publications, including scientific monographs "Real Estate and Economic Development: Synergy of Science and Practice" (2019), "Management System of Real Estate Market Development in Latvia" (2015). All monographs are included in the US Library of Congress. She was project manager of project "Coast4us" in INTERREG Central Baltic programme from 2018 – 2020. Currently, Sanda Lapuke is the project manager of projects "Opti-WaMag" and "PROGRESS" in INTERREG Europe programme.