DERIVING STRATEGY AND DEVELOPING BALANCED SCORECARD FOR GENERAL DIRECTORATE OF ENVİRONMENTAL IMPACT ASSESSMENT AND PLANNING IN THE MINISTRY OF ENVIRONMENT AND FORESTRY.

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ABSTRACT

DERIVING STRATEGIES AND DEVELOPING A BALANCED SCORECARD FOR GENERAL DIRECTORATE OF ENVIRONMENTAL IMPACT ASSESSMENT AND PLANNING IN THE MINISTRY OF ENVIRONMENT AND FORESTRY.

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In this study, it is aimed to derive strategies and develop a Balanced Scorecard in General Directorate of Environmental Impact Assessment and Planning in the Ministry of Environment and Forestry.

Firstly, the objectives of the General Directorate defined in the law are reassessed and strategies to realize the objectives are derived by making use of feedback received by conducting surveys to 4 main stakeholder groups which are the staff of the General Directorate, Provincial Directorates, companies preparing EIA reports, other public institutions, and interviews with managers. Following the determination of strategies, performance measures for each strategy are specified, replaced into internal business perspective, stakeholder perspective and learning and growth

perspective in the Balanced Scorecard and and finally deployed to head of departments and branch offices.

Key Words: Balanced Scorecard, performance, stakeholder analysis, public sector

ÖZ

ÇEVRE VE ORMAN BAKANLIĞI ÇEVRESEL ETKİ DEĞERLENDİRMESİ VE PLANLAMA GENEL MÜDÜRLÜĞÜ İÇİN STRATEJİLERİN OLUŞTURULMASI VE "DENGELİ PUAN KARTI" GELİŞTİRİLMESİ

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Bu tez çalışması Çevre ve Orman Bakanlığı, Çevresel Etki Değerlendirmesi ve Planlama Genel Müdürlüğü için strateji oluşturulması ve "Dengeli Puan Kartı" geliştirilmesini amaçlamaktadır.

Çalışmada öncelikle 4 ana paydaş grubu olan Genel Müdürlük personeli, İl Müdürlükleri, ÇED raporu hazırlayan firmalar ve diğer kamu kurumlarına uygulanan anketlerin sonuçları ve müdürlerle yapılan görüşmelerden faydalanılarak Genel Müdürlüğün kanunla tanımlanan amaçları yeniden değerlendirilmiş ve bu amaçlara ulaşmak için stratejiler oluşturulmuştur. Stratejilerin belirlenmesini takiben, her bir stratejik amaç için performans ölçütleri belirlenmiş ve bu ölçütler iş, paydaş ve büyüme ve öğrenme perspektiflerine göre yapılandırılmış ve nihai olarak ta daire başkanlıkları ve şube müdürlüklerine kadar ilişkilendirilmişlerdir.

Anahtar Kelimeler: Dengeli puan kartı, performans, paydaş analizi, kamu kurumu

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DEFINITIONS OF KEY TERMS:

Ministry: The Ministry of Environment and Forestry,

Environment: The biological, physical, social, economic and cultural medium with which living organisms maintain their relationships and interact throughout their lifetime,

Impact: The direct or indirect, temporary or permanent, short-term or long-term, favorable or adverse changes likely to occur in environmental elements during the preparation, construction, and operational or post-operational phases of a project,

Project: Construction work for a project, which is planned to be implemented, implementation of other installations or plans or assessment of underground resources,

Environmental Impact Assessment (EIA): The work to be carried out in the identification of the possible favorable or adverse impacts of projects that are planned to be implemented, in the determination and evaluation of the precautions to be taken in order to prevent or mitigate their adverse impacts so that they will not harm the environment, in the identification and evaluation of the site chosen and of alternative technologies, and in the monitoring and auditing of the implementation of projects,

Strategic Environmental Assessment (SEA): Formalized, systematic and comprehensive process of evaluating the environmental effects of a plan or program and its alternatives including preparation of a written report on findings of the evaluation and using the findings in publicly accountable decision making.

EIA Report: The report, which is submitted by the project developer to the ministry, such that the issues stated above are covered for the activities covered in Annex 1 of EIA Directive.

Environmental State Report: Reports including environmental information for provinces.

Proponent: The private or public organization planning to implement a project, which is covered in Annex 1 of the Turkish EIA Directive.

EIA Meetings: The Scope Determination, Inspection and Evaluation meeting held by the Ministry with the participation of all stakeholders for the purpose determining the scope and criteria of the special format that shall be assigned to a project, and for inspecting and evaluating the EIA reports.

CHAPTER 1

INTRODUCTION

A renewed interest in performance measurement has surged through the government and the nonprofit sector over the past several years in response to demands for increased accountability, pressures for improved quality and customer service, and mandates to "do more with less", as well as the drive to strengthen the capacity for results-oriented management among professional public and nonprofit administrators. Performance measurement systems are critical elements of strategic planning efforts, quality improvement programs, performance management processes, results based budgeting systems, and other management approaches.

The task might seem simple; define goals and objectives and then identify measures of success in accomplishing them. However, in reality a myriad of conceptual, managerial, logistical, cultural, and organizational difficulties, as well as measurement issues, make this a very challenging enterprise.
(http://www.evaluatorsinstitute.com/performance_measurement.htm)

In this study, Balanced Scorecard Methodology is chosen to develop a performance measurement system in General Directorate of Environmental Impact Assessment and Planning (EIAP) functioning under the Ministry of Environment and Forestry.

However, one of the main challenges of developing a performance measurement system is the fact that although performance measures must be derived from strategy, there is no clearly defined and shared strategies in General Directorate of EIAP. There are objective statements defined by law, but they neither reflect the expectations and requests of stakeholder groups nor provide a linkage between general objective statements and daily activities of the staff.

Therefore, the objectives of General Directorate are reassessed and translated into clear, understandable strategies by taking into account the feedback, received by conducting surveys to 4 main stakeholder groups which are the staff of the General Directorate, Provincial Directorates, companies preparing EIA reports, and other public institutions. Although the number of respondents does not allow survey results to be accurate enough, they provide useful insights on what the stakeholders think. The survey results are analysed and factor analysis is carried on by using Statistical Package Program SPSS 11.5. Factor analysis is undertaken to group the highly correlated questions and derive underlying factors responsible for the observed correlations. Therefore, the information contained in questions is condensed into factors. Based on the factors derived from the questionnaires, a SWOT analysis is undertaken.

Strategies are identified based on general objective statements defined by law, SWOT analysis results and interviews with managers and heads of departments.

Later, the Balanced Scorecard Methodology is modified in order to make it more suitable for the General Directorate. Three perspectives, the internal business perspective, stakeholder perspective and learning and growth perspective, are assumed to be considerably significant.

Following the modification of Balanced Scorecard Methodology, performance measures for each strategy are determined. Finally, the performance measures are replaced into each perspective and deployed to head of departments and branch offices.

This chapter includes the general information about General Directorate of Environmental Impact Assessment and Planning, the purpose of the thesis study and the outline of the thesis.

1.1 GENERAL INFORMATION ABOUT THE GENERAL DIRECTORATE OF ENVIRONMENTAL IMPACT ASSESSMENT AND PLANNING

The Ministry of Environment has had full ministry status since 1991. It was previously (1978 to 1991) an under-secretariat in the Prime Minister's office. In 1991, it was reorganized as the Ministry of Environment. It was responsible for the formulation of policies, strategies, and standards regarding the prevention of pollution and protection of the environment. However, the Ministry of Environment and Ministry of Forestry, which were originally two separate ministries, were integrated as the Ministry of Environment and Forestry (MoEF) by the law on 8 May 2003.

Environmental issues have been executed at both the central and local levels. The MoEF has local branches in 81 provinces. These provincial directorates function under the authority of the MoEF and implement the decisions taken by the MoEF and enforce environmental legislation.

The General Directorate of EIAP functions under the authority of The Ministry of Environment and Forestry.

The general objectives of the General Directorate of EIAP defined by the law are:

1. Performing Environmental Impact Assessment and Strategic Environmental Assessment,
2. Preparing environmental inventories and environmental state reports,
3. Controlling and monitoring activities under its responsibility, monitoring international studies and assuring their implementation at the national level,
4. Performing activities and coordinating efforts related with the European Environmental Agency,
5. Preparing, approving and assuring the implementation of 1/25000 scaled territorial plans, which are prepared based on development plans and regional plans, in order to integrate ecological decisions with economic decisions.

The Organization chart of the General Directorate is given in Appendix 1.

The EIA Directive has been executed since 07.02.1993 and it has been revised in 1997 and its last revision was accomplished on 06.06.2002.

The stakeholders of the General Directorate can be grouped as internal and external stakeholders. The internal Stakeholders are the staff and provincial directorates. The external stakeholders are project developers, companies preparing the EIA Report on behalf of the project developers, the public living on the impacted area of the activities under the scope of EIA procedure, representatives of other public organizations attending the EIA commissions (mostly, Ministry of Public Works and Settlements, Ministry of Agriculture and Rural Affairs, Ministry of Energy and Natural Resources, Ministry of Health, Ministry of Culture and Tourism**,** State Hydrological Works, Ministry of Industry and Trade, Municipalities) and the society.

1.2. THE PURPOSE OF THE STUDY:

The participation of different stakeholder groups, which include not only the other public organizations but also companies preparing the EIA reports, project developers and provincial directorates functioning under the Ministry, is indispensable for Environmental Impact Assessment, therefore, getting feedback about their requests and expectations is necessary to be able to reassess the general objectives and derive strategies.

Moreover, there are five different Heads of Departments under the General Directorate and communication, coordination between these Departments and their relations with external and internal stakeholders are quite critical issues. Furthermore, the linkage between daily activities of the staff and the general objectives stated by law and effective implementation of strategy is important.

This study is expected to overcome the difficulties stated above and serve the management of the General Directorate of EIAP for the purposes of reassessing the general objectives stated in law taking the requests and expectations of stakeholders into account and restructuring the General Directorate to increase its efficiency and effectiveness by setting measurable, understandable and clear performance measures which are in compliance with organizations' top-level objectives.

Therefore, the Proposed Balanced Scorecard is supposed to provide a basis for management to enable them to control their management system, get continuous feedback, create opportunities for all levels of organization to enable them to contribute to the overall success of the organization with enhanced communication, motivation and stakeholder satisfaction.

1.3. OUTLINE OF THE THESIS

In the continuing parts of the thesis following subjects are examined. In chapter 2, the literature survey about the evolution of the Balanced Scorecard methodology, different approaches about it and its applications in non-profit and public organizations are examined. Moreover, the basis of factor analyses is described briefly.

In chapter 3, the general methodology proposed to realize the aim of this study is presented. The procedure followed to determine the performance measures is also presented.

In Chapter 4, the Balanced Scorecard methodology is modified and applied to the General Directorate. The performance measures determined in Chapter 3 are broken down into perspectives and cascaded to head of departments and branch offices.

Chapter 5 presents the results obtained from this study. Recommendations about the results of the study and future studies are discussed.

CHAPTER 2

LITERATURE SURVEY

The scope of the literature survey covers the Balanced Scorecard methodology, performance measurement systems in non-profit organizations, balanced scorecards in the public sector, and applications of the Balanced Scorecard methodology in the public sector and factor analyses.

2.1 BALANCED SCORECARD METHODOLOGY

The nature of competition has changed dramatically and traditional financially based performance measurement systems have become less relevant.

Robert Kaplan, a professor at Harvard University, and David Norton, a consultant also from the Boston area, developed the Balanced Scorecard. In 1990, Kaplan and Norton led a research study of a dozen companies exploring new methods of performance measurement. The impetus for the study was a growing belief that financial measures of performance were ineffective for the modern business enterprise. They named this system the 'balanced scorecard'. Recognizing some of the weaknesses and vagueness of previous management approaches, the balanced scorecard approach provides a clear prescription as to what companies should measure in order to 'balance' the financial perspective due to its inherit focus on short-term results, often at the expense of long-

term value-creating activities. Financial measures are lag indicators since they are outcomes of actions previously taken. The Balanced Scorecard complements these lag indicators with the drivers of future economic performance, or lead indicators (Niven, 2002).

The scorecard represents a fundamental change in the underlying assumptions about performance measurement. Traditional performance measurement systems specify the particular actions they want employees to take and then measure to see whether the employees have in fact taken those actions. Therefore, the systems try to control behavior. The balanced scorecard, on the other hand, puts strategy and vision, not control, at the center. It establishes goals but assumes that people will adopt the necessary behaviors and actions to arrive at those goals. The measures are designed to pull people toward the overall vision (Kaplan et al., 1992).

The balanced scorecard can be defined as a carefully selected set of measures derived from an organization's strategy. The measures selected for the scorecard represent a tool for leaders to use in communicating to employees and external stakeholders the outcomes and performance drivers by which the organization will achieve its mission and strategic objectives (Niven, 2002). The balance scorecard provides executives with a comprehensive framework that translates a company's strategic objectives in a balanced set of performance measures. Much more than a measurement exercise, the balanced scorecard can be used as a management system to motivate strategic breakthrough improvements in such critical areas as product, process, customer, and market development. The scorecard establishes the linkage between company's short-term activities and long-term strategies and explains the relationship between them. Moreover, the scorecard enables managers to understand the long-term strategy of staff at all levels and whether departmental and personal targets are in compliance with that strategy (Argüden, et al. 2000).

The balanced scorecard is a management system (not only a measurement system) that enables organizations to clarify their vision and strategy and translate them into action. It provides feedback around both the internal business processes and external outcomes in order to continuously improve strategic performance and results. When fully deployed, the balanced scorecard transforms strategic planning from an academic exercise into the nerve center of an enterprise. (http://www.balancedscorecard.org)

2.1.1 Four Perspectives:

The balanced scorecard design identifies four perspectives, which are the *financial* perspective, the *customer* perspective, *the internal business process* perspective, and *the learning and growth* perspective. The importance with each of these perspectives is that the perspectives themselves and the measures chosen are consistent with the corporate strategy (Mooraj et al., 1999).

The Customer Perspective:

Recent management philosophy has shown an increasing realization of the importance of customer focus and customer satisfaction in any business. If customers are not satisfied, they will eventually find other suppliers that will meet their needs. Poor performance from this perspective is thus a leading indicator of future decline, even though the current financial picture may look good (www.balancedscorecard.org).

Many companies today have a corporate mission that focuses on the customer. How a company is performing from its customers' perspective has become, therefore, a priority for top management. The balanced scorecard demands that managers translate their general mission statement on customer service into specific measures that reflect the factors that really matter to customers. The customer perspective enables companies to align their core customer outcome measures-satisfaction, loyalty, retention, acquisition, and profitability-to targeted customers and market segments (Kaplan et al., 1992).

In developing metrics for satisfaction, customers should be analyzed in terms of kinds of customers and the kinds of processes for which we are providing a product or service to those customer groups.

The Business Process Perspective:

Costumer-based measures are important, but they must be translated into measures of what the company must do internally to meet its customers' expectations.

The internal measures for the balanced scorecard should appear from the business processes that have the greatest impact on customer satisfaction – factors that affect cycle time, quality, employee skills, and productivity, for example. Companies should also attempt to identify and measure their company's core competencies, the critical technologies needed to ensure continued market leadership. Companies should decide what processes and competencies they must excel at and specify measures for each.

The Learning and Growth Perspective:

The measures in the learning and growth perspective of the balanced scorecard are the enablers of the other three perspectives. In essence, they are the foundation on which this entire house of a balanced scorecard is built. Once you identify measures and related initiatives in your customer and internal process perspective, discovering some gaps between your current organizational infrastructure of employee skills and information systems, and the level necessary to achieve your results (Niven, 2002).

There are three principal categories for the learning and growth perspective:

- Employee capabilities

- Information systems capabilities

• Motivation, empowerment, and alignment.

Financial Perspective:

Financial perspective is concerned with how to succeed financially and appear to shareholders.

Figure 2.1 shows how the balanced scorecard provides a framework, through these four perspectives, for translating strategy into operational themes and thereby facilitating the role of management.

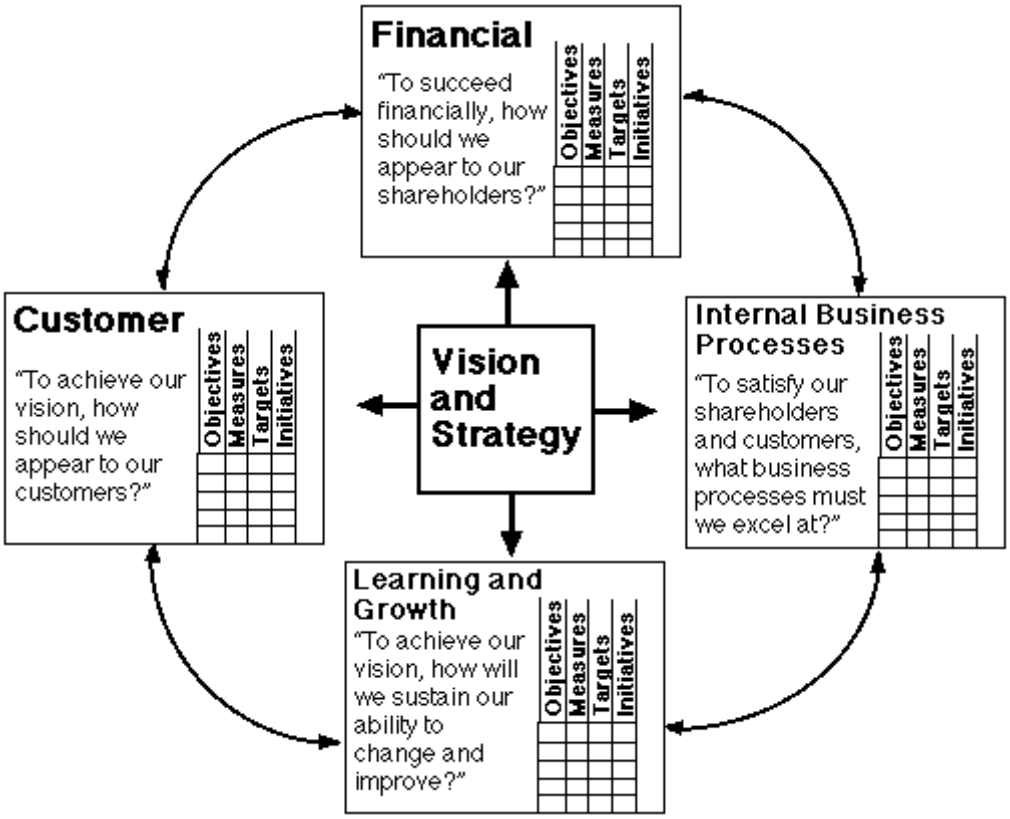

Figure 2.1 Balanced Scorecard Framework (Source: Kaplan et al., 1996b)

2.1.2 Top Ten Reasons for a Performance Measurement System:

1. It improves the bottom line by reducing process cost and improving productivity and mission effectiveness.

2. A performance measurement system such as the Balanced Scorecard allows an agency to align its strategic activities to the strategic plan. It permits -- often for the first time -- real deployment and implementation of the strategy on a continuous basis. With it, an organization can get feedback needed to guide the planning efforts. Without it, an organization is 'flying blind'.

3. The Measurement of process efficiency provides a rational basis for selecting what business process improvements to make first.

4. It allows managers to identify best practices in an organization and expand their usage elsewhere.

5. The visibility provided by a measurement system supports better and faster budget decisions and control of processes in the organization. This means it can reduce risk.

6. Visibility provides accountability and incentives based on real data, not anecdotes and subjective judgments. This serves for reinforcement and the motivation that comes from competition.

7. It permits benchmarking of process performance against outside organizations.

8. Collection of process cost data for many past projects allows us to learn how to estimate costs more accurately for future projects.

9. If you are in a US Federal agency, it's the law. The Government Performance and Results Act of 1993 require a strategic plan, and a method of measuring the performance of strategic initiatives. (http://www.balancedscorecard.org)

2.2 PERFORMANCE MEASUREMENT SYSTEM IN NON-PROFIT ORGANIZATIONS

Performance measures organize information for use by the decision-makers engaged in those activities. Through the measurement, analysis, and evolution of performance data, public officials can identify ways to maintain or improve the efficiency and effectiveness of activities and provide the public with objective information on their results.

Performance measures for non-profit organizations consist of three broad categories of indicators—those that measure service efforts, those that measure service accomplishments, and those that relate efforts to accomplishments—and certain explanatory information. Although a clear division cannot be made in all cases among these categories of measures, they are helpful for understanding what a performance indicator is designed to measure. Performance measures should be reported for services the entity is responsible for providing, whether the governmental entity provides the service itself or contracts for it.

a. ***Measures of efforts:*** Efforts are the amount of financial and nonfinancial resources (in terms of money, material, and so forth) that are put into a program or process. Measures of service efforts also include ratios that compare financial and nonfinancial resources with other measures that may indicate potential demand for services, such as general population, service population, or lane-miles of road.

(1) *Financial information:* This information includes financial measures of expenditures/expenses. These measures include the cost of salaries, employee benefits, materials and supplies, contract services, equipment, and so forth, of providing a service. For example, measures of efforts may include the amount spent for education and the amount spent per full-time-equivalent student; the amount spent on public

transit and the amount spent on public transit per commuter; the amount spent on road maintenance and the amount spent per lane-mile of road on road maintenance; and the amount spent for crime investigations and the amount spent per capita on crime investigations.

(2) *Nonfinancial information:*

Nonfinancial information includes number of personnel and other measures.

(a) *Number of personnel:* Because personnel is the major resource for most government agencies, departments, programs, and services, indicators that measure the number of full-time-equivalent employees or employee-hours used in providing a service often are appropriate measures of resources used. These measures have the effect of removing wage, benefit, and cost-of-living differences from the resource inputs, and may facilitate comparisons over time and with other organizations. For example, measures may include the number of teachers in total or per student, the number of road maintenance workers in total or per lane-mile of road, and the number of uniformed officers assigned to crime investigations or the number per capita assigned to crime investigations.

(b) *Other measures:* These may include the amount of equipment (such as number of vehicles) or other capital assets (such as lane-miles of road or acres of park land) used in providing a service.

b. ***Measures of accomplishments***: Accomplishment measures report what was provided and achieved with the resources used. There are two types of measures of accomplishments—outputs and outcomes. Outputs measure the quantity of services provided; outcomes measure the results of providing those outputs.

(1) *Output measures:*

Output measures include quantity of a service provided and quantity of a service provided that meets a certain quality requirement.

(a) *Quantity of a service provided:* These indicators measure the physical quantity of a service provided. For example, measures may include the number of students graduated; the number of passenger miles provided by public transit; the number of lane-miles of road repaired; and the number of crimes investigated.

(b) *Quantity of a service provided that meets a certain quality requirement:* These indicators measure the physical quantity of a service provided that meets a test of quality. For example, measures may include the percentage of students graduated who have met a minimum prespecified standard of achievement; the percentage of buses meeting a prespecified on-time standard of achievement; the percentage of lane-miles of road repaired to a certain minimum satisfactory condition; and the percentage of criminal investigations performed that result in the identification of prime suspect. In some cases, meeting a quality requirement may turn an "output" indicator into an "outcome" indicator.

(2) *Outcome measures:*

Characteristics of outcome measures are given below:

(a) These indicators measure accomplishments or results that occur (at least partially) because of services provided. Results also include measures of public perceptions of outcomes. For example, measures may include the percentage of students achieving a specified skill-level in reading, the percentage of the population being served by public transportation, the percentage of lane-miles of road in excellent, good, or fair condition,

and the clearance rate for serious crimes or the percentage of residents rating their neighborhood as safe or very safe.

(b) Outcome measures are particularly useful when presented as comparisons with results from previous years, entity-established targets or goals and objectives, generally accepted norms and standards, other parts of the entity, or other, comparable jurisdictions (both public and private). For example, measures may include 75 percent of the students achieving a specified skill-level in reading when the school district's objective is for at least 70 percent of the students to achieve the specified skill-level in reading.

(c) Sometimes the secondary effects of a service on the recipients, state, or community may be identified and may warrant reporting. These measures include significant indirect consequences, intended or unintended and positive or negative, that occur as a result of providing a service. For example, measures may include a decrease in the unemployment rate in a community as a result of a decrease in the school dropout rate (more students are staying in school and are not looking for employment). These measures often are difficult to identify and to relate to the actual service being provided. This occurs because of an inability to establish a definite correlation between the secondary effects and the service and because extraneous factors may affect the results.

c. Measures that relate efforts to accomplishments:

(1) Efficiency measures that relate efforts to outputs of services: These indicators measure the resources used or cost (for example, in dollars, employee-hours, or equipment used) per unit of output. They provide information about the production of an output at a given level of resource use and demonstrate an entity's relative efficiency when compared with previous results, internally established goals and objectives, generally accepted norms or standards, or results achieved by similar jurisdictions. For

example, measures may include the cost per full-time-equivalent student or the cost per student promoted or graduated; the cost per transit passenger or per passenger-mile; the cost per lane-mile of road repaired in total or repaired to good condition; and the cost per serious crime investigated or per arrest.

(2) Cost–outcome measures that relate efforts to the outcomes or results of services: These measures report the cost per unit of outcome or result. They relate costs and results so that management, elected officials, and the public can begin to assess the value of the services provided by an entity. For example, cost–outcome measures may include the cost per student who achieves a specified skill-level gain in reading; the cost per transit passenger arriving at his or her stop within a specific time schedule; the cost per lane-mile of road improved or maintained in excellent, good, or fair condition; and the cost per serious crime cleared by indictment. (http://www.seagov.org/perfmeasures/categori.html)

2.3 BALANCED SCORECARDS IN THE PUBLIC SECTOR

The design of a public service company must start from the identification of stakeholders and of their requests. Once the identification of stakeholders and of their needs has been completed, it is possible to fix the precise goals of the organization, *i.e.* the kind and the target of the service to be provided. (http://bham.ac.uk/EAA/eaa95/abstracts/188.htm).

Neither the public sector nor the not-for-profit organizations look to financial rewards as their ultimate show of success. Instead, they seek to achieve lofty missions aiming at improving society. As mission-focused organizations, they must change the architecture of the balanced scorecard, elevating the role of the mission and customers, and reducing the influence of financial indicators. The balanced scorecard was originally designed with the profit-seeking enterprise in mind and its basic framework must be modified for

public sector organizations to utilize it to full advantage. Figure 2.2 displays a public sector Balanced Scorecard model (Niven, 2002).

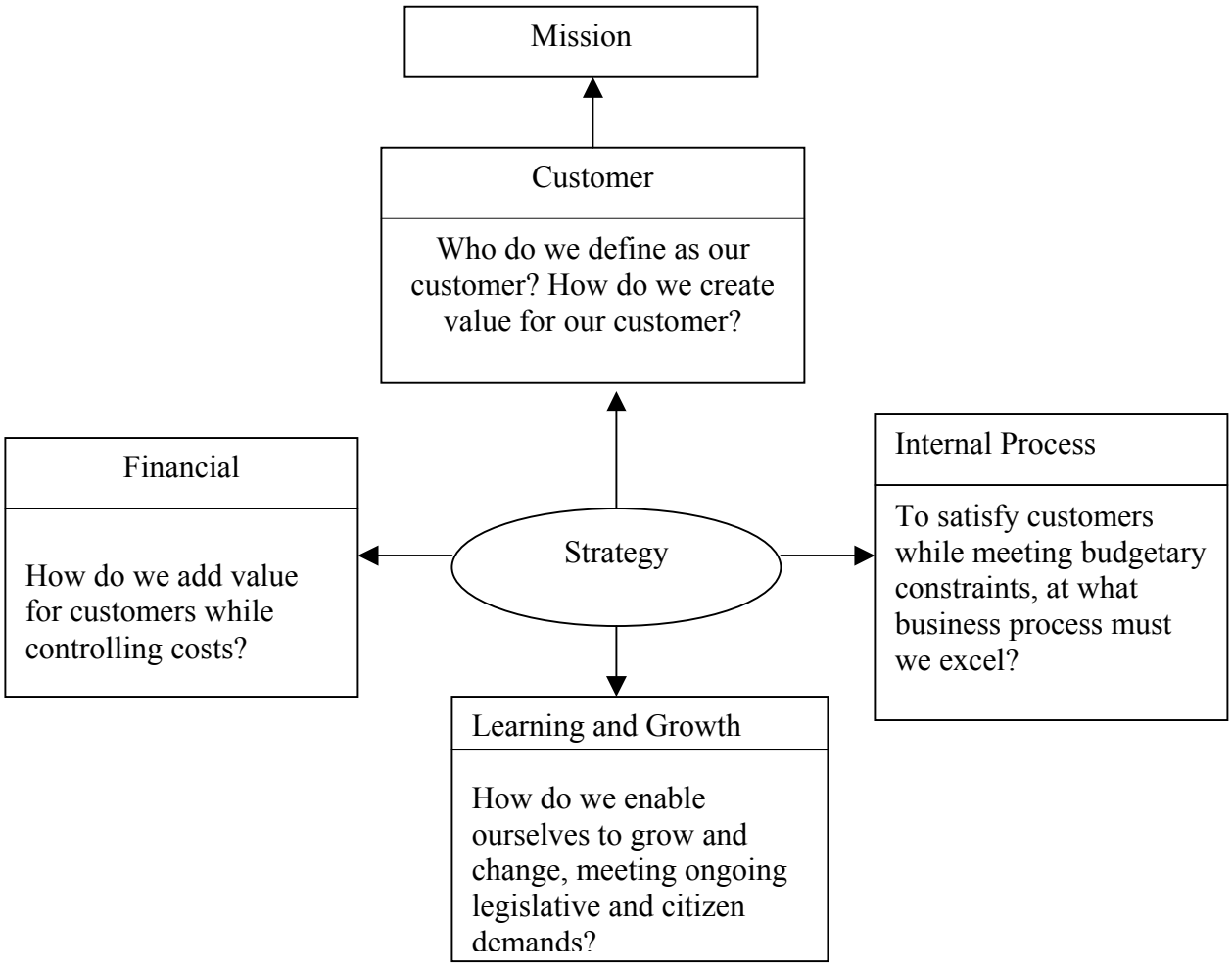

Figure 2.2 The Public Sector Balanced Scorecard Model

2.4 SOME APPLICATIONS OF THE BALANCED SCORECARD METHODOLOGY IN THE PUBLIC SECTOR

The Balanced Scorecard developed by the United States Department of Energy Federal Procurement System in 2003 is one of the applications of Balanced Scorecard in public

organizations. In this study, objectives for the customer, financial, internal business and learning and growth perspectives are determined as indicated in Figure 2.3 based on the organization's mission, vision and strategies. Furthermore, performance measures for each objective are determined and targets for each performance measure are set. (http://professionals.pr.doe.gov)

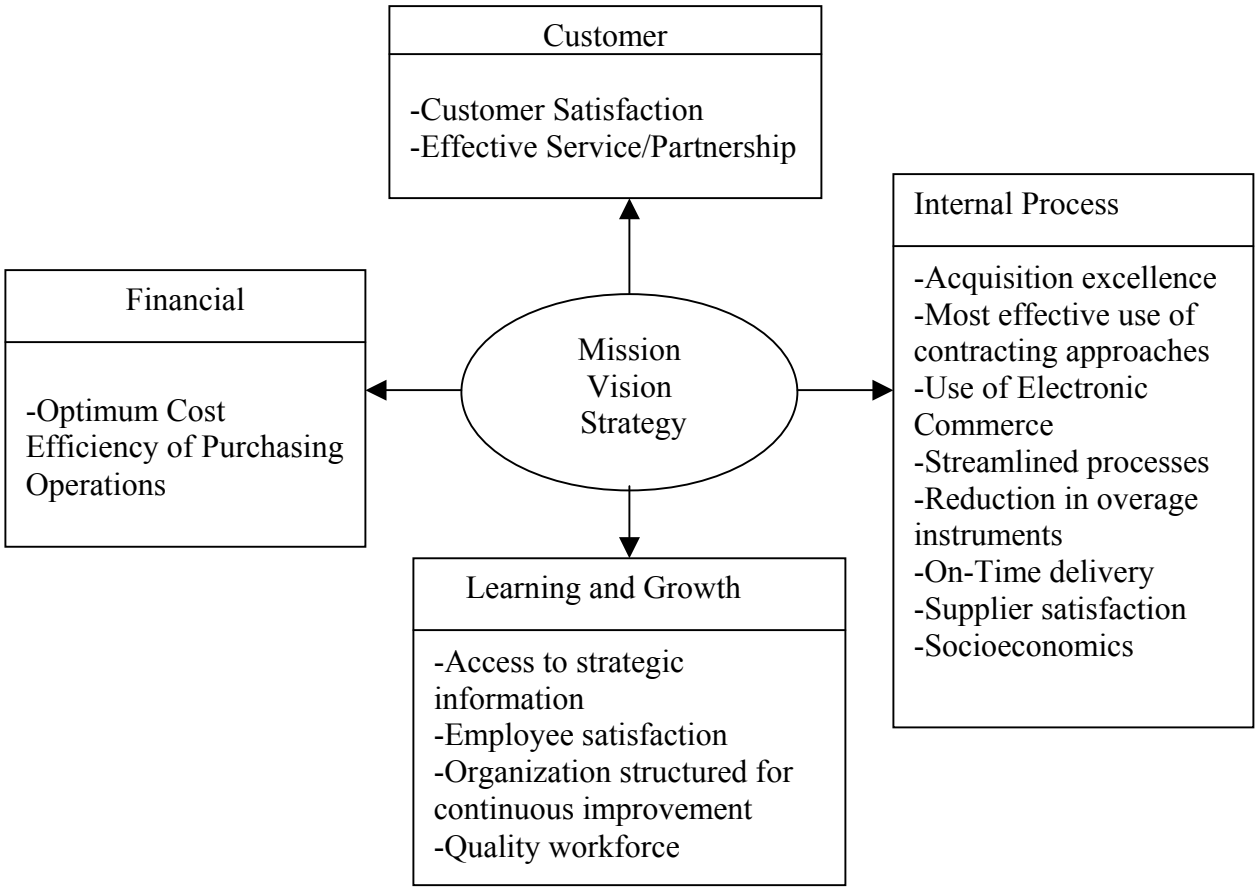

Figure 2.3 Balanced Scorecard Model developed by Department of Energy Federal Procurement System

The Balanced Scorecard developed by United States Army is another application of Balanced Scorecard in public organizations. Known as the Strategic Readiness System, the Army's Balanced Scorecard has been implemented and the Army has developed

over 300 scorecards. The Army will further deploy to divisions and separate brigades, consisting of around 10,000 soldiers each, demonstrating the depth and breadth of the Army's Balanced Scorecard initiative and leadership commitment to its success. While the Army continues to meet its mission objectives on numerous fronts, it is orchestrating a profound and comprehensive effort to transform itself into a technically advanced, nimble force able to respond rapidly and decisively across a full spectrum of operations. To facilitate that change, the Army instituted an organization-wide Balanced Scorecard initiative in October 2001 to improve overall communication, accountability and performance measurement against the Army's strategic vision as articulated on its strategy map.

The Army Balanced Scorecard provides leadership with accurate, objective, predictive, and actionable readiness information to dramatically enhance strategic resource management. For the first time in its history the Army has an enterprise management system that integrates readiness information from both the Active and Reserve Components – enabling the Army to improve support to Combatant Commanders, invest in soldiers and their families, identify and adopt sound business practices, and transform the Army. This reporting system markedly improves how it measures readiness by gathering timely information with precision and expands the scope of the data considered. The Army is further developing this system to leverage leading indicators and predict trends – avoiding issues that affect readiness before they become problems. (http://www.bscol.com/training/success/army/)

The United States Postal Service (USPS) has also been using a balanced scorecard since 1996 to focus its strategy and communications internally. It ties performance targets in the scorecard to the pay of the top 800 managers and plans to cascade this down to mid- and lower-level managers (http://www.aspanet.org/bscorecard/meetings). Its mission is to provide for the processing of all incoming postal mail. Its vision is to provide cost-

effective mail services that meet changing needs and exceed customer expectations. Balanced scorecard objectives and performance goals and standards for each objective are explained below.

Customers: Reduce the amount of time to process and deliver internal mail.
Performance Goal: Improve Customer Service
Performance Standard: Zero customer complaints regarding on-time delivery of mail.

Financials: Reduce customer's mailing costs by utilizing presort mail rates.
Performance Goal: Reduce mail costs for program offices by utilizing presort mail rates
Performance Standard: Increase the use of presort mail services.

Internal Processes: Maintain the highest security standards for incoming, outgoing, and internal mail distribution.
Performance Goal: Improve personnel safety
Performance Standard: Establish improved sensing/ID processes for incoming mail.

Learning and Growth: Enhance the effectiveness, knowledge, and satisfaction of Mail Service Business Line Employees.
Performance Goal: Fully train and develop staff
Performance Standard: 100% of staff attends at least 1 class or seminar per quarter. (http://ma.mbe.doe.gov/wcf/MAILplan.PDF)

2.5 FACTOR ANALYSIS

The general purpose of factor analyses is to condense the information contained in a number of original variables into a set of new, composite dimensions or factors with a minimum loss of information (Hair et al., 1995). Variables can be grouped by their correlations. That is, all variables within a particular group are highly correlated among themselves but have relatively small correlations with variables in a different group. It is conceivable that each group of variables represents a single underlying factor that is responsible for the observed correlations.

Once the variables are specified, a decision must be made concerning the method of extracting the factors and the number of factors selected. There are two basic methods known as principal component analyses (PCA) and maximum likelihood method.

Principal Component Analysis is a statistical technique that linearly transforms an original set of variables into a substantially smaller set of uncorrelated variables that represents the most of the information in the original set of uncorrelated variables. A small set of uncorrelated variables is much easier to understand and use in further analyses than a larger set of correlated variables (Lewis-Beck, 1994). Principal components are linear combination of observed variables, possessing properties such as being orthogonal to each other, and the first principal component representing the maximum amount of variance in the data, the second representing the second largest and so on (Kim, 1985). For example, an organizational psychologist may have 20 Likert-type items measuring various aspects of job satisfaction (e.g., pay, working conditions, supervision, etc.). There are clearly too many variables to use as independent, intervening, or dependent variables in a subsequent statistical model. If the variables are correlated, and especially they are highly correlated, then we can linearly transform the p correlated variables into a relatively small set of k uncorrelated

variables such that the k derived variables, if considered as independent variables, will maximize the prediction of the original p variables. The k-derived variables, which maximize the variance accounted for in the original variables, are called principal components (Lewis-Beck, 1994).

An analysis of principal components often reveals relationships that were not previously suspected and thereby allows data reduction and interpretations that would not ordinarily result. With component analysis, unities are inserted in the diagonal of the correlation matrix, so that the full variance is brought into the factor matrix. Each factor accounts for the maximum possible amount of the variance of the variables being factored (Gorsuch, 1974).

The eigenvalue for a given factor measures the variance in all the variables, which are accounted for by that factor. Since the sum of all eigenvalues is equal to the number of variables in the analysis (when the correlation matrix is used), by dividing the first eigenvalue by the m (the number of variables), the proportion of the variance explained by a given component can be obtained (Lewis-Beck, 1994).

Conversely, with the maximum likelihood method, estimated communalities are inserted in the diagonal. Once the diagonal elements are replaced with communality estimates, the extraction procedure is identical to that of principal components. Communality of an observed variable is simply the square of the factor loadings for that variable. Since squared multiple correlations (SMC) are a lower bound for the communality in the population, they are often used for communality estimates (Gorsuch, 1974).

In deciding on the number of factors to extract, three criterion are mostly used:

1.*Latent root (Eigenvalue) Criterion:* Only the factors having eigenvalues greater than one are considered significant. An eigenvalue represents the amount of variance accounted for by a factor. This criterion allows us to be fairly sure that the factor will account for the variance of at least one of the variables used in the analyses.
2. *Percentage of Variance Criterion:* It is an approach in which the cumulative percentages of the variance extracted by successive factors are the criterion.
3. *Scree Test Criterion:* This test is derived by plotting the eigenvalues against the number of factors in their order of extraction and the point at which the curve begins to straighten out is considered to indicate the maximum number of factors to extract.

The factor loadings listed under the "Factor Matrix" represent the correlations between factors and the variables themselves. These values range from –1.0 to +1.0. To interpret the factors first, the unrotated factor matrix is computed. In most instances, the unrotated factor matrix will not provide information that offers the most adequate interpretation of the variables. The factor loading is the means of interpreting the role each variable plays in defining each factor. *Factor loadings* are the correlation of each variable and the factor. Loadings indicate the degree of correspondence between the variable and the factor, with higher loadings making the variable representative of the factor. Rotation is used to simplify the factor structure. The ultimate effect of rotating the factor matrix is to redistribute the variance from earlier factors to later ones to achieve a simpler and more meaningful factor pattern. The mostly used rotation is orthogonal (VARIMAX) rotation in which the axes are maintained at 90 degrees. The last step is interpreting the factor matrix and assigning meanings to the pattern of factor loadings (Hair et al., 1995).

Cronbach's Alpha (Coefficient α): This is a measure of the internal consistency of a set of items. A large coefficient alpha indicates that each item is highly correlated with entire test.

CHAPTER 3

METHODS

The general methodology of this thesis is indicated in Figure 3.1.

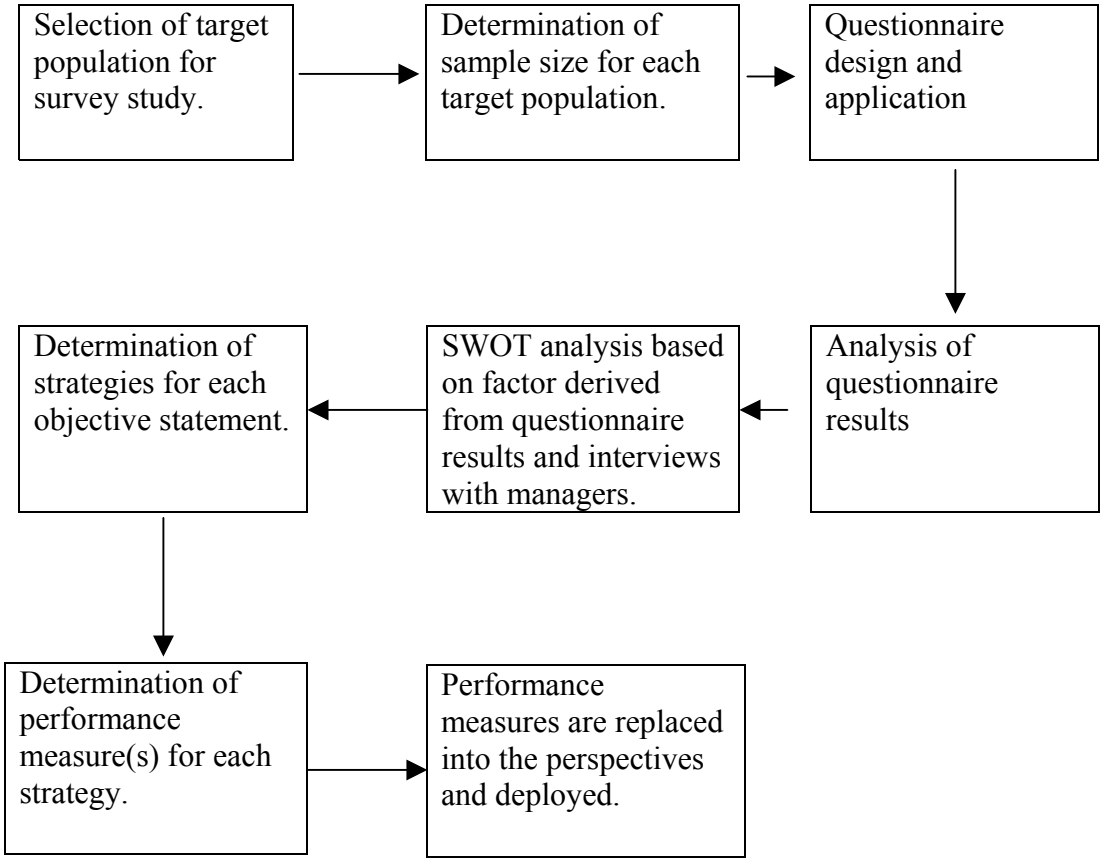

Figure 3.1 General Methodology

The methodology used for the analysis of questionnaires is given in Figure 3.2.

3.1 SURVEY DESIGN

The survey design part includes objectives, selecting population, determining sample size, questionnaire design and application, the methodology used for the analysis of questionnaire results and analysis of questionnaire results.

3.1.1 Objectives:

The survey study includes assessing satisfaction level of stakeholder groups identified in Chapter 1 except for the public living on the impact area of the activities involved in EIA procedure, proponents, municipalities and society as a whole. These stakeholder groups are excluded from the survey study due to the difficulty of accessing them.

In this study, surveys are expected to serve as a tool to assess stakeholders' satisfaction level prior to SWOT analyses. After conducting the surveys, the statistical package program SPSS 11.5 is used to group questions and determine the factors affecting the satisfaction level of both internal and external stakeholders. Later, the internal weaknesses and strengths and external opportunities and threats are determined based on the factors derived from the survey results.

3.1.2 Selecting The Population:

The population selected from the stakeholder groups is identified in Chapter 1. The population of stakeholders to which survey was conducted was selected as follows. The distribution for EIA Reports according to the companies between 06.06.2002 (the date of last revision of EIA Directive) and 31.01.2003 is shown in Table 3.1.

Table 3.1

The Distribution For EIA Reports According To The Companies

The Name of Companies	Number of Reports Prepared
M&T Şti.	6
Çınar Müh.	6
PRD	6
DEMO Ltd. Şti.	5
Serdar Mühendislik	4
Yılmaz Müşavirlik	2
NEN Mühendislik	2
Sürekciler A.Ş.	2

8 companies that prepared more than one EIA report within the specified period are tabulated in Table 3.1 and chosen as target population, since their contribution to this study is assumed to be more vital by senior executives of General Directorate.

There are 77 provinces involved in EIA procedure between 07.02.1993 and 31.01.2003 and these provinces were chosen as target population. 7 major public institutions which are Ministry of Public Works and Settlements, Ministry of Agriculture and Rural Affairs, Ministry of Energy and Natural Resources, Ministry of Health, Ministry of Culture and Tourism**,** State Hydrological Works, Ministry of Industry and Trade were chosen as the target population.

There are 60 persons working for EIAP and they were all chosen as the target population.

To summarize, the target population for each stakeholder group is given in Table 3.2.

Table 3.2

Target Population For Each Stakeholder Group

Stakeholder Groups	**Target Populations**
The Staff of the General Directorate	All staff.
Provincial Directorates	77 Provincial Directorates.
Companies Preparing EIA reports	7 companies (Table 3.1).
Other Involved Public Institutions	7 public institutions.
Project Developers	No survey study is to be conducted.
Public Living on The Impact Area of Activities	No survey study is to be conducted.
Society	No survey study is to be conducted.
Municipalities	No survey study is to be conducted.

3.1.3 Determining Sample Size:

The Statistical analysis was undertaken to determine the sample size for provincial directorates. There are 77 provinces as the target population. In order to determine the sample size for applying questionnaire, the formula given below (Renckly, 1996) was used.

$$n = \frac{N * Z^2 * 0.25}{[d^2 * (N-1)] + [Z^2 * 0.25]} \qquad (3.1)$$

Where n=sample size required

N = Total population size

d = precision level, expressed as a decimal (i.e., .01, .03, .05, etc)

Z = Number of standard deviation units of the sampling distribution corresponding to the desired confidence level.

Inserting the necessary values into formula, the necessary sample size for provincial directorates was found as:

$$n = \frac{77 * 1.4395^2 * 0.25}{[0.15^2 * 76] + 1.4395^2 * 0.25} = 17.9 \qquad (3.2)$$

The necessary sample size was found to be 18 at an 85% confidence level and + or – 15% accuracy level (Z= 1.4395 from table of critical values of t). Considering the risk on questionnaires that they may not return from all members who are in this sample, this number was taken as 20.

20 Provincial Directorates with the larger number of EIA Reports involved were chosen by purposeful sampling since the aim is to select "information-rich" cases. The frequency distribution for EIA reports according to the 20 provinces with larger number of EIA Reports involved between 07.02.1993 and 31.01.2003 was analyzed and shown in Table 3.3.

Table 3.3

Frequency Distribution for EIA Reports According to Provinces

Provinces	Number of EIA Reports	Percentage of EIA Reports	Cumulative Percentages
Antalya	67	8,30	8,30
İzmir	57	7,06	15,37
İstanbul	55	6,82	22,18
Kocaeli	45	5,58	27,76
Muğla	43	5,33	33,09
Tekirdağ	38	4,71	37,79
Çanakkale	37	4,58	42,38
Bursa	27	3,35	45,72
Sakarya	24	2,97	48,70
Ankara	22	2,73	51,43
Bilecik	22	2,73	54,15
Kayseri	21	2,60	56,75
Manisa	20	2,48	59,23
Konya	20	2,48	61,71
İçel	20	2,48	64,19
Balıkesir	18	2,23	66,42
Hatay	14	1,73	68,15
Adana	14	1,73	69,89
Afyon	14	1,73	71,62
Aydın	12	1,49	73,11

The survey was conducted for all staff. There are 8 companies as the target population and the survey was conducted for all of these 8 companies given in Table 3.1. There are 7 major public institutions involved in EIA procedure and survey was conducted to all of these public institutions.

The target sample sizes, the number of respondents for each target sample and the communication tool for the application of questionnaires are shown in Table 3.4 below.

Table 3.4

Application of Questionnaires

Target Groups	Target Sample Sizes	Number of Respondents	Communication Tools
The Staff of General Directorate	60 persons	50 persons	Direct contact
Provincial Directorates	20 different provincial directorates	All	Fax, mail and e-mail
Companies Preparing EIA Reports	7 different companies	All	Direct contact and e-mail
Other Public Institutions	7 different public institutions	All	Direct contact

3.1.4 Questionnaire Design and Application:

4 different questionnaires are designed for the four different stakeholder groups. They are staff questionnaire, provincial directorate questionnaire, company questionnaire and public institutions questionnaire and given in Appendix 2, 3, 4 and 5 respectively.

Firstly, the questions to be used in questionnaires were determined with management to be able to receive feedback about the general expectations and requests of different stakeholder group. Although the questions in questionnaires are not expected to cover all the expectations and requests of the stakeholder groups, the aim is the overall assessment. Then the 5-point Likert-type scales with anchors of "strongly agree", "agree", "neutral", "disagree" and "strongly disagree" were chosen as the reasonable response format since it allows the stakeholders to respond in varying degrees to each question in questionnaire. Finally the introduction was written for each questionnaire and content of the final questionnaire was determined.

There are 43 questions with Likert type scales in the staff questionnaire. It consists of 4 parts, which are technical infrastructure, management, communication with other organizations and general overview to EIA. The technical infrastructure part consists of 17 questions, the management part consists of 10 questions, the communication with other organizations part consists of 5 questions, and the general overview to EIA part consists of 11 questions.

There are 27 questions with Likert type scales in the company questionnaire. It consists of 3 parts, which are the Communication and Coordination with the Ministry, the EIA Meetings and the Benefits of EIA. The Communication and Coordination with Ministry part consists of 6 questions, the EIA Meetings part consists of 15 questions, and the Benefits of the EIA part consists of 6 questions.

There are questions with Likert type scales in the provincial directorate questionnaire. It consists of 4 parts, which are the Technical Infrastructure, the Communication and Coordination with the Ministry, the Overall Overview of the EIA, and the Other Associated Public Institutions parts. Technical Infrastructure part consists of 12

questions, the Communication and Coordination with the Ministry part consists of 8 questions, the Overall Overview of the EIA part consists of 13 questions and the Other Associated Public Institutions part consists of 9 questions.

There are 28 questions with Likert type scales in the public institutions questionnaire. It consists of 3 parts, which are the Communication and Coordination with the Ministry, the EIA Meetings, and the Benefits of EIA. The communication and Coordination with the Ministry part consists of 9 questions, the EIA Meetings consists of 14 questions, and the Benefits of EIA part consists of 5 questions.

There are many stakeholder groups involved in the EIA process and the General Directorate of EIAP is responsible for the coordination of this entire stakeholders. Factor analysis is undertaken to derive the underlying factors responsible for the observed correlations among the questions and determine strengths, weaknesses, opportunities, and threats based on the feedback received about the effectiveness of the communication and coordination efforts of the General Directorate, the effectiveness of the EIA meetings, and the perceived benefits of the EIA. However, it is not expected to be able to cover all the expectations of stakeholders and identify all strengths, weaknesses, opportunities, and threats by survey study since the questions in questionnaires are prepared only with the participation of the managers of the General Directorate.

3.1.5 The Methodology Used For The Analyses Of Questionnaire Results:

The flowchart of the methodology used for the analyses of questionnaires is indicated in Figure 3.2.

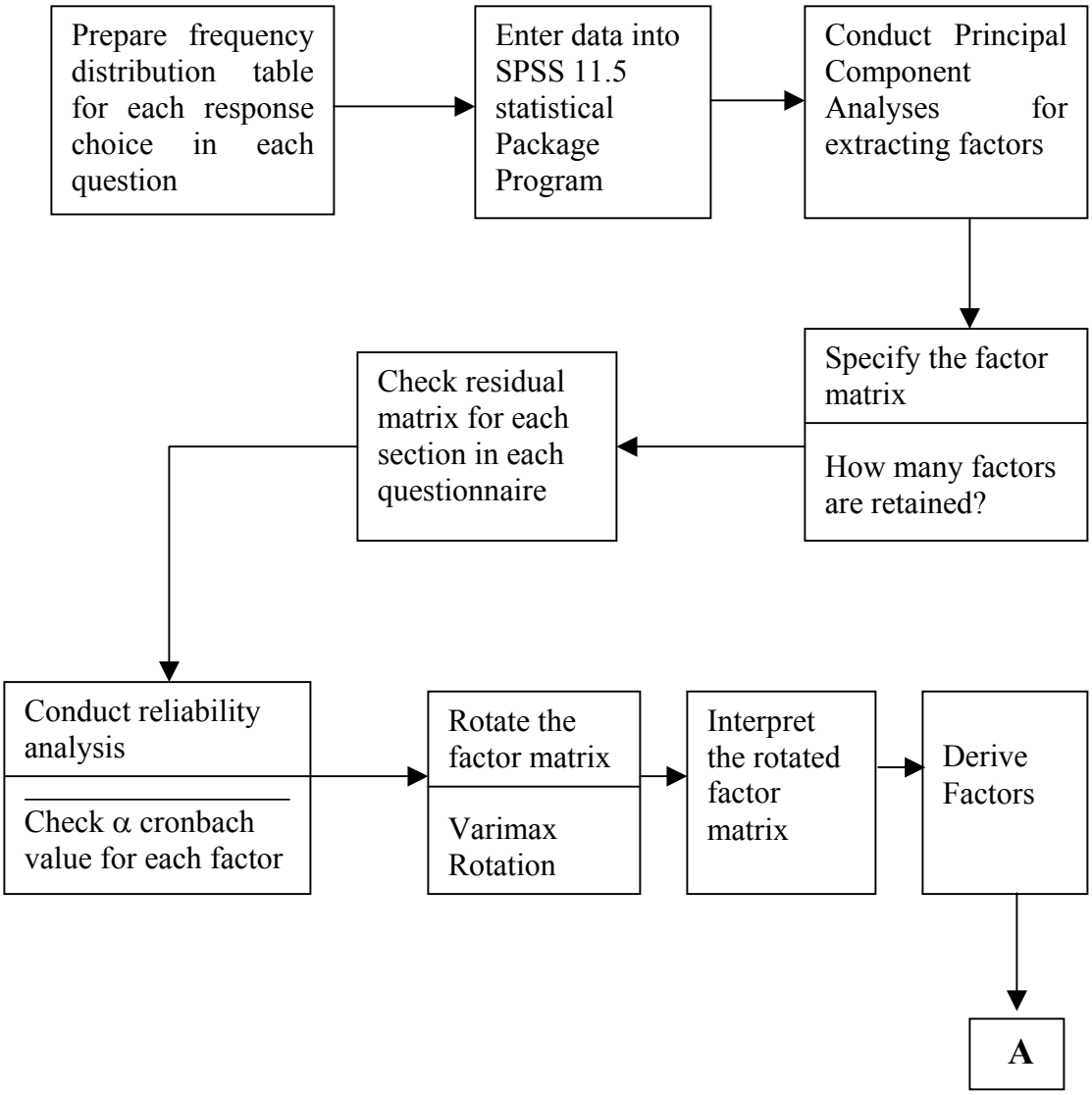

Figure 3.2 Methodology Used for the Analysis of Questionnaires

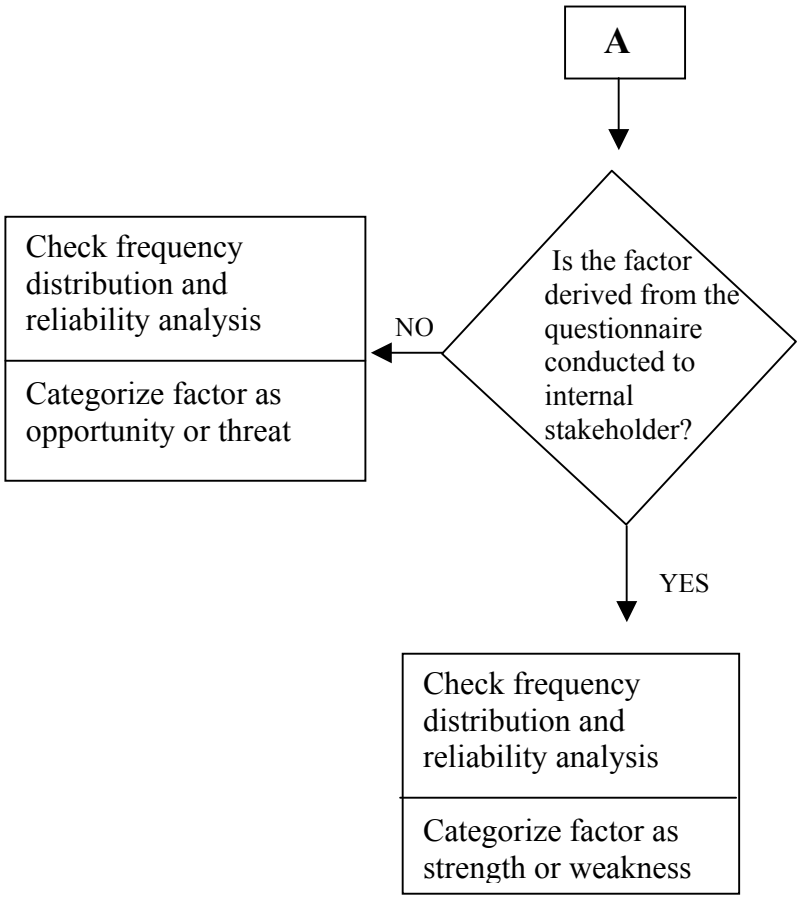

Figure 3.2 Methodology Used for the Analysis of Questionnaires (Continued)

The methodology indicated in Figure 3.2 is explained as follows;

1. Frequencies distribution and associated percentages for each Likert-type question in staff questionnaires are prepared and tabulated in Appendix 6.

2. Data are entered into SPSS 11.5 for windows statistical package program.

3. Principal Component Analyses method is conducted to extract factors.

4. The number of factors to be retained is decided by latent root (Eigenvalue) criterion.

5. Residual matrix for each section in each questionnaire is checked.

6. Reliability Analysis is conducted and Cronbach's Alpha (Coefficient α) value is checked to measure the internal consistency for each factor.

7. Factor matrix is rotated by Varimax Rotation to be able to interpret the factors.

8. Rotated factor matrix is interpreted and factors are derived.

9. If the factor is derived from the questionnaire conducted to internal stakeholders, the factor is categorized as strength or weakness based on the frequency distribution for each response choice given in Appendix 6 and reliability analysis results in Appendix 7. The frequency distribution table provides the percentage of responses for each response choice in each question and reliability analysis, which is based on 5-point likert type scales, provides the mean value for each question. Therefore if the mean value for the group of questions represented by a factor is greater than 3, then the factor is assumed to be strength since the expressions in this group of questions are relatively agreed by respondents.

10. If the factor derived from questionnaire conducted to external stakeholders, the factor is categorized as opportunity or threat based on the frequency distributions for each response choice and reliability analysis results as explained above.

3.1.6 Analyses of Questionnaire Results:

The methodology given in Figure 3.2 is used for each section in each questionnaire. Since varimax factor rotation is applied for all cases, unrotated factor matrices are not given in the analyses of the questionnaire results.

The factor analysis results for technical infrastructure section of the staff questionnaire are given in Table 3.5.

Table 3.5

Total Variance Explained For the Technical Infrastructure Section of the Staff Questionnaire

Component	Initial Eigenvalues		
	Total	% of Variance	Cumulative %
1	**6,780**	39,883	39,883
2	**1,735**	10,206	50,089
3	**1,426**	8,390	58,479
4	**1,292**	7,602	66,082
5	,932	5,481	71,562
6	,861	5,066	76,628
7	,708	4,164	80,792
8	,612	3,601	84,393
9	,596	3,505	87,898
10	,509	2,994	90,893
11	,420	2,468	93,360
12	,301	1,769	95,130
13	,236	1,389	96,519
14	,177	1,040	97,559
15	,149	,876	98,434
16	,140	,823	99,257
17	,126	,743	100,000

4 factors, which account for 66,1 percent of the total variance of the 17 variables, will be retained according to the latent root criterion. The corresponding factor loadings after varimax rotation are tabulated in Table 3.6.

Table 3.6

Factor Analyses For the Technical Infrastructure Section of the Staff Questionnaire (rotated)

	Factor 1	Factor 2	Factor 3	Factor 4
Staff Questionnaire section-1/Q-1	,003	-,181	**,808**	,113
Staff Questionnaire section-1/Q-2	,362	,399	**,627**	-,221
Staff Questionnaire section-1/Q-3	,242	,450	**,758**	-,091
Staff Questionnaire section-1/Q-4	,278	**,700**	,261	-,039
Staff Questionnaire section-1/Q-5	**,638**	,522	,265	-,163
Staff Questionnaire section-1/Q-6	-,044	,099	-,095	**,845**
Staff Questionnaire section-1/Q-7	,501	,299	,213	**,624**
Staff Questionnaire section-1/Q-8	,337	**,589**	,248	,153
Staff Questionnaire section-1/Q-9	,199	**,666**	,248	,305
Staff Questionnaire section-1/Q-10	,064	**,713**	-,009	,169
Staff Questionnaire section-1/Q-11	,189	**,668**	-,120	,089
Staff Questionnaire section-1/Q-12	**,578**	,300	-,058	,410
Staff Questionnaire section-1/Q-13	**,753**	,134	,288	,144
Staff Questionnaire section-1/Q-14	**,726**	,148	,214	,307
Staff Questionnaire section-1/Q-15	**,671**	,276	,220	,119
Staff Questionnaire section-1/Q-16	,517	**,497**	-,122	-,226
Staff Questionnaire section-1/Q-17	**,777**	,146	-,070	-,193

Residual matrix for that section is checked and there are 64 (47,0%) nonredundant residuals with absolute values greater than 0.05.

Questions 5, 12, 13, 14, 15, and 17 are grouped under factor 1 as it can be seen in Table 3.6. Therefore, reliability analysis is undertaken for these questions and the mean values for each question is tabulated in Table 3.7.

Table 3.7

The Mean Values for the Questions Grouped Under Factor 1 for the Technical Infrastructure Section of the Staff Questionnaire

Questions	Mean Values out of "5"
Question 5	1,96
Question 12	3,16
Question 13	2,02
Question 14	2,32
Question 15	2,50
Question 17	2,52

Cronbach's alpha value is found to be 0,85, which indicates that all the questions grouped under factor 1 have an internal consistency of 85%.

The first factor is interpreted as the information level of staff about the general objectives defined by the law and it is considered as weakness since the mean values are mostly lower than 3, which indicates that respondents relatively disagree with the associated questions.

Questions 4, 8, 9, 10, 11, and 16 are grouped under factor 2 as it can be seen in Table 3.6. Therefore, reliability analysis is undertaken for these questions and the mean values for each question is tabulated in Table 3.8.

Table 3.8

The Mean Values for the Questions Grouped Under Factor 2 for the Technical Infrastructure Section of the Staff Questionnaire

Questions	Mean Values out of "5"
Question 4	2,20
Question 8	2,94
Question 9	2,78
Question 10	1,98
Question 11	2,62
Question 16	2,52

Cronbach's alpha value is found to be 0,80, which indicates that all the questions grouped under factor 2 have an internal consistency of 80%.

The second factor is interpreted as effectiveness of all the complementary activities such as monitoring and controlling, environmental inventory and planning for the effective implementation of EIA and it is identified as weakness since the mean values are mostly lower than 3, which indicates that respondents relatively disagree with the associated questions.

Questions 1, 2 and 3 are grouped under factor 3 as it can be seen in Table 3.6. Therefore, reliability analysis is undertaken for these questions and the mean values for each question is tabulated in Table 3.9.

Table 3.9

The Mean Values for the Questions Grouped Under Factor 3 for the Technical Infrastructure Section of the Staff Questionnaire

Questions	Mean Values out of "5"
Question 1	2,02
Question 2	1,96
Question 3	1,98

Cronbach's alpha value is found to be 0,73, which indicates that all the questions grouped under factor 3 have an internal consistency of 73%.

The third factor is interpreted as the in-service training and it is identified as weakness since the mean values are all lower than 3, which indicates that respondents relatively disagree with the associated questions.

Questions 6 and 7 are grouped under factor 4 as it can be seen in Table 3.6. Therefore, reliability analysis is undertaken for these questions and the mean values for each question is tabulated in Table 3.10.

Table 3.10

The Mean Values for the Questions Grouped Under Factor 4 for the Technical Infrastructure Section of the Staff Questionnaire

Questions	Mean Values out of "5"
Question 6	2,46
Question 7	2,52

Cronbach's alpha value is found to be 0,61, which indicates that all the questions grouped under factor 4 have an internal consistency of 61%.

The fourth factor is interpreted as the sufficiency of physical materials needed and the level of importance given to the technological developments by senior executives and it is identified as weakness since the mean values are all lower than 3, which indicates that respondents relatively disagree with the associated questions.

The factor analysis results for the management section are given in Table 3.11.

Table 3.11

Total Variance Explained For the Management Section of the Staff Questionnaire

Component	Initial Eigenvalues		
	Total	% of Variance	Cumulative %
1	**5,221**	52,208	52,208
2	**1,061**	10,611	62,819
3	,893	8,926	71,745
4	,784	7,842	79,586
5	,609	6,093	85,679
6	,483	4,828	90,506
7	,357	3,571	94,077
8	,281	2,812	96,889
9	,201	2,008	98,897
10	,110	1,103	100,000

2 factors, which account for 62,8 % of the total variance of the 10 variables, will be retained according to the latent root criterion. The corresponding factor loadings after varimax rotation are tabulated in Table 3.12.

Table 3.12

Factor Analyses For the Management Section of Staff Questionnaire (rotated)

	Factor 1	Factor 2
Staff Questionnaire section-2/Q-18	**,787**	,150
Staff Questionnaire section-2/Q-19	**,798**	,312
Staff Questionnaire section-2/Q-20	**,765**	,279
Staff Questionnaire section-2/Q-21	,443	**,636**
Staff Questionnaire section-2/Q-22	**,732**	,311
Staff Questionnaire section-2/Q-23	,368	**,787**
Staff Questionnaire section-2/Q-24	,330	**,819**
Staff Questionnaire section-2/Q-25	**,704**	,325
Staff Questionnaire section-2/Q-26	,209	**,541**
Staff Questionnaire section-2/Q-27	,105	**,726**

Residual matrix for that section is checked and there are 26 (57,0%) nonredundant residuals with absolute values greater than 0.05.

In Table 3.12, questions 18, 19, 20, 22, and 25 are grouped under factor 1. Therefore, reliability analysis is undertaken for these questions and the mean values for each question is tabulated in Table 3.13.

Table 3.13

The Mean Values for the Questions Grouped Under Factor 1 for the Management Section of the Staff Questionnaire

Questions	Mean Values out of "5"
Question 18	2,86
Question 19	2,40
Question 20	2,52
Question 22	2,46
Question 25	2,52

Cronbach's alpha value is found to be 0,87, which indicates that all the questions grouped under factor 4 have an internal consistency of 87 %.

The first factor is interpreted as the level of importance given by the management to the thoughts, ideas and expectations of the staff and it is identified as weakness since the mean values are all lower than 3, which indicates that respondents relatively disagree with the associated questions.

In Table 3.12, questions 21, 23, 24, 26, and 27 are grouped under factor 2. Therefore, reliability analysis is undertaken for these questions and the mean values for each question is tabulated in Table 3.14.

Table 3.14

The Mean Values for the Questions Grouped Under Factor 2 for the Management Section of the Staff Questionnaire

Questions	Mean Values out of "5"
Question 21	3,06
Question 23	3,44
Question 24	3,44
Question 26	2,56
Question 27	2,44

Cronbach's alpha value is found to be 0,81, which indicates that all the questions grouped under factor 4 have an internal consistency of 81 %.

There is a contradiction in the results achieved in this section and previous section. In technical infrastructure section of the staff questionnaire, the respondents are asked whether they have sufficient information for each objective statement and they disagreed. However, when the same question (23rd question) is asked in a general format in the management section of the staff questionnaire, they agreed that they have sufficient information about the general objectives. Therefore, this contradiction reveals us that more effective communication is necessary. For example, meetings can accompany survey study with target groups to revise the findings of statistical analysis results.

Therefore, the second factor is interpreted as level of awareness of staff about the mission of the General Directorate and although the second factor seems to be strength, it is identified as weakness.

The factor analysis results for Communication with Other Organizations section are given in Table 3.15.

Table 3.15

Total Variance Explained For the Communication with the Other Organizations Section of the Staff Questionnaire

Component	Total	% of Variance	Cumulative %
1	**2,743**	54,861	54,861
2	**1,096**	21,925	76,786
3	,492	9,845	86,630
4	,367	7,330	93,961
5	,302	6,039	100,000

2 factors, which account for 76.7 % of the total variance of the 5 variables, will be retained according to the latent root criterion. The corresponding factor loadings after varimax rotation are tabulated in Table 3.16.

Table 3.16

Factor Analyses For the Communication with the Other Organizations Section of the Staff Questionnaire (rotated)

	Factor1	Factor 2
Staff Questionnaire section-3/Q-28	**,793**	,373
Staff Questionnaire section-3/Q-29	**,831**	,178
Staff Questionnaire section-3/Q-30	,478	**,726**
Staff Questionnaire section-3/Q-31	-,016	**,937**
Staff Questionnaire section-3/Q-32	**,845**	-,032

Residual matrix for that section is checked and there are 7 (70,0%) nonredundant residuals with absolute values greater than 0.05.

In Table 3.16, questions 28, 29 and 32 are grouped under factor 1. Therefore, reliability analysis is undertaken for these questions and the mean values for each question is tabulated in Table 3.17.

Table 3.17

The Mean Values for the Questions Grouped Under Factor 1 for the Other Organizations Section of the Staff Questionnaire

Questions	Mean Values out of "5"
Question 28	2,96
Question 29	3,12
Question 32	2,86

Cronbach's alpha value is found to be 0,79, which indicates that all the questions grouped under factor 1 have an internal consistency of 79 %.

The first factor is interpreted as the capability of developing common standards and the level of communication and coordination with the other institutions and it is identified as weakness since most of the mean values are all lower than 3, which indicates that respondents relatively disagree with the associated questions.

In Table 3.16, questions 30 and 31 are grouped under factor 2. Therefore, reliability analysis is undertaken for these questions and the mean values for each question is tabulated in Table 3.18.

Table 3.18

The Mean Values for the Questions Grouped Under Factor 2 for the Other Organizations Section of the Staff Questionnaire

Questions	Mean Values out of "5"
Question 30	3,08
Question 31	3,40

Cronbach's alpha value is found to be 0,69, which indicates that all the questions grouped under factor 2 have an internal consistency of 69 %.

The second factor is interpreted as the level of communication and support for proponent and it is identified as strength since the mean values are all higher than 3, which indicates that respondents relatively agree with the associated questions.

The factor analysis results for the General Overview to EIA Section are given in Table 3.19.

Table 3.19

Total Variance Explained For the General Overview to EIA Section of the Staff Questionnaire

Component	Initial Eigenvalues		
	Total	% of Variance	Cumulative %
1	**4,528**	41,167	41,167
2	**1,311**	11,917	53,084
3	**1,166**	10,604	63,688
4	,983	8,940	72,627
5	,841	7,643	80,271
6	,501	4,552	84,823
7	,464	4,218	89,041
8	,460	4,178	93,219
9	,289	2,629	95,848
10	,246	2,240	98,088
11	,210	1,912	100,000

3 factors, which account for 63,7 percent of the total variance of 11 variables, will be retained according to the latent root criterion. The corresponding factor loadings after Varimax Rotation are tabulated in Table 3.20.

Table 3.20

Factor Analyses For the General Overview to EIA Section of the Staff Questionnaire (rotated)

	Factor 1	Factor 2	Factor 3
Staff Questionnaire section-4/Q-33	**,705**	,384	,102
Staff Questionnaire section-4/Q-34	,358	,378	**,598**
Staff Questionnaire section-4/Q-35	,469	**,685**	,084
Staff Questionnaire section-4/Q-36	,291	**,760**	,134
Staff Questionnaire section-4/Q-37	,199	-,091	**,822**
Staff Questionnaire section-4/Q-38	,172	,271	**,791**
Staff Questionnaire section-4/Q-39	,133	**,730**	,094
Staff Questionnaire section-4/Q-40	**,743**	-,028	,224
Staff Questionnaire section-4/Q-41	**,751**	,215	,317
Staff Questionnaire section-4/Q-42	-,195	**,441**	,404
Staff Questionnaire section-4/Q-43	,757	**,224**	,012

Residual matrix for that section is checked and there are 33 (60,0%) nonredundant residuals with absolute values greater than 0.05.

In Table 3.20, questions 33, 40, and 41 are grouped under factor 1. Therefore, reliability analysis is undertaken for these questions and the mean values for each question is tabulated in Table 3.21.

Table 3.21

The Mean Values for the Questions Grouped Under Factor 1 for the General Overview to EIA Section of the Staff Questionnaire

Questions	Mean Values out of "5"
Question 33	2,96
Question 40	3,12
Question 41	2,86

Cronbach's alpha value is found to be 0,77, which indicates that all the questions grouped under factor 1 have an internal consistency of 77 %.

The first factor is interpreted as the contribution level of the other related public organizations to EIA process and it is identified as weakness since most of the mean values are all lower than 3, which indicates that respondents relatively disagree with the associated questions.

In Table 3.20, questions 35, 36, 39, 42, and 43 are grouped under factor 2. Therefore, reliability analysis is undertaken for these questions and the mean values for each question is tabulated in Table 3.22.

Table 3.22

The Mean Values for the Questions Grouped Under Factor 2 for the General Overview to EIA Section of the Staff Questionnaire

Questions	Mean Values out of "5"
Question 35	3,12
Question 36	3,38
Question 39	3,48
Question 42	2,38
Question 43	3,14

Cronbach's alpha value is found to be 0,71, which indicates that all the questions grouped under factor 2 have an internal consistency of 71 %.

The second factor is interpreted as the level of quality of the EIA process and it is identified as strength since most of the mean values are all higher than 3, which indicates that respondents relatively agree with the associated questions.

In Table 3.20, questions 34, 37, and 43 are grouped under factor 3. Therefore, reliability analysis is undertaken for these questions and the mean values for each question is tabulated in Table 3.23.

Table 3.23

The Mean Values for the Questions Grouped Under Factor 3 for the General Overview to EIA Section of the Staff Questionnaire

Questions	Mean Values out of "5"
Question 34	2,80
Question 37	2,24
Question 38	2,24

Cronbach's alpha value is found to be 0,75, which indicates that all the questions grouped under factor 2 have an internal consistency of 75 %.

The third factor is interpreted as the satisfaction level of the project developers from EIA and it is identified as weakness since the mean values are all lower than 3, which indicates that respondents relatively disagree with the associated questions.

The factor analysis results for technical infrastructure section of provincial directorate questionnaire are given in Table 3.24.

Table 3.24

Total Variance Explained For the Technical Infrastructure Section of the Provincial Directorate Questionnaire

Component	Initial Eigenvalues		
	Total	% of Variance	Cumulative %
1	**3,261**	27,178	27,178
2	**2,168**	18,069	45,247
3	**1,659**	13,826	59,073
4	**1,284**	10,698	69,771
5	**1,135**	9,460	79,232
6	,662	5,519	84,751
7	,615	5,127	89,878
8	,534	4,453	94,330
9	,335	2,791	97,121
10	,171	1,426	98,547
11	,113	,941	99,488
12	,061	,512	100,000

5 factors, which account for 79.2 percent of the total variance of the 12 variables, will be retained according to the latent root criterion. The corresponding factor loadings after Varimax Rotation are tabulated in Table 3.25.

Table 3.25

Factor Analyses For the Technical Infrastructure Section of the Provincial Directorate Questionnaire (rotated)

	Factor1	Factor 2	Factor 3	Factor 4	Factor 5
Pro. Dir. Questionnaire section-1/Q-1	,260	**,881**	-,149	,127	,038
Pro. Dir. Questionnaire section-1/Q-2	,214	**,624**	-,307	,388	,431
Pro. Dir. Questionnaire section-1/Q-3	**,730**	,176	,224	,351	-,075
Pro. Dir. Questionnaire section-1/Q-4	-,191	**,861**	,204	-,162	-,027
Pro. Dir. Questionnaire section-1/Q-5	,173	,157	,123	-,077	**,808**
Pro. Dir. Questionnaire section-1/Q-6	,168	,120	**,866**	,124	,046
Pro. Dir. Questionnaire section-1/Q-7	-,214	-,194	,540	,022	**,601**
Pro. Dir. Questionnaire section-1/Q-8	**,846**	-,122	-,053	,105	,399
Pro. Dir. Questionnaire section-1/Q-9	**,864**	,125	,327	-,046	-,044
Pro. Dir. Questionnaire section-1/Q-10	,249	-,113	**,679**	-,064	,145
Pro. Dir. Questionnaire section-1/Q-11	-,047	,019	,264	**,868**	-,155
Pro. Dir. Questionnaire section-1/Q-12	,348	,011	-,242	**,716**	,128

Residual matrix for that section is checked and there are 33 (50,0%) nonredundant residuals with absolute values greater than 0.05.

In Table 3.25, questions 3, 8, and 9 are grouped under factor 1. Therefore, reliability analysis is undertaken for these questions and the mean values for each question is tabulated in Table 3.26.

Table 3.26

The Mean Values for the Questions Grouped Under Factor 1 for the Technical Infrastructure Section of the Provincial Directorate Questionnaire

Questions	Mean Values out of "5"
Question 3	3,25
Question 8	1,80
Question 9	1,85

Cronbach's alpha value is found to be 0,81, which indicates that all the questions grouped under factor 1 have an internal consistency of 81 %.

The first factor is interpreted as the information level of the staff about the general objectives and it is identified as weakness since most of the mean values are all lower than 3, which indicates that respondents relatively disagree with the associated questions.

In Table 3.25, questions 1, 2, and 4 are grouped under factor 2. Therefore, reliability analysis is undertaken for these questions and the mean values for each question is tabulated in Table 3.27.

Table 3.27

The Mean Values for the Questions Grouped Under Factor 2 for the Technical Infrastructure Section of the Provincial Directorate Questionnaire

Questions	Mean Values out of "5"
Question 1	3,70
Question 2	3,25
Question 4	2,70

Cronbach's alpha value is found to be 0,77, which indicates that all the questions grouped under factor 2 have an internal consistency of 77 %.

The second factor is interpreted as the sufficiency of technical infrastructure and it is identified as strength since most of the mean values are all higher than 3, which indicates that respondents relatively agree with the associated questions.

In Table 3.25, questions 6 and 10 are grouped under factor 3. Therefore, reliability analysis is undertaken for these questions and the mean values for each question is tabulated in Table 3.28.

Table 3.28

The Mean Values for the Questions Grouped Under Factor 3 for the Technical Infrastructure Section of the Provincial Directorate Questionnaire

Questions	Mean Values out of "5"
Question 6	2,85
Question 10	2,20

Cronbach's alpha value is found to be 0,60, which indicates that all the questions grouped under factor 3 have an internal consistency of 60 %.

The third factor is interpreted as the contribution of Environmental State Reports to EIA and it is identified as weakness since the mean values are all lower than 3, which indicates that respondents relatively disagree with the associated questions.

In Table 3.25, questions 11 and 12 are grouped under factor 4. Therefore, reliability analysis is undertaken for these questions and the mean values for each question is tabulated in Table 3.29.

Table 3.29

The Mean Values for the Questions Grouped Under Factor 4 for the Technical Infrastructure Section of the Provincial Directorate Questionnaire

Questions	Mean Values out of "5"
Question 11	2,20
Question 12	2,55

Cronbach's alpha value is found to be 0,56, which indicates that all the questions grouped under factor 3 have an internal consistency of 56 %.

The fourth factor is interpreted as the sufficiency of the technical infrastructure for monitoring and controlling and the capacity to initiate projects when needed and it is identified as weakness since the mean values are all lower than 3, which indicates that respondents relatively disagree with the associated questions.

In Table 3.25, questions 5 and 7 are grouped under factor 5. Therefore, reliability analysis is undertaken for these questions and the mean values for each question is tabulated in Table 3.30.

Table 3.30

The Mean Values for the Questions Grouped Under Factor 5 for the Technical Infrastructure Section of the Provincial Directorate Questionnaire

Questions	Mean Values out of "5"
Question 5	3,45
Question 7	2,25

Cronbach's alpha value is found to be 0,42, which indicates that all the questions grouped under factor 5 have a internal consistency of 42 % which is relatively low.

The fifth factor is interpreted as the sufficiency of environmental inventory and although the mean values in Table 3.30 are considerably different from each other it is identified as weakness by the management of the General Directorate.

The factor analysis results for the Communication and Coordination with the Ministry Section of the Provincial Directorates Questionnaire are given in Table 3.31.

Table 3.31

Total Variance Explained For the Communication and Coordination with the Ministry Section of the Provincial Directorate Questionnaire

Component	Total	% of Variance	Cumulative %
1	**2,763**	34,535	34,535
2	**1,674**	20,929	55,464
3	**1,402**	17,531	72,995
4	,840	10,498	83,493
5	,580	7,245	90,738
6	,405	5,059	95,797
7	,232	2,896	98,693
8	,105	1,307	100,000

3 factors, which account for 73 percent of the total variance of the 8 variables, will be retained according to the latent root criterion. The corresponding factor loadings after Varimax Rotation are tabulated in Table 3.32.

Table 3.32

Factor Analysis For the Communication and Coordination with the Ministry Section of the Provincial Directorate Questionnaire (rotated)

	Factor 1	Factor 2	Factor 3
Pro. Dir. Questionnaire section –2/Q-13	-,072	**,888**	,300
Pro. Dir. Questionnaire section –2/Q-14	,304	**,813**	-,172
Pro. Dir. Questionnaire section –2/Q-15	-,070	**,516**	-,452
Pro. Dir. Questionnaire section –2/Q-16	**,588**	,102	-,657
Pro. Dir. Questionnaire section –2/Q-17	**,911**	-,056	,006
Pro. Dir. Questionnaire section –2/Q-18	**,920**	,038	-,006
Pro. Dir. Questionnaire section –2/Q-19	,160	,096	**,787**
Pro. Dir. Questionnaire section –2/Q-20	**,614**	,374	,239

Residual matrix for that section is checked and there are 15 (53,0%) nonredundant residuals with absolute values greater than 0.05.

In Table 3.32, questions 16, 17, 18, and 20 are grouped under factor 1. Therefore, reliability analysis is undertaken for these questions and the mean values for each question is tabulated in Table 3.33.

Table 3.33

The Mean Values for the Questions Grouped Under Factor 1 for the Communication and Coordination with the Ministry Section of the Provincial Directorate Questionnaire

Questions	Mean Values out of "5"
Question 16	3,46
Question 17	3,06
Question 18	2,30
Question 20	3,47

Cronbach's alpha value is found to be 0,79, which indicates that all the questions grouped under factor 1 have an internal consistency of 79 %.

The first factor is interpreted as the level of mutual understanding of the standards for EIA and it is identified as strength since most of the mean values are higher than 3, which indicates that respondents relatively agree with the associated questions.

In Table 3.32, questions 13, 14, and 15 are grouped under factor 2. Therefore, reliability analysis is undertaken for these questions and the mean values for each question is tabulated in Table 3.34.

Table 3.34

The Mean Values for the Questions Grouped Under Factor 2 for the Communication and Coordination with the Ministry Section of the Provincial Directorate Questionnaire

Questions	Mean Values out of "5"
Question 13	3,10
Question 14	3,35
Question 15	3,40

Cronbach's alpha value is found to be 0,64, which indicates that all the questions grouped under factor 2 have an internal consistency of 64 %.

The second factor is interpreted as the effectiveness of the communication and coordination with the ministry and it is identified as strength since the mean values are all higher than 3, which indicates that respondents relatively agree with the associated questions.

In Table 3.32, question 19 is highly correlated with factor 3. The factor is interpreted as the level of agreement upon the aim and definition of EIA and it is identified as weakness since the mean value for this question is 2,85, which indicates that respondents relatively disagree with the associated question.

The factor analysis results for overall overview to EIA section of Provincial Directorates Questionnaire are given in Table 3.35.

Table 3.35

Total Variance Explained For Overall Overview to EIA Section of Provincial Directorate Questionnaire

	Total	% of Variance	Cumulative %
1	**3,376**	25,969	25,969
2	**2,359**	18,144	44,113
3	**1,813**	13,946	58,060
4	**1,248**	9,598	67,657
5	**1,104**	8,490	76,147
6	,886	6,817	82,964
7	,643	4,946	87,910
8	,582	4,475	92,385
9	,443	3,406	95,790
10	,353	2,715	98,505
11	,120	,922	99,428
12	,042	,320	99,748
13	,033	,252	100,000

5 factors, which account for 76,1 percent of the total variance of the 13 variables, will be retained according to the latent root criterion. The corresponding factor loadings after Varimax Rotation are tabulated in Table 3.36.

Table 3.36

Factor Analyses For the Overall Overview to EIA section of the Provincial Directorate Questionnaire (Rotated)

	Factor1	Factor 2	Factor 3	Factor 4	Factor 5
Pro. Dir. Questionnaire section-3/Q-21	,034	-,014	**,828**	-,108	-,138
Pro. Dir. Questionnaire section-3/Q-22	**,640**	,319	,193	,164	-,469
Pro. Dir. Questionnaire section-3/Q-23	**,897**	-,142	-,002	-,012	-,056
Pro. Dir. Questionnaire section-3/Q-24	,025	**,794**	,234	,118	,003
Pro. Dir. Questionnaire section-3/Q-25	**,513**	,569	-,080	-,165	,297
Pro. Dir. Questionnaire section-3/Q-26	**,801**	-,151	,052	,225	-,046
Pro. Dir. Questionnaire section-3/Q-27	,333	,272	-,255	**,805**	,169
Pro. Dir. Questionnaire section-3/Q-28	-,309	**,682**	,115	,281	-,277
Pro. Dir. Questionnaire section-3/Q-29	,390	,280	**,594**	,097	,069
Pro. Dir. Questionnaire section-3/Q-30	-,119	**,784**	-,173	,226	-,339
Pro. Dir. Questionnaire section-3/Q-31	-,121	,012	**,701**	,205	,322
Pro. Dir. Questionnaire section-3/Q-32	-,100	-,157	,112	-,028	**,891**
Pro. Dir. Questionnaire section-3/Q-33	,024	,161	,297	**,837**	-,204

Residual matrix for that section is checked and there are 40 (51,0%) nonredundant residuals with absolute values greater than 0.05.

In Table 3.36, questions 22, 23, 25 and 26 are grouped under factor 1. Therefore, reliability analysis is undertaken for these questions and the mean values for each question is tabulated in Table 3.37.

Table 3.37

The Mean Values for the Questions Grouped Under Factor 1 for the Overall Overview to EIA section of the Provincial Directorate Questionnaire

Questions	Mean Values out of "5"
Question 22	2,15
Question 23	1,95
Question 25	2,65
Question 26	3,80

Cronbach's alpha value is found to be 0,72, which indicates that all the questions grouped under factor 1 have an internal consistency of 72 %.

The first factor is interpreted as the satisfaction level of the project developers from the EIA applications and it is identified as weakness since most of the mean values are lower than 3, which indicates that respondents relatively disagree with the associated questions.

In Table 3.36, questions 24, 28, and 30 are grouped under factor 2. Therefore, reliability analysis is undertaken for these questions and the mean values for each question is tabulated in Table 3.38.

Table 3.38

The Mean Values for the Questions Grouped Under Factor 2 for the Overall Overview to EIA section of the Provincial Directorate Questionnaire

Questions	Mean Values out of "5"
Question 24	2,55
Question 28	3,75
Question 30	3,90

Cronbach's alpha value is found to be 0,78, which indicates that all the questions grouped under factor 2 have an internal consistency of 78 %.

The second factor is interpreted as the contributions of EIA to the project developers and it is identified as strength since most of the mean values are higher than 3, which indicates that respondents relatively agree with the associated questions.

In Table 3.36, questions 21, 29, and 31 are grouped under factor 3. Therefore, reliability analysis is undertaken for these questions and the mean values for each question is tabulated in Table 3.39.

Table 3.39

The Mean Values for the Questions Grouped Under Factor 3 for the Overall Overview to EIA section of the Provincial Directorate Questionnaire

Questions	Mean Values out of "5"
Question 21	3,50
Question 29	3,55
Question 31	2,70

Cronbach's alpha value is found to be 0,56, which indicates that all the questions grouped under factor 2 have an internal consistency of 56 %.

The third factor is interpreted as the relationship with the project developers regarding the scope and the quality of the EIA reports and it is identified as strength since most of the mean values are higher than 3, which indicates that respondents relatively agree with the associated questions.

In Table 3.36, questions 27 and 33 are grouped under factor 4. Therefore, reliability analysis is undertaken for these questions and the mean values for each question is tabulated in Table 3.40.

Table 3.40

The Mean Values for the Questions Grouped Under Factor 4 for the Overall Overview to EIA section of the Provincial Directorate Questionnaire

Questions	Mean Values out of "5"
Question 27	2,45
Question 33	2,75

Cronbach's alpha value is found to be 0,73, which indicates that all the questions grouped under factor 4 have an internal consistency of 73 %.

The fourth factor is interpreted as the common standards for EIA, control and monitoring after the completion of the EIA procedure and it is identified as weakness since all the mean values are lower than 3, which indicates that respondents relatively disagree with the associated questions.

In Table 3.36, question 32 is highly correlated with factor 5. The factor is interpreted as the scope and quality of the EIA reports and it is identified as strength since the mean value for this question is 3,40, which indicates that respondents relatively agree with this question.

The factor analysis results for the Other Associated Organizations Section of the Provincial Directorates Questionnaire are given in Table 3.41.

Table 3.41

Total Variance Explained For the Other Associated Organizations Section of the Provincial Directorate Questionnaire

Component	Total	% of Variance	Cumulative %
1	**3,608**	32,799	32,799
2	**2,367**	21,522	54,320
3	**1,465**	13,321	67,641
4	**1,095**	9,952	77,593
5	,849	7,716	85,309
6	,610	5,547	90,856
7	,465	4,224	95,080
8	,284	2,586	97,666
9	,152	1,379	99,045
10	,078	,708	99,753
11	,027	,247	100,000

4 factors, which account for 77,6 percent of the total variance of the 11 variables, will be retained according to the latent root criterion. The corresponding factor loadings after Varimax Rotation are tabulated in Table 3.42.

Table 3.42

Factor Analysis For the Other Associated Organizations Section of the Provincial Directorate Questionnaire (rotated)

	Factor1	Factor 2	Factor 3	Factor 4
Pro. Dir. Quest. section -3/Q-34	**,940**	,073	,090	,035
Pro. Dir. Quest. section -3/Q-35	**,751**	,309	-,234	-,165
Pro. Dir. Quest. section -3/Q-36	-,054	,287	**,923**	,100
Pro. Dir. Quest. section -3/Q-37	,106	,186	**,751**	,452
Pro. Dir. Quest. section -3/Q-38	-,036	**,867**	,362	,019
Pro. Dir. Quest. section -3/Q-39	,169	**,680**	-,010	,449
Pro. Dir. Quest. section -3/Q-40	**,621**	-,433	-,051	,217
Pro. Dir. Quest. section -3/Q-41	,145	**,808**	,159	-,093
Pro. Dir. Quest. section -3/Q-42	,052	,030	-,213	**-,814**
Pro. Dir. Quest. section -3/Q-43	**,684**	-,013	,503	-,332
Pro. Dir. Quest. section -3/Q-44	**,606**	,378	,122	,399

Residual matrix for that section is checked and there are 28 (50,0%) nonredundant residuals with absolute values greater than 0.05.

In Table 3.42, questions 34, 35, 40, 43, and 44 are grouped under factor 1. Therefore, reliability analysis is undertaken for these questions and the mean values for each question is tabulated in Table 3.43.

Table 3.43

The Mean Values for the Questions Grouped Under Factor 1 for the Other Associated Organizations Section of the Provincial Directorate Questionnaire

Questions	Mean Values out of "5"
Question 34	2,85
Question 35	2,60
Question 40	3,90
Question 43	3,15
Question 44	3,40

Cronbach's alpha value is found to be 0,79, which indicates that all the questions grouped under factor 1 have a internal consistency of 79 %.

The first factor is interpreted as the contribution of the other associated organizations to the EIA process and it is identified as strength since most of the mean values are higher than 3, which indicates that respondents relatively agree with the associated questions.

In Table 3.42, questions 38, 39, and 41 are grouped under factor 2. Therefore, reliability analysis is undertaken for these questions and the mean values for each question is tabulated in Table 3.44.

Table 3.44

The Mean Values for the Questions Grouped Under Factor 2 for the Other Associated Organizations Section of the Provincial Directorate Questionnaire

Questions	Mean Values out of "5"
Question 38	2,85
Question 39	2,85
Question 41	2,85

Cronbach's alpha value is found to be 0,79, which indicates that all the questions grouped under factor 2 have an internal consistency of 79 %.

The second factor is interpreted as the common standards for EIA and it is identified as weakness since all the mean values are lower than 3, which indicates that respondents relatively disagree with the associated questions.

In Table 3.42, questions 36 and 37 are grouped under factor 3. Therefore, reliability analysis is undertaken for these questions and the mean values for each question is tabulated in Table 3.45.

Table 3.45

The Mean Values for the Questions Grouped Under Factor 3 for the Other Associated Organizations Section of the Provincial Directorate Questionnaire

Questions	Mean Values out of "5"
Question 36	2,50
Question 37	2,70

Cronbach's alpha value is found to be 0,82, which indicates that all the questions grouped under factor 2 have a internal consistency of 82 %.

The third factor is interpreted as the conflict of the authority between the other associated organizations and it is identified as weakness since all the mean values are lower than 3, which indicates that respondents relatively disagree with the associated questions.

In Table 3.42, question 42 is highly correlated with factor 4. The factor is interpreted as the coordination with the other associated organizations and it is identified as strength since the mean value for this question is 3,35, which indicates that respondents relatively agree with that question.

The factor analysis results for the Communication and Coordination with the Ministry Section of the Companies' questionnaire are given in Table 3.46

Table 3.46

Total Variance Explained For the Communication and Coordination with the Ministry Section of the Companies' Questionnaire

Components	Total	% of Variance	Cumulative %
1	**3,846**	64,093	64,093
2	**1,172**	19,533	83,626
3	,473	7,880	91,506
4	,297	4,949	96,455
5	,172	2,871	99,326
6	,040	,674	100,000

2 factors, which account for 83,5 percent of the total variance of 6 variables, will be retained according to the latent root criterion. The corresponding factor loadings after Varimax Rotation are tabulated in Table 3.47.

Table 3.47

Factor Analyses For the Communication and Coordination with the Ministry Section of the Companies' Questionnaire (Rotated)

	Factor 1	Factor 2
Companies' Questionnaire Section-1/Q-1	,311	**,860**
Companies' Questionnaire Section-1/Q-2	**-,889**	-,051
Companies' Questionnaire Section-1/Q-3	**,842**	,401
Companies' Questionnaire Section-1/Q-4	,108	**,915**
Companies' Questionnaire Section-1/Q-5	**,891**	,200
Companies' Questionnaire Section-1/Q-6	**,873**	,273

Residual matrix for that section is checked and there are 8 (53,0%) nonredundant residuals with absolute values greater than 0.05.

In Table 3.47, questions 2, 3, 5, and 6 are grouped under factor 1. Therefore, reliability analysis is undertaken for these questions and the mean values for each question is tabulated in Table 3.48.

Table 3.48

The Mean Values for the Questions Grouped Under Factor 1 for the Communication and Coordination with the Ministry Section of the Companies' Questionnaire

Questions	Mean Values out of "5"
Question 2	3,43
Question 3	3,29
Question 5	2,29
Question 6	1,57

Cronbach's alpha value is found to be 0,19, which indicates that all the questions grouped under factor 1 have an internal consistency of 19 %. Although the correlations of these questions with factor 1 are considerably high, Cronbach's alpha value is relatively low since question 2 is negatively correlated with factor 1.

The first factor is interpreted as the common understanding of EIA process and it is identified as threat by the management although the mean values are considerably different from each other.

In Table 3.47, questions 1 and 4 are grouped under factor 2. Therefore, reliability analysis is undertaken for these questions and the mean values for each question is tabulated in Table 3.49.

Table 3.49

The Mean Values for the Questions Grouped Under Factor 2 for the Communication and Coordination with the Ministry Section of the Companies' Questionnaire

Questions	Mean Values out of "5"
Question 1	3,86
Question 4	2,71

Cronbach's alpha value is found to be 0,59, which indicates that all the questions grouped under factor 2 have an internal consistency of 59 %.

The second factor is interpreted as the level of the coordination and the agreement upon the aim and definition of EIA and it is identified as opportunity by management although the mean values are considerably different from each other.

The factor analyses results for EIA Meetings section of companies' questionnaire are given in Table 3.50.

Table 3.50

Total Variance Explained For the EIA Meetings Section of the Companies' questionnaire

Component	Total	% of Variance	Cumulative %
1	**5,798**	38,656	38,656
2	**2,997**	19,977	58,632
3	**2,428**	16,189	74,821
4	**1,746**	11,638	86,459
5	**1,246**	8,309	94,768
6	,785	5,232	100,000
7	3,586E-16	2,391E-15	100,000
8	3,207E-16	2,138E-15	100,000
9	1,569E-16	1,046E-15	100,000
10	-1,115E-17	-7,432E-17	100,000
11	-1,722E-16	-1,148E-15	100,000
12	-2,327E-16	-1,551E-15	100,000
13	-3,504E-16	-2,336E-15	100,000
14	-4,806E-16	-3,204E-15	100,000
15	-1,437E-15	-9,582E-15	100,000

5 factors, which account for 94,7 % of the total variance of the 15 variables, will be retained according to the latent root criterion. The corresponding factor loadings after Varimax Rotation are tabulated in Table 3.51.

Table 3.51

Factor analyses For the EIA Meetings Section of Companies' Questionnaire (rotated)

	Component				
	Factor1	Factor2	Factor3	Factor4	Factor5
Companies' Quest. Section-2/Q-7	,206	**,929**	,133	-,030	,246
Companies' Quest. Section-2/Q-8	**,649**	,264	,635	,143	,235
Companies' Quest. Section-2/Q-9	**,847**	-,464	-,194	-,034	-,167
Companies' Quest. Section-2/Q-10	**,973**	,178	-,100	-,054	,004
Companies' Quest. Section-2/Q-11	**,841**	,072	,482	,111	,147
Companies' Quest. Section-2/Q-12	,015	,108	-,093	-,052	**,851**
Companies' Quest. Section-2/Q-13	,637	-,009	,268	**,664**	,188
Companies' Quest. Section-2/Q-14	,015	,206	-,126	**,954**	-,135
Companies' Quest. Section-2/Q-15	-,183	-,052	**,912**	-,045	-,307
Companies' Quest. Section-2/Q-16	-,225	-,366	**,666**	,609	-,026
Companies' Quest. Section-2/Q-17	**,910**	,235	,069	-,014	-,010
Companies' Quest. Section-2/Q-18	,053	**-,947**	,151	-,024	,257
Companies' Quest. Section-2/Q-19	,211	**,786**	-,113	,291	,424
Companies' Quest. Section-2/Q-20	**,878**	,103	-,266	,132	,361
Companies' Quest. Section-2/Q-21	,400	-,024	**,602**	-,240	,492

Residual matrix for that section is checked and there are 22 (20,0%) nonredundant residuals with absolute values greater than 0.05.

In Table 3.51, questions 8, 9, 10, 17, and 20 are grouped under factor 1. Therefore, reliability analysis is undertaken for these questions and the mean values for each question is tabulated in Table 3.52.

Table 3.52

The Mean Values for the Questions Grouped Under Factor 1 for the EIA Meetings Section of the Companies' Questionnaire

Questions	Mean Values out of "5"
Question 8	3,42
Question 9	4,14
Question 10	3,00
Question 11	3,57
Question 17	2,57
Question 20	3,00

Cronbach's alpha value is found to be 0,92, which indicates that all the questions grouped under factor 1 have a internal consistency of 92 %.

The first factor is interpreted as the atmosphere of the meetings, impartiality and timing of the invitations and it is identified as opportunity since most of the mean values are higher than 3, which indicates that respondents relatively agree with the associated questions.

In Table 3.51, questions 7, 18, and 19 are grouped under factor 2. Therefore, reliability analysis is undertaken for these questions and the mean values for each question is tabulated in Table 3.53.

Table 3.53

The Mean Values for the Questions Grouped Under Factor 2 for the EIA Meetings Section of the Companies' Questionnaire

Questions	Mean Values out of "5"
Question 7	2,57
Question 18	2,85
Question 19	2,42

Cronbach's alpha value is found to be –2,06. Although these questions are highly correlated with second factor, the Cronbach's alpha value is negative, since the question 18 is negatively correlated with factor 2.

The second factor is interpreted as the sufficiency of the scientific approaches, the complition time of EIA process and the contributions of the other organizations and it is identified as threat since all the mean values are lower than 3, which indicates that respondents relatively disagree with the associated questions.

In Table 3.51, questions 15, 16, and 21 are grouped under factor 3. Therefore, reliability analysis is undertaken for these questions and the mean values for each question is tabulated in Table 3.54.

Table 3.54

The Mean Values for the Questions Grouped Under Factor 3 for the EIA Meetings Section of the Companies' Questionnaire

Questions	Mean Values out of "5"
Question 15	2,57
Question 16	2,14
Question 21	1,85

Cronbach's alpha value is found to be 0,55, which indicates that all the questions grouped under factor 2 have an internal consistency of 55 %.

The third factor is interpreted as the standards for EIA between all stakeholders and the conflict of the authority between the other involved organizations and it is identified as threat since all the mean values are lower than 3, which indicates that respondents relatively disagree with the associated questions.

In Table 3.51, questions 13 and 14 are grouped under factor 4. Therefore, reliability analysis is undertaken for these questions and the mean values for each question is tabulated in Table 3.55.

Table 3.55

The Mean Values for the Questions Grouped Under Factor 4 for the EIA Meetings Section of the Companies' Questionnaire

Questions	Mean Values out of "5"
Question 13	3,00
Question 14	3,14

Cronbach's alpha value is found to be 0,71, which indicates that all the questions grouped under factor 2 have an internal consistency of 71 %.

The fourth factor is interpreted as the participation of all stakeholders to the EIA meetings and it is identified as opportunity since the mean values are relatively higher than 3, which indicates that respondents relatively agree with the associated questions.

In Table 3.51, question 12 is highly correlated with factor 5. The factor is interpreted as the communication between all stakeholders in the EIA meetings and it is identified as threat since the mean value for this question is 2,14, which indicates that respondents relatively disagree with the associated question.

The factor analyses results for the Benefits of EIA Section of the Companies' Questionnaire are given in Table 3. 56.

Table 3.56

Total Variance Explained For the Benefits of EIA Section of the Companies' Questionnaire

Component	Total	% of Variance	Cumulative %
1	**2,825**	47,076	47,076
2	**1,605**	26,758	73,834
3	**1,243**	20,711	94,544
4	,281	4,676	99,221
5	,047	,779	100,000
6	-1,197E-16	-1,995E-15	100,000

3 factors, which account for 94,5 percent of the total variance of the 6 variables, will be retained according to the latent root criterion. The corresponding factor loadings after Varimax Rotation are tabulated in Table 3.57.

Table 3.57

Factor Analyses For the Benefits of EIA Section of Companies' Questionnaire (rotated)

	Factor 1	Factor 2	Factor 3
Companies' Questionnaire Section-3/Q-22	-,074	**,892**	,424
Companies' Questionnaire Section-3/Q-23	,120	,378	**,886**
Companies' Questionnaire Section-3/Q-24	,238	-,145	**,896**
Companies' Questionnaire Section-3/Q-25	,200	**,934**	-,147
Companies' Questionnaire Section-3/Q-26	**,974**	-,049	,091
Companies' Questionnaire Section-3/Q-27	**,923**	,234	,259

Residual matrix for that section is checked and there are 3 (20,0%) nonredundant residuals with absolute values greater than 0.05.

In Table 3.57, questions 26 and 27 are grouped under factor 1. Therefore, reliability analysis is undertaken for these questions and the mean values for each question is tabulated in Table 3.58.

Table 3.58

The Mean Values for the Questions Grouped Under Factor 1 for the Benefits of EIA Section of the Companies' Questionnaire

Questions	Mean Values out of "5"
Question 26	2,42
Question 27	2,57

Cronbach's alpha value is found to be 0,94, which indicates that all the questions grouped under factor 1 have an internal consistency of 94 %.

The first factor is interpreted as the attitudes of the project developers towards EIA and it is identified as threat since all the mean values are lower than 3, which indicates that respondents relatively disagree with the associated questions.

In Table 3.57, questions 22 and 25 are grouped under factor 2. Therefore, reliability analysis is undertaken for these questions and the mean values for each question is tabulated in Table 3.59.

Table 3.59

The Mean Values for the Questions Grouped Under Factor 2 for the Benefits of EIA Section of the Companies' Questionnaire

Questions	Mean Values out of "5"
Question 22	3,42
Question 25	3,85

Cronbach's alpha value is found to be 0,83, which indicates that all the questions grouped under factor 2 have a internal consistency of 83 %.

The second factor is interpreted as the sufficiency of the scientific approaches, the complition time of EIA process and the contributions of the other organizations and it is identified as opportunity since all the mean values are higher than 3, which indicates that respondents relatively agree with the associated questions.

In Table 3.57, questions 23 and 24 are grouped under factor 3. Therefore, reliability analysis is undertaken for these questions and the mean values for each question is tabulated in Table 3.60.

Table 3.60

The Mean Values for the Questions Grouped Under Factor 3 for the Benefits of EIA Section of the Companies' Questionnaire

Questions	Mean Values out of "5"
Question 23	4,00
Question 24	3,14

Cronbach's alpha value is found to be 0,80, which indicates that all the questions grouped under factor 3 have an internal consistency of 80 %.

The third factor is interpreted as the standards for EIA between all stakeholders and the conflict of the authority between the other involved organizations and it is identified as opportunity since all the mean values are higher than 3, which indicates that respondents relatively agree with the associated questions.

The factor analyses results for the Communication and Coordination with the Ministry Section of the Public Institutions Questionnaire are given in Table 3. 61.

Table 3.61

Total Variance Explained For the Communication and Coordination with the Ministry Section of the Public Institutions Questionnaire

Component	Initial Eigenvalues		
	Total	% of Variance	Cumulative %
1	**3,636**	40,405	40,405
2	**3,109**	34,545	74,950
3	**1,175**	13,054	88,005
4	,719	7,993	95,998
5	,232	2,576	98,573
6	,128	1,427	100,000
7	8,931E-17	9,924E-16	100,000
8	-1,603E-16	-1,781E-15	100,000
9	-4,734E-16	-5,260E-15	100,000

3 factors, which account for 88,0 percent of the total variance of the 9 variables, will be retained according to the latent root criterion. The corresponding factor loadings after Varimax Rotation are tabulated in Table 3.62.

Table 3.62

Factor Analyses For the Communication and Coordination with Ministry Section of the Public Institutions Questionnaire (PIQ)

(rotated)

	Factor 1	Factor 2	Factor 3
PIQ section-1/Q-1	**,982**	-,019	-,085
PIQ section-1/Q-2	**,966**	,098	,095
PIQ section-1/Q-3	,047	**,963**	-,052
PIQ section-1/Q-4	,001	**,972**	,042
PIQ section-1/Q-5	**,982**	-,019	-,085
PIQ section-1/Q-6	,253	-,096	**-,718**
PIQ section-1/Q-7	,123	**,894**	,328
PIQ section-1/Q-8	-,128	**,690**	,504
PIQ section-1/Q-9	,498	,156	**,785**

Residual matrix for that section is checked and there are 8 (22,0%) nonredundant residuals with absolute values greater than 0.05.

In Table 3.62, questions 1, 2, and 5 are grouped under factor 1. Therefore, reliability analysis is undertaken for these questions and the mean values for each question is tabulated in Table 3.63.

Table 3.63

The Mean Values for the Questions Grouped Under Factor 1 for the Communication and Coordination with Ministry Section of the Public Institutions Questionnaire

Questions	Mean Values out of "5"
Question 1	3,57
Question 2	3,71
Question 5	3,57

Cronbach's alpha value is found to be 0,98, which indicates that all the questions grouped under factor 1 have an internal consistency of 98 %.

The first factor is interpreted as the effectiveness of the interaction and the communication with the Ministry and it is identified as opportunity since all the mean values are higher than 3, which indicates that respondents relatively agree with the associated questions.

In Table 3.62, questions 3, 4, 7 and 8 are grouped under factor 2. Therefore, reliability analysis is undertaken for these questions and the mean values for each question is tabulated in Table 3.64.

Table 3.64

The Mean Values for the Questions Grouped Under Factor 2 for the Communication and Coordination with Ministry Section of the Public Institutions Questionnaire

Questions	Mean Values out of "5"
Question 3	3,42
Question 4	3,28
Question 7	3,42
Question 8	3,42

Cronbach's alpha value is found to be 0,92, which indicates that all the questions grouped under factor 1 have a internal consistency of 92 %.

The second factor is interpreted as the effectiveness of exchange of information with the Ministry and it is identified as opportunity since all the mean values are higher than 3, which indicates that respondents relatively agree with the associated questions.

In Table 3.62, questions 6 and 9 are grouped under factor 3. Therefore, reliability analysis is undertaken for these questions and the mean values for each question is tabulated in Table 3.65.

Table 3.65

The Mean Values for the Questions Grouped Under Factor 3 for the Communication and Coordination with Ministry Section of the Public Institutions Questionnaire

Questions	Mean Values out of "5"
Question 6	4,14
Question 9	2,28

Cronbach's alpha value is found to be - 0,67. The Cronbach's alpha value is negative since the sixth question is negatively correlated with factor 3.

The third factor is interpreted as the development of common projects and although mean values are considerably different from each other it is identified as threat by the management.

The factor analysis results for the EIA Meetings Section of the Public Institutions Questionnaire are given in Table 3. 66.

Table 3.66

Total Variance Explained For the EIA Meetings Section of the Public Institutions Questionnaire

Component	Initial Eigenvalues		
	Total	% of Variance	Cumulative %
1	**5,397**	38,552	38,552
2	**2,891**	20,651	59,203
3	**2,374**	16,956	76,160
4	**1,681**	12,005	88,164
5	**1,470**	10,499	98,664
6	,187	1,336	100,000
7	1,191E-15	8,506E-15	100,000
8	2,604E-16	1,860E-15	100,000
9	2,219E-16	1,585E-15	100,000
10	1,560E-16	1,114E-15	100,000
11	1,796E-18	1,283E-17	100,000
12	-9,397E-18	-6,712E-17	100,000
13	-1,209E-16	-8,636E-16	100,000
14	-4,012E-16	-2,865E-15	100,000

5 factors, which account for 98,7 percent of the total variance of the 14 variables, will be retained according to the latent root criterion. The corresponding factor loadings after Varimax Rotation are tabulated in Table 3.67.

Table 3.67

Factor Analyses For the EIA Meetings Section of Public Institutions Questionnaire (PIQ)

(Rotated)

	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5
PIO section-2/Q-10	**,556**	,546	,556	,000	-,275
PIO section-2/Q-11	,**826**	,249	,276	,406	,083
PIO section-2/Q-12	,314	,273	-,420	**,798**	-,052
PIO section-2/Q-13	-,028	-,074	-,065	-,035	**,989**
PIO section -2/Q-14	,**813**	,155	,080	-,434	,336
PIO section -2/Q-15	,374	,351	**,835**	,003	,198
PIO section -2/Q-16	,164	,140	,246	**,914**	-,238
PIO section -2/Q-17	**,616**	,056	,783	,054	,032
PIO section -2/Q-18	**,934**	,081	-,023	,049	-,251
PIO section -2/Q-19	,100	**,902**	,398	-,078	-,098
PIO section -2/Q-20	,232	,206	**-,913**	-,052	,233
PIO section -2/Q-21	,437	,057	-,066	**-,848**	-,268
PIO section -2/Q-22	-,002	**,938**	-,025	,308	,147
PIO section -2/Q-23	,556	**,546**	,556	,000	-,275

Residual matrix for that section is checked and there are 1 (1,0%) nonredundant residuals with absolute values greater than 0.05.

In Table 3.67, questions 10, 11, 14, 17, and 18 are grouped under factor 1. Therefore, reliability analysis is undertaken for these questions and the mean values for each question is tabulated in Table 3.68.

Table 3.68

The Mean Values for the Questions Grouped Under Factor 1 for the EIA Meetings Section of the Public Institutions Questionnaire

Questions	Mean Values out of "5"
Question 10	3,57
Question 11	4,00
Question 14	3,71
Question 17	3,42
Question 18	3,71

Cronbach's alpha value is found to be 0,88, which indicates that all the questions grouped under factor 1 have an internal consistency of 88 %.

The first factor is interpreted as the sufficiency of the scientific approaches, timing of invitations to EIA meetings and the participation of all stakeholders and it is identified as opportunity since all the mean values are higher than 3, which indicates that respondents relatively agree with the associated questions.

In Table 3.67, questions 19, 22, and 23 are grouped under factor 2. Therefore, reliability analysis is undertaken for these questions and the mean values for each question is tabulated in Table 3.69.

Table 3.69

The Mean Values for the Questions Grouped Under Factor 2 for the EIA Meetings Section of the Public Institutions Questionnaire

Questions	Mean Values out of "5"
Question 19	3,28
Question 22	3,57
Question 23	3,28

Cronbach's alpha value is found to be 0,91, which indicates that all the questions grouped under factor 1 have an internal consistency of 91 %.

The second factor is interpreted as the standards for EIA, qualification of the technical staff and the conflict of authority and it is identified as opportunity since all the mean values are higher than 3, which indicates that respondents relatively agree with the associated questions.

In Table 3.67, questions 15 and 20 are grouped under factor 3. Therefore, reliability analysis is undertaken for these questions and the mean values for each question is tabulated in Table 3.70.

Table 3.70

The Mean Values for the Questions Grouped Under Factor 3 for the EIA Meetings Section of the Public Institutions Questionnaire

Questions	Mean Values out of "5"
Question 15	3,14
Question 20	3,14

Cronbach's alpha value is found to be -1,33. The Cronbach's alpha value is negative since the question 20 is negatively correlated with factor 3.

The third factor is interpreted as the communication between the public organizations and the quality of reports and it is identified as opportunity since all the mean values are higher than 3, which indicates that respondents relatively agree with the associated questions.

In Table 3.67, questions 12, 16, and 21 are grouped under factor 4. Therefore, reliability analysis is undertaken for these questions and the mean values for each question is tabulated in Table 3.71.

Table 3.71

The Mean Values for the Questions Grouped Under Factor 4 for the EIA Meetings Section of the Public Institutions Questionnaire

Questions	Mean Values out of "5"
Question 12	4,42
Question 16	4,28
Question 21	3,85

Cronbach's alpha value is found to be - 0,11. The Cronbach's alpha value is negative since the question 21 is negatively correlated with factor 4.

The fourth factor is interpreted as the completion time of the EIA procedure, impartiality and the contribution of the other involved public organizations and it is identified as opportunity since all the mean values are higher than 3, which indicates that respondents relatively agree with the associated questions.

In Table 3.67, question 13 is highly correlated with factor 5. The factor is interpreted as the management of the EIA meetings and it is identified as opportunity since the mean value for this question is 3,57, which indicates that respondents relatively agree with that question.

The factor analyses results for Benefits of EIA section of Public Institution Questionnaire are given in Table 3. 72

Table 3.72

Total Variance Explained For the Benefits of EIA section of Public Institutions Questionnaire

Component	Initial Eigenvalues		
	Total	% of Variance	Cumulative %
1	**3,027**	60,550	60,550
2	**1,137**	22,743	83,293
3	,582	11,636	94,929
4	,227	4,548	99,477
5	,026	,523	100,000

2 factors, which account for 83,3 percent of the total variance of the 5 variables, will be retained according to the latent root criterion. The corresponding factor loadings after Varimax Rotation are tabulated in Table 3.73.

Table 3.73

Factor Analyses For the Benefits of EIA section of Public Institutions Questionnaire (PIQ)

(Rotated)

	Factor 1	Factor 2
PIO section -2/Q-24	**,761**	-,108
PIO section -2/Q-25	**,785**	,512
PIO section -2/Q-26	**,926**	-,008
PIO section -2/Q-27	-,033	,**965**
PIO section -2/Q-28	,**947**	,101

Residual matrix for that section is checked and there are 8 (80,0%) nonredundant residuals with absolute values greater than 0.05.

In Table 3.73, questions 24, 25, 26, and 28 are grouped under factor 1. Therefore, reliability analysis is undertaken for these questions and the mean values for each question is tabulated in Table 3.74.

Table 3.74

The Mean Values for the Questions Grouped Under Factor 1 for the Benefits of EIA section of the Public Institutions Questionnaire

Questions	Mean Values out of "5"
Question 24	3,71
Question 25	3,71
Question 26	3,71
Question 28	3,85

Cronbach's alpha value is found to be 0,87, which indicates that all the questions grouped under factor 1 have an internal consistency of 87 %.

The first factor is interpreted as the contributions of EIA for the solution of the environmnetal problems as a planning tool and it is identified as opportunity since all the mean values are higher than 3, which indicates that respondents relatively agree with the associated questions.

In Table 3.73, question 25 is highly correlated with factor 2. The factor is interpreted as the capacity of EIA to benefit from the views of different experts and it is identified as

opportunity since the mean value for this question is 3,71, which indicates that respondents relatively agree with that question.

3.2 STAKEHOLDER ANALYSIS

Based on factors derived from the analysis of questionnaire results, a SWOT analysis is undertaken for the target stakeholder groups. The SWOT analysis is undertaken to determine the organization's strengths, weaknesses, opportunities, and threats in order to reassesses its mission and objectives and translate them into clear, understandable, and concrete strategic objectives. Opportunities are positive external factors, threats are negative external factors, strengths are what the organization does well, and weaknesses are activities that the organization does not do well (Robbins et al., 1998).

3.2.1 Staff Stakeholder Analysis

Since the staff is grouped as internal stakeholder, factors derived from the staff questionnaire are considered as strengths or weaknesses according to the methodology given in Figure 3.2.

STRENGTHS:

- Level of the communication and support for the project developers is satisfactory.
- Quality of the EIA process is sufficient.

WEAKNESSES:

- Information level of the staff about the general objectives is insufficient.
- All the complementary activities of EIA such as monitoring and control, environmental inventory and planning are not effective.

- In service training is not adequate.
- Physical materials needed and the level of importance given to technological developments by senior executives is not adequate.
- Level of the importance given by the management to thoughts, ideas, and expectations of staff is considerably low.
- Level of awareness of the staff about the general objectives of General Directorate is low.
- Capability of developing common standards and the level of communication and coordination with the other institutions are insufficient.
- Satisfaction level of the project developers from EIA is considerably low.
- Contribution of the other associated organizations to the EIA process is not satisfactory.

3.2.2 Provincial Directorates Stakeholder Analysis:

Since the provincial directorates are also grouped as internal stakeholder, factors derived from the provincial directorate questionnaire are considered as strengths or weaknesses according to the methodology given in Figure 3.2.

STRENGTHS:

- There is effective communication and support from the Ministry.
- Common standards can be developed between the Ministry and the provincial directorates.
- Cooperation between the provincial directorates and the other associated organizations is satisfactory.
- The contributions of EIA to the project developers are sufficient.
- Relationship with the project developers regarding the scope and the quality of the EIA reports is satisfactory.

- Contribution of the other associated organizations to EIA is satisfactory.
- The completion time of EIA is satisfactory.

WEAKNESSES:

- Information level of the staff about the general objectives is insufficient.
- In service training is not adequate.
- Contribution of the environmental state reports to EIA is considerably low.
- Environmental inventory is not adequate
- Satisfaction level of the project developers from EIA is considerably low.
- Contribution of EIA to the project developers is considerably low.
- Relationship with the project developers regarding the scope and quality of EIA reports is weak.
- There is a lack of common standards between the Ministry and the provincial directorates concerning EIA and controlling-monitoring after the completion of EIA procedure.
- There is a lack of common standards between the Ministry and the other associated organizations.
- There is a conflict of authority between the other associated organizations.
- The level of agreement upon the aim and definition of EIA is not satisfactory.

3.2.3 Companies Stakeholder Analysis:

Since companies preparing the EIA reports are grouped as external stakeholder, the factors derived from the companies' questionnaire are considered as opportunities or threats according to the methodology given in Figure 3.2.

OPPORTUNITIES:

- Atmosphere, impartiality, and timing of invitations of the EIA meetings are satisfactory.
- All the stakeholders are participating at the EIA meetings.
- Different alternatives for the project developers can be proposed at the EIA meetings.
- Proactive solutions can be proposed at the EIA meetings.
- There are well-defined standards for EIA between all the stakeholders and the responsibilities of the other associated organizations are clear.
- The interaction and the communication with the ministry are effective.

THREATS:

- There is a lack of common standards for the EIA between the companies and the other associated organizations.
- The expectations and standards of the Ministry for the EIA process are not apparent.
- Sufficiency of scientific approaches, the completion time of the EIA process and the contribution of the other associated organizations to EIA are not satisfactory.
- Communication between all the stakeholders at the EIA meetings is not satisfactory.
- The project developers are not satisfied with the EIA.

3.2.4 Other Public Institutions Stakeholder Analysis:

Since other public institutions are also grouped as external stakeholder, the factors derived from other public institutions questionnaire are considered as opportunities or threats according to the methodology given in Figure 3.2.

OPPORTUNITIES:

- There is an effective interaction and communication between the Ministry and the other associated organizations
- There is an effective information exchange between the Ministry and the other associated organizations
- Sufficiency of scientific approaches, the completion time of the EIA process and contribution of the other associated organizations to the EIA are satisfactory.
- Technical staff is qualified and there is no conflict of authority.
- Communication is effective between the other associated organizations.
- Completion time of the EIA procedure, impartiality of the Ministry at the EIA meetings and the contribution of the other associated organizations are satisfactory.
- The EIA meetings are managed well.
- Contributions of the EIA for the solution of environmental problems as a planning tool.
- Capacity of the EIA to benefit from the views of different experts.
- The completion time of the EIA procedure, impartiality and the contribution of the other involved public organizations are satisfactory.

THREAT:

- There are no projects developed together.

3.3 STRATEGIES AND PERFORMANCE MEASURES

The general objectives of the General Directorate defined by law are given in Chapter 1. Strategies are derived based on the SWOT analysis results and interviews with the managers of the General Directorate to realize the top-level objectives effectively. Strategies and performance measure(s) for each objective statement are determined according to the general objective statements defined by law, the SWOT analysis results

and interviews with heads of departments and managers. Firstly, strategies to achieve each objective and then the performance measure(s) for each strategy are determined as follows,

Objective Statement 1: Performing EIA and SEA studies:

Strategy 1: Informing all stakeholders about the mission of General Directorate.

Performance Measures:

1. Number of hits to the Ministry's web page.
2. Number of publications, explaining the general objectives of the General Directorate, requested by stakeholders.

Strategy 2: Increasing the capacity of the staff and provincial directorates to initiate new projects when needed.

Performance Measure:

1. Number of projects completed successfully annually.

Strategy 3: Increasing the number of in service training activities for staff and provincial directorates.

Performance Measures:

1. Number of in service training activities organized for the staff for every three-month period.

2. Number of in service training activities organized for the Provincial Directorates every year.

Strategy 4: Using information technologies to increase efficiency and effectiveness.

Performance Measures:

1. Percentage of the staff with direct access to Internet.
2. Percentage of provincial directorates with direct access to Internet.
3. Proportion of number of software programs available to number of software programs needed.
4. Proportion of educated staff for the use of software programs.

Strategy 5: Increasing the coordination with stakeholders and getting continuous feedback from all stakeholders.

Performance Measure:

1. Number of meetings held annually.
2. Availability of feedback mechanisms on the web.

Strategy 6: Increasing the quality of EIA reports.

Performance Measure:

1. Sufficiency of different alternatives, including doing-nothing alternative, proposed in the EIA reports.

Strategy 7: Clarifying the responsibilities of each stakeholder involved in EIA procedure to avoid conflict of authority.

Performance Measure:

1. The extent to which the responsibilities of different stakeholder groups overlap.

Strategy 8: Increasing the number of stakeholders involved in the EIA process.

Performance Measure:

1. Proportion of the number of stakeholder groups involved to the number of stakeholder groups invited for each EIA process.

Strategy 9: Decreasing the completion time of the EIA procedure.

Performance Measure:

1. Completion time of each EIA procedure.

Strategy 10: Defining the relationship between EIA and SEA clearly.

Performance Measure:

1. Number of conflicts between the EIA Regulation and the Draft SEA Regulation.

Strategy 11: Arranging education programs for SEA to increase the capacity of the external stakeholders.

Performance Measure:

1. The number of education programs arranged for the external stakeholders annually.

Objective Statement 2: Preparing environmental inventory and environmental state report:

Strategy 1: Using geographical information systems.

Performance Measures:

1. The number of thematic maps planned to be produced annually.
2. Proportion of the number of maps actually produced to number of the thematic maps planned to be produced annually.
3. Proportion of the data integrated into digital maps (1/100 000 or 1/250 000 scaled) to the data available in the EIA reports.
4. Proportion of the data integrated into digital map to the data available in Environmental State Reports.
5. Proportion of the number of maps integrated into digital map to the number of maps available in Environmental Atlas.

Strategy 2: Preparing Environmental Atlas for Turkey.

Performance Measure:

1. Number of hits to web page of the Ministry containing Environmental Atlas.

Strategy 3: Developing an environmental database on the web allowing the provincial directorates to enter environmental data continuously.

Performance Measure:

1. Number of data entered into the database by the provincial directorates monthly.

Strategy 4: Preparing an inventory for provincial environmental priorities and problems.

Performance Measures:

1. Percentage of information sent from the provincial directorates.
2. Percentage of inaccurate information for each provincial directorate.

Strategy 5: Increasing the contribution of the environmental state reports to the EIA.

Performance Measures:

1. Number of the environmental state reports demanded by EIA practitioners.
2. Percentage of the provincial directorates with environmental state reports.
3. Percentage of information in compliance with the format given by the Ministry.
4. Frequency of the revision of the environmental state reports for each provincial directorate.

Objective Statement 3: Controlling and monitoring of activities under its responsibility, following international studies and assuring their implementation at the national level.

Strategy 1: Increasing the number of projects controlled and monitored after the EIA procedure.

Performance Measure:

1. Percentage of the projects controlled and monitored after the EIA procedure.

Strategy 2: Decreasing the gap between what is stated in the EIA reports and what is observed in reality.

Performance Measure:

1. Percentage of the projects with a gap between what is stated in the EIA reports and what is observed in reality.

Objective Statement 4: **Performing activities and coordinating efforts related with European Environmental Agency.**

Strategy 1: Developing, coordinating, and implementing projects regarding the management of environmental information systems.

Performance Measures:

1. Observing whether projects are completed on time and the desired results defined in Terms of References are achieved or not.
2. Proportion of the number of institutions involved in projects to the total number of institutions envisaged taking part in projects.

3. Proportion of the number of project proposals accepted to the number of projects proposed to international funding organizations.

Strategy 2: Coordinating relations between National Reference Centers in Turkey and topic centers of European Environment Agency.

Performance Measures:

1. Proportion of the number of existing environmental indicators to the total number of indicators requested by European Environment Agency.
2. Proportion of the existing environmental data to the data requested by European Environment Agency.
3. Proportion of the number of existing reports to the total number of reports requested by European Environment Agency.

Strategy 3: Ensuring public access to environmental information.

Performance Measures:

1. Proportion of the data demanded by the public to the data provided.
2. Percentage of the number of provinces with environmental information offices.
3. Percentage of the provinces in which public awareness on environment is raised.

Objective Statement 5: Preparing, approving and assuring the implementation of 1/25000 scaled territorial plans, which are prepared based on development plans and regional plans, in order to integrate ecological decisions with economic decisions.

Strategy 1: Ensuring the balance between protection and use under the scope of sustainable development.

Performance Measure:

1. Pollution load on the natural resources threatening their sustainability.

Strategy 2: Setting the framework for territorial plans with a scale of 1/5000, 1/1000, or smaller which must be in compliance with 1/25000 scaled territorial plans.

Performance Measure:

1. Number of the revisions made for each 1/25000-scaled territorial plan after its approval.

CHAPTER 4

BALANCED SCORECARD METHODOLOGY

4.1 Modification of Balanced Scorecard Methodology:

Figure 2.2 in Chapter 2 presents the Balanced Scorecard Methodology for public sector. However, the Balanced Scorecard Methodology is modified in order to make it more suitable for General Directorate of EIA and Planning. First of all, the number of perspectives, which was originally four, is reduced to three perspectives, which are Internal Business Perspective, Stakeholder perspective and Learning and growth perspective. The financial perspective is removed since the ultimate goal of the Balanced Scorecard model proposed in this study is the achievement of the general objectives and the general objectives do not cover the issues related with the financial perspective. Moreover, the customer perspective is renamed, as the stakeholder perspective since there are many stakeholder groups involved in the EIA process and the main concern is how to create value for stakeholders. Based on the strategies derived to realize the general objectives, performance measures for each perspective are determined and deployed to head of departments and branch offices. The Proposed Balanced Scorecard Methodology is given in Figure 4.1.

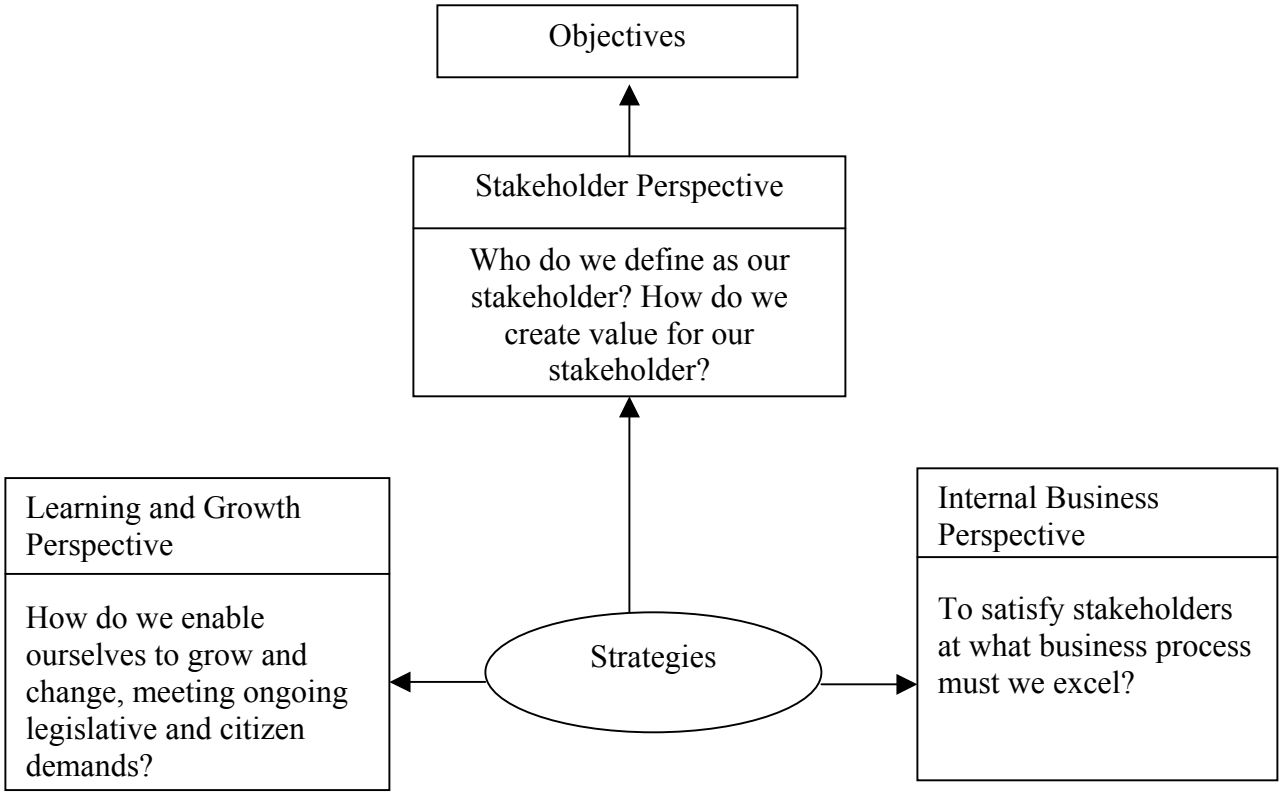

Figure 4.1 Proposed Balanced Scorecard Model

4.2. Application of Proposed Balanced Scorecard Methodology:

Strategies to realize the general objectives, performance measures and responsible departments for each strategy of the Internal Business Perspective is given in Table 4.1.

Table 4.1

Strategies and Performance Measures for Each Strategy for Internal Business Perspective

Strategies	Performance Measures	Responsible Department(s)
Informing all stakeholders about the general objectives of General Directorate.	Number of hits to the Ministry's web page. Number of publications, explaining the general objectives of the General Directorate, requested by stakeholders.	All Departments.
Using information technologies to increase efficiency and effectiveness.	Percentage of the staff with direct access to internet. Percentage of the provincial directorates with direct access to internet. Proportion of number of software programs available to number of software programs needed. Proportion of educated staff for the use of software programs.	Department of Environmental Inventory. All Branch Offices
Increasing the quality of EIA reports.	Sufficiency of different alternatives, including doing-nothing alternative, proposed in the EIA reports.	Department of EIA for Industrial Investments and Department of EIA for Infrastructural Investments. All Branch Offices.

Table 4.1 - Continued

Strategies and Performance Measures for Each Strategy for Internal Business Perspective

Defining the relationship between EIA and SEA clearly.	Number of conflicts between the EIA Regulation and the Draft SEA Regulation.	Department of Planning and Strategic Environmental Assessment. All Branch Offices.
Using geographical information systems (GIS).	The number of the thematic maps planned to be produced annually.	Department of environmental Inventory. Branch Office of Preparation of Environmental State Reports and Branch Office of Data Assessment
	Proportion of number of the maps actually produced to number of the thematic maps planned to be produced annually.	
	Proportion of the data integrated into digital map (1/100 000 or 1/250 000 scaled) to the data available in the EIA reports.	
	Proportion of the data integrated into digital map to the data available in Environmental State Reports.	
	Proportion of number of the maps integrated into digital map to the number of maps available in the Environmental Atlas.	

Table 4.1 - Continued

Strategies and Performance Measures for Each Strategy for Internal Business Perspective

Preparing Environmental Atlas for Turkey.	Number of hits to the web page of the Ministry containing Environmental Atlas.	Department of environmental Inventory. Branch Office of Data Assessment
Developing environmental database on web allowing the provincial directorates to enter environmental data continuously.	The extent of the data entered into the database by the provincial directorates monthly.	Department of environmental Inventory. Branch Office of Data Assessment
Preparing an inventory for provincial environmental priorities and problems.	Percentage of information sent from provincial directorates. Percentage of inaccurate information for each provincial directorate.	Department of environmental Inventory. Branch Office of Preparation of Environmental State Reports

Table 4.1 - Continued

Strategies and Performance Measures for Each Strategy for Internal Business Perspective

Increasing the contribution of environmental state reports to EIA.	Number of the environmental state reports demanded by EIA practitioners.	Department of environmental Inventory. Branch Office of Preparation of Environmental State Reports
	Percentage of the provincial directorates with the environmental state reports.	
	Percentage of the information in compliance with format given by the ministry.	
	Frequency of revision of environmental state reports for each provincial directorate.	
Increasing the number of projects controlled and monitored after the EIA procedure.	Percentage of the projects controlled and monitored after the EIA procedure.	Department of Control and Monitoring of Plan and EIA. Branch Office of Control and Monitoring of EIA.
Decreasing the gap between what is stated in EIA reports and what is observed in reality.	Percentage of the projects with a gap between what is stated in the EIA reports and what is observed in reality.	Department of Control and Monitoring of Plan and EIA. All Branch Offices

Table 4.1 - Continued

Strategies and Performance Measures for Each Strategy for Internal Business Perspective

Controlling and monitoring of the companies with authorization for preparing EIA reports.	Percentage of the companies controlled.	Department of Control and Monitoring of Plan and EIA. Branch Office of Sufficiency Certificate.
Coordinating relations between National Reference Centers in Turkey and topic centers of European Environment Agency.	Proportion of the number of existing environmental indicators to total number of indicators requested by European Environment Agency.	Department of Environmental Inventory. Branch Office of Environmental Agency.
	Proportion of the existing environmental data to the data requested by European Environment Agency.	
	Proportion of number of existing reports to total number of reports requested by European Environment Agency.	

Table 4.1 - Continued

Strategies and Performance Measures for Each Strategy for Internal Business Perspective

Ensuring the balance between protection and use under the scope of sustainable development.	Pollution load on the natural resources threatening their sustainability.	Department of Planning and Strategic Environmental Assessment. All Branch Offices
Setting the framework for territorial plans with a scale of 1/5000, 1/1000, or smaller which must be in compliance with 1/25000 scaled territorial plans.	Number of revisions made for each 1/25000-scaled territorial plan after its approval.	Department of Planning and Strategic Environmental Assessment. All Branch Offices.

Strategies and performance measures and responsible departments for each strategy for Stakeholder Perspective are given in Table 4.2.

Table 4.2

Strategies and Performance Measures for Each Strategy for Stakeholder Perspective

Strategies	Performance Measures	Responsible Department(s)
Increasing the coordination with stakeholders and getting continuous feedback from all the stakeholders.	Number of the meetings held annually. Availability of the feedback mechanisms on web.	All Departments.
Increasing the benefits of EIA.	Proportion of the projects, which have already been initiated and still subject to EIA procedure.	Department of EIA for Industrial Investments and Department of EIA for Infrastructural Investments. All Branch Offices.
Clarifying the responsibilities of each stakeholder involved in EIA procedure to avoid conflict of authority.	The extent to which the responsibilities of different stakeholder groups overlap.	Department of EIA for Industrial Investments and Department of EIA for Infrastructural Investments. All Branch Offices.
Increasing the number of stakeholders involved in EIA process.	Proportion of number of stakeholder groups involved to number of stakeholder groups invited for each EIA process.	Department of EIA for Industrial Investments and Department of EIA for Infrastructural Investments. All Branch Offices.

Table 4.2

Strategies and Performance Measures for Each Strategy for Stakeholder Perspective (Continued)

Decreasing the completion time of EIA procedure.	The completion time of each EIA procedure.	Department of EIA for Industrial Investments and Department of EIA for Infrastructural Investments. All Branch Offices.
Ensuring public access to environmental information.	Proportion of the data demanded by public to the data provided.	Department of environmental Inventory.
	Percentage of number of the provinces with the environmental information offices.	Branch Office of Environmental Agency.
	Percentage of the provinces in which public awareness on environment is raised.	

Strategies and performance measures and responsible departments for each strategy for Learning and Growth Perspective is given in Table 4.3.

Table 4.3

Strategies and Performance Measures for Each Strategy for Learning and Growth Perspective

Strategies	Performance Measures	Responsible Department(s)
Increasing the capacity of staff and provincial directorates to initiate new projects when needed.	The number of the projects completed successfully annually.	All Departments.
Increasing the number of in service training activities for staff and provincial directorates.	The number of in service training activities organized for the staff for every three-mounth period. The number of in service training activities organized for the Provincial Directorates for every annually.	All Departments.
Arranging education programs for SEA to increase the capacity of external stakeholders.	The number of the education programs arranged for the external stakeholders annually.	Department of Planning and Strategic Environmental Assessment. All Branch Offices.

Table 4.3 - Continued

Strategies and Performance Measures for Each Strategy for Learning and Growth Perspective

Developing, coordinating, and implementing the projects regarding the management of the environmental information system.	Observing whether the projects are completed on time and the desired results defined in Terms of References are achieved or not.	Department of environmental Inventory. Branch Office of Environmental Agency.
	Proportion of the number of institutions involved in the projects to total number of the institutions envisaged taking part in projects.	
	Proportion of the number of the project proposals accepted to the number of the projects proposed to the international funding organizations.	

CHAPTER 5

CONCLUSION AND RECOMMENDATIONS

Although the balanced scorecard methodology is originally developed for profit seeking companies, it has also been receiving growing interest from public organizations especially in developed countries such as the US Federal Government. However, the interest in this issue in Turkey is relatively recent and despite the ongoing legislative studies on strategic planning and performance measurement by the prime ministry, there is almost no concrete study on the balanced scorecard methodology. Therefore, the primary concern of this study to develop a Balanced Scorecard for the General Directorate of EIAP functioning under the Ministry of Environment and Forestry by reassessing its objective statements defined by law, drivinng tangible, clear and understandable strategies and setting performance measures for each strategy to provide a basis for future studies.

As the first step in this study, internal and external stakeholders were identified and target populations and sample sizes were determined to conduct a survey. Analysis of questionnaire results was undertaken by SPSS 11.5 Statistical Package Program and factor analysis and reliability analysis were applied for each factor derived from each section in the questionnaires. Moreover, residual analysis was undertaken for each

section in the questionnaires and frequency distribution for each response choice in each question was determined and given in Appendix 6.

Due to the lack of full commitment of top management to this study, number of respondents was limited and communication with stakeholder groups except for the staff of General Directorate and the other associated organizations was confined to the application of questionnaires via e-mail and fax. If meetings with these stakeholder groups were possible and number of respondents was higher, statistically more reliable and accurate results could have been achieved. However, although the limited number of respondents and lack of more effective communication tools did not allow survey results to be accurate enough, they have provided useful insights of what the stakeholders think.

Factors derived from the analysis of questionnaires were categorized as weaknesses, strengths, opportunities, and threats as explained in Figure 3.2 and a SWOT analysis was undertaken. In the SWOT analysis, strengths and weaknesses were determined from results of questionnaires conducted to internal stakeholders, which are the staff of General Directorate and Provincial Directorates, and opportunities and threats were determined from the results of questionnaires conducted to external stakeholders, which are other public organizations involved in EIA procedure and companies preparing EIA reports.

Furthermore, the SWOT analysis was undertaken according to the stakeholder requests and expectations. However, analysis of environment including political, economical, socio-cultural and technological issues and analysis of resources including physical plants, and financial structure was not undertaken due to the lack of full commitment of top management and the ambiqueties resulting from the integration of the Ministry of Environment and the Ministry of Forestry as the Ministry of Environment and Forestry.

Therefore, the SWOT analysis undertaken in this study was confined to the assessment of stakeholder expectations and requests by surveys.

The objectives of General Directorate of EIAP was reassessed and strategies to achieve each objective statement and performance measures for each strategy were determined taking into account the SWOT analysis results and the interviews with managers.

Following that specified performance measures were replaced into three perspectives, which are internal business, stakeholder and learning and growth perspectives and deployed to the head of departments and branch offices.

Surveys are not expected to cover all the expectations and requests of stakeholder groups since; survey questions are prepared with the limited participation of the management of the General Directorate and the other stakeholder groups. Therefore, the number of the strengths, weaknesses, opportunities, and threats is quite limited.

Residual values for some sections are relatively high and another factor extraction technique could be used for these sections.

Financial perspective, which is also among the most widely used perspectives of Balanced Scorecard Methodology, was removed in this study. The primary reason for that is the fact that financial issues are not among the objective statements of General Directorate and proposed Balanced Scorecard Model in this study is aiming to assist the implementation of strategies fundamentally derived from the objective statements defined in law. However, performance measures for financial perspective can also be developed in the future.

One of the main shortcomings of this study is the fact that there are too many performance measures defined. Having too many measures could distract management's focus from those measures that are most critical to organizational success. The process of simplifying and distilling a large number of performance measures across the organization to select critical few measures that drive strategic success should be viewed as part of the performance measurement process itself.

In the future, most critical performance measures can be deployed even to the individuals. Moreover, target and frequency of measument for each performance measure can also be set.

Therefore, the Balanced Scorecard proposed in this study is only a framework which has to be improved and reviewed progressively with broader and more effective participation of stakeholder groups and management.

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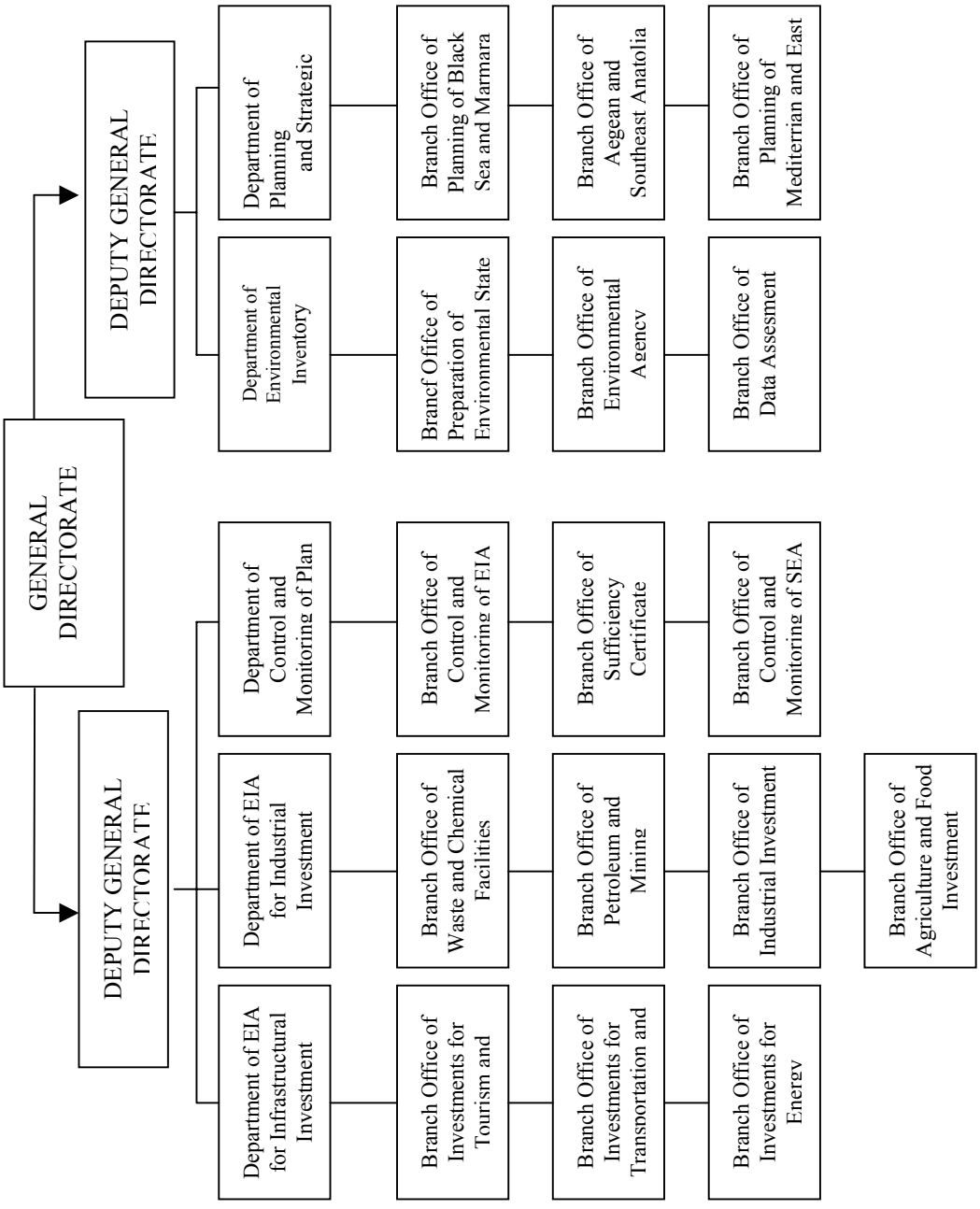
APPENDIX 1

ORGANIZATIONAL CHART OF GENERAL DIRECTORATE OF ENVIRONMENTAL IMPACT ASSESSMENT AND PLANNING



APPENDIX 2

ASSESSMENT OF STAKEHOLDER EXPECTATIONS AND REQUESTS

"STAFF QUESTIONNAIRE"

Dear Friends,

Main purpose of this questionnaire is to get your views and ideas in order to be able to reassess the mission of General Directorate of Environmental Impact Assessment and Planning.

This survey study is conducted with the approval of General Director. The results of this survey study are going to be used for my thesis study in Industrial Engineering Department of METU.

Thank you very much for your commitment. 14.05.2003

Mehmet ÖZCAN
Assistant Expert.

VIEWS OF PERSONNEL ABOUT THE GENERAL DIRECTORATE					
Explanation: Main purpose of this questionnaire is to get your views and ideas in order to be able to reassess the mission of General Directorate of Environmental Impact Assessment and Planning. Therefore, your answers to the questions below will act as a guide on this subject. Please indicate your level of acceptance for the following items with an "x" mark.					
	TECHNICAL INFRASTRUCTURE				
	Strongly		Neither Agree		Strongly
	Agree	Agree	Nor Disagree	Disagree	Disagree
1. Professional requirements of staff are continuously reviewed.	O	O	O	O	O
2. We have a planned training program related to services given.	O	O	O	O	O
3. The staff is provided with the necessary in service training.	O	O	O	O	O
4. The in service trainings we are provided with are sufficient for our studies related with EIA.	O	O	O	O	O
5. Continuous education is provided which enables me to understand the relationship between the work I perform and the general objectives of our organization.	O	O	O	O	O
6. Every kind of equipment is provided to make me perform my job better.	O	O	O	O	O
7. Our managers pay great attention for the application of the technological developments in the area we are providing services in.	O	O	O	O	O
8. We have the staff with necessary qualifications related with EIA and preliminary EIA.	O	O	O	O	O
9. We can easily access to all kind of information that we need while performing our job.	O	O	O	O	O
10. We have sufficient environmental inventory.	O	O	O	O	O
11. Environmental state reports contribute much to EIA and preliminary EIA process.	O	O	O	O	O

12. 1:25 000 scaled territorial plans contribute much to EIA and preliminary EIA process.	O	O	O	O	O
13. We have sufficient information about European Environment Agency.	O	O	O	O	O
14. We have sufficient information about the national environment strategy and action plans.	O	O	O	O	O
15. We have sufficient information about the strategic environmental assessment.	O	O	O	O	O
16. We have sufficient infrastructure to control and monitor projects after completion of EIA procedure.	O	O	O	O	O
17. We can initiate projects on every subject we require.	O	O	O	O	O
	MANAGEMENT				
	Strongly		Neither Agree		Strongly
	Agree	Agree	Nor Disagree	Disagree	Disagree
18. Every personnel have the necessary authority to perform their duties.	O	O	O	O	O
19. Personal expectations of every personnel are taken into consideration by management	O	O	O	O	O
20. Every personnel in my department are encouraged to develop innovative and creative thinking.	O	O	O	O	O
21. The work groups are established in order to improve the work performed and our managers support these groups' studies.	O	O	O	O	O
22. There is an effective coordination and communication between head of departments.	O	O	O	O	O
23. We have sufficient information about the general objectives of general directorate.	O	O	O	O	O
24. We understand the relationship between the job we perform and general mission of general directorate.	O	O	O	O	O

25. Our managers ask for the opinions and views of personnel to increase the service quality.	O	O	O	O	O
26. There is a documented adaptation process for the new personnel.	O	O	O	O	O
27. I am extremely happy about working for our general directorate.	O	O	O	O	O
	COMMUNICATION WITH OTHER ORGANIZATIONS				
	Strongly		Neither Agree		Strongly
	Agree	Agree	Nor Disagree	Disagree	Disagree
28. Our general directorate has effective communication and coordination with other organizations.	O	O	O	O	O
29. All stakeholders are satisfied with our general directorate.	O	O	O	O	O
30. There is an effective communication between proponents and us.	O	O	O	O	O
31. We can support proponents whenever they have problems regarding the implementation of EIA.	O	O	O	O	O
32. There is an agreement upon the aim and definition of EIA	O	O	O	O	O
	GENERAL OVERVIEW TO EIA				
	Strongly		Neither Agree		Strongly
	Agree	Agree	Nor Disagree	Disagree	Disagree
33. EIA provides proponents with different alternatives and approaches.	O	O	O	O	O
34. EIA has great contributions for proponents.	O	O	O	O	O
35. EIA procedures are executed in compliance with their aim.	O	O	O	O	O
36. EIA and preliminary EIA procedures contribute much to the prevention of environmental pollution since they provide proactive solutions.	O	O	O	O	O
37. The attitudes of project developers towards EIA are positive.	O	O	O	O	O

38. Proponents think that EIA is quite beneficial for them.	O	O	O	O	O
39. EIA procedures are completed in a reasonable time.	O	O	O	O	O
40. Other associated organizations are making great contributions for EIA procedure.	O	O	O	O	O
41. Participation of other associated organizations in the EIA procedure is making great contributions for project developers.	O	O	O	O	O
42. Control and monitoring activities after the completion of EIA are sufficient.	O	O	O	O	O
43. There is an agreement upon the aim and definition of EIA within our general directorate.	O	O	O	O	O

APPENDIX 3

ASSESSMENT OF STAKEHOLDER EXPECTATIONS AND REQUESTS

"PROVINCIAL DIRECTORATES QUESTIONNAIRE"

Dear Friends,

Main purpose of this questionnaire is to get your views and ideas in order to be able to reassess the mission of General Directorate of Environmental Impact Assessment and Planning.

This survey study is conducted with the approval of General Director. The results of this survey study are going to be used for my thesis study in Industrial Engineering Department of METU.

Thank you very much for your commitment. 14.05.2003

Mehmet ÖZCAN
Assistant Expert.

VIEWS OF PROVINCIAL DIRECTORATES ABOUT THE GENERAL DIRECTORATE

Explanation: Main purpose of this questionnaire is to get your views and ideas in order to be able to reassess the mission of General Directorate of Environmental Impact Assessment and Planning. Therefore, your answers to the questions below will act as a guide on this subject. Please indicate your level of acceptance for the following items with an "x" mark.

TECHNICAL INFRASTRUCTURE

	Strongly Agree	Agree	Neither Agree Nor Disagree	Disagree	Strongly Disagree
1. We have sufficient knowledge about EIA and preliminary EIA.	O	O	O	O	O
2. We have sufficient infrastructure and equipment for implementation of EIA and preliminary EIA.	O	O	O	O	O
3. We have staff with sufficient qualifications for implementation of EIA and preliminary EIA effectively.	O	O	O	O	O
4. In service trainings and printed notices are sufficient for the studies associated with EIA.	O	O	O	O	O
5. We have sufficient environmental inventory.	O	O	O	O	O
6. Environmental state reports contribute much to EIA studies.	O	O	O	O	O
7. 1:25000 scaled territorial plans contribute much to EIA studies.	O	O	O	O	O
8. We have sufficient knowledge about European Environment Agency.	O	O	O	O	O
9. We have sufficient knowledge about the National Environmental Strategy and Action Plans.	O	O	O	O	O
10. We have sufficient knowledge about Strategic Environmental Assessment.	O	O	O	O	O
11. We have sufficient infrastructure and equipment for monitoring and control of EIA.	O	O	O	O	O
12. We can initiate projects in the areas we need.	O	O	O	O	O

	COMMUNICATION AND COORDINATION WITH MINISTRY				
	Strongly		Neither Agree		Strongly
	Agree	Agree	Nor Disagree	Disagree	Disagree
13. There exists an effective communication and coordination with ministry for the topics regarding the implementation of EIA.	O	O	O	O	O
14. We can get effective views of the Ministry regarding the issues on EIA.	O	O	O	O	O
15. When we ask for the views of the Ministry, we are able to obtain the replies whenever we need**.**	O	O	O	O	O
16. We know the expectations of ministry exactly about the implementation of EIA.	O	O	O	O	O
17. We know the general mission of ministry about the implementation of EIA.	O	O	O	O	O
18. We carry out our studies in compliance with general mission of ministry.	O	O	O	O	O
19. There is an agreement upon the aim and definition of EIA between ministry and us.	O	O	O	O	O
20. Our suggestions and views regarding the implementation of EIA are taken into consideration by ministry.	O	O	O	O	O
	OVERALL OVERVIEW TO EIA				
	Strongly		Neither Agree		Strongly
	Agree	Agree	Nor Disagree	Disagree	Disagree
21. Ministry is open to new ideas and innovations.	O	O	O	O	O
22. There is an effective communication between proponents and us.	O	O	O	O	O
23. Attitudes of proponents towards EIA are quite positive.	O	O	O	O	O
24. Proponents think that EIA is quite beneficial for them.	O	O	O	O	O
25. EIA provides proponents with different alternatives and approaches.	O	O	O	O	O
26. EIA has great contributions for proponents as a planning tool.	O	O	O	O	O

27. Proponents prepare EIA reports in compliance with predefined standards.	O	O	O	O	O
28. There is an agreement upon the aim and definition of EIA between proponents and provincial directorates.	O	O	O	O	O
29. We can support proponents whenever they have problems regarding the implementation of EIA.	O	O	O	O	O
30. EIA procedures are executed in compliance with their aim.	O	O	O	O	O
31. EIA and preliminary EIA procedures contribute much to the prevention of environmental pollution since they provide proactive solutions.	O	O	O	O	O
32. The scope and quality of EIA and preliminary EIA reports are satisfactory	O	O	O	O	O
33. EIA procedures are completed in a reasonable time.	O	O	O	O	O
	OTHER ASSOCIATED ORGANIZATIONS				
	Strongly		Neither Agree		Strongly
	Agree	Agree	Nor Disagree	Disagree	Disagree
34. Control and monitoring activities after EIA procedure are carried out effectively.	O	O	O	O	O
35. Other associated organizations are making great contributions to EIA procedure.	O	O	O	O	O
36. Participation of other associated organizations in EIA meetings is making great contributions for proponents	O	O	O	O	O
37. There is no conflict of authority between associated organizations in EIA meetings.	O	O	O	O	O
38. Each organization in the EIA meetings is aware of its duties and responsibilities.	O	O	O	O	O
39. There is an agreement upon the aim and definition of EIA between all associated organizations.	O	O	O	O	O
40. There are common efforts with other associated organizations to increase the quality of the EIA.	O	O	O	O	O
41. There is an agreement upon the benefits of the EIA between all the other associated organizations.	O	O	O	O	O

42. There are ongoing efforts with the other associated organizations to increase the quality of the EIA.	O	O	O	O	O
43. There is an effective communication with other associated organization for the implementation of EIA.	O	O	O	O	O
44. Other associated organizations are satisfied with our studies related with the implementation of the EIA.	O	O	O	O	O

APPENDIX 4

ASSESSMENT OF STAKEHOLDER EXPECTATIONS AND REQUESTS

"COMPANIES QUESTIONNAIRE"

Dear Friends,

Main purpose of this questionnaire is to get your views and ideas in order to be able to reassess the mission of General Directorate of Environmental Impact Assessment and Planning.

This survey study is conducted with the approval of General Director. The results of this survey study are going to be used for my thesis study in Industrial Engineering Department of METU.

Thank you very much for your commitment. 14.05.2003

Mehmet ÖZCAN
Assistant Expert.

VIEWS OF COMPANIES ABOUT THE GENERAL DIRECTORATE

Explanation: Main purpose of this questionnaire is to get your views and ideas in order to be able to reassess the general objectives of the General Directorate of Environmental Impact Assessment and Planning. Therefore, your answers to the questions below will act as a guide on this subject. Please indicate your level of acceptance for the following items with an "x" mark.

	COMMUNICATION COORDINATION				
	Strongly Agree	Agree	Neither Agree Nor Disagree	Disagree	Strongly Disagree
1. There exists an effective information exchange with the Ministry regarding the topics about the implementation of EIA.	O	O	O	O	O
2. We can easily access to information on the topics regarding EIA.	O	O	O	O	O
3. We well-know the expectations while preparing the EIA reports.	O	O	O	O	O
4. There is an opinion accord regarding the aim and definition of EIA between the Ministry and us.	O	O	O	O	O
5.The opinion and coordination correspondences regarding the EIA implementation are transmitted in a short time period.	O	O	O	O	O
6. There is an opinion accord regarding the aim and definition of EIA between the other associated organizations/institutions.	O	O	O	O	O
	EIA MEETINGS				
	Strongly Agree	Agree	Neither Agree Nor Disagree	Disagree	Strongly Disagree
7. EIA meetings are executed at a scientific level.	O	O	O	O	O
8. We can freely express our ideas in the EIA meetings.	O	O	O	O	O
9. At the EIA meetings, the chairman of the commission acts impartially being the representative of the Ministry.	O	O	O	O	O
10. EIA meetings are executed in compliance with their aim.	O	O	O	O	O
11. Invitations for the EIA meetings are made on time and in a suitable manner.	O	O	O	O	O
12. There is an effective communication between all stakeholders in EIA meetings.	O	O	O	O	O
13. Participation of other associated organizations in EIA meetings is making great contributions for project developers.	O	O	O	O	O
14. All the related stakeholders take part in the EIA meetings.	O	O	O	O	O

15. Each organization in EIA meetings is aware of its duties and responsibilities.	O	O	O	O	O
16. There is no conflict of authority between the associated organizations at the EIA meetings.	O	O	O	O	O
17. The scope and quality of EIA and preliminary EIA reports are satisfactory	O	O	O	O	O
18. EIA procedures are completed in a reasonable time.	O	O	O	O	O
19. Participation of other associated organizations in EIA meetings is making great contributions for proponents	O	O	O	O	O
20. The Ministry possesses sufficient amount of technical personnel regarding the EIA implementations.	O	O	O	O	O
21. There is an agreement upon the definition and aim of EIA between all organizations.	O	O	O	O	O
	BENEFITS OF EIA				
	Strongly Agree	Agree	Neither Agree Nor Disagree	Disagree	Strongly Disagree
22. EIA procedure provides project developers with different alternatives and approaches.	O	O	O	O	O
23. EIA and preliminary EIA procedures contribute much to the prevention of environmental pollution since they provide proactive solutions.	O	O	O	O	O
24. EIA procedure provides proponents with great contributions as an effective planning tool	O	O	O	O	O
25. At the EIA meetings, it is possible to benefit from views of different experts.	O	O	O	O	O
26. Benefits of EIA are known clearly by all the stakeholders.	O	O	O	O	O
27. Proponents mostly think that EIA is quite beneficial.	O	O	O	O	O

APPENDIX 5

ASSESSMENT OF STAKEHOLDER EXPECTATIONS AND REQUESTS

"OTHER PUBLIC INSTITUTIONS QUESTIONNAIRE"

Dear Friends,

Main purpose of this questionnaire is to get your views and ideas in order to be able to reassess the mission of General Directorate of Environmental Impact Assessment and Planning.

This survey study is conducted with the approval of General Director. The results of this survey study are going to be used for my thesis study in Industrial Engineering Department of METU.

Thank you very much for your commitment. 14.05.2003

Mehmet ÖZCAN
Assistant Expert.

VIEWS OF OTHER PUBLIC INSTITUTIONS ABOUT THE GENERAL DIRECTORATE

Explanation: Main purpose of this questionnaire is to get your views and ideas in order to be able to reassess the mission of General Directorate of Environmental Impact Assessment and Planning. Therefore, your answers to the questions below will act as a guide on this subject. Please indicate your level of acceptance for the following items with an "x" mark.

	COMMUNICATION AND COORDINATION				
	Strongly Agree	Agree	Neither Agree Nor Disagree	Disagree	Strongly Disagree
1. We have sufficient knowledge about EIA and preliminary EIA.	O	O	O	O	O
2. We can get effective views of the Ministry regarding the issues on EIA.	O	O	O	O	O
3. There exists an effective communication and coordination with Ministry for the topics regarding the implementation of EIA.	O	O	O	O	O
4. There exists an effective information exchange with the Ministry about the implementation of EIA.	O	O	O	O	O
5. We can easily access to information on the topics regarding the EIA.	O	O	O	O	O
6. We well-know the expectations while examining the EIA reports.	O	O	O	O	O
7. There is an opinion accord regarding the aim and definition of EIA between the Ministry and us.	O	O	O	O	O
8. The opinion and coordination correspondences regarding the EIA implementations are transmitted in a short time period.	O	O	O	O	O
9. Common efforts are executed, when necessary, in-between the associated organizations to increase the quality of the EIA implementations.	O	O	O	O	O
	EIA MEETINGS				
	Strongly Agree	Agree	Neither Agree Nor Disagree	Disagree	Strongly Disagree
10. The EIA meetings are executed on a scientific level.	O	O	O	O	O
11. We can express our ideas in EIA meetings in total freedom.	O	O	O	O	O
12. At the EIA meetings, chairman of the commission acts impartially as being the representative of the Ministry.	O	O	O	O	O
13. The EIA meetings are executed in compliance with their aim.	O	O	O	O	O

14. Invitations for EIA meetings are made on time and in a reasonable manner.	O	O	O	O	O
15. There is an effective communication between all stakeholders at the EIA meetings.	O	O	O	O	O
16. The participation of the other associated organizations in EIA meetings is making great contributions for project developers.	O	O	O	O	O
17. All related stakeholders take part in EIA meetings.	O	O	O	O	O
18. Each organization in EIA meetings is aware of its duties and responsibilities.	O	O	O	O	O
19. There is no conflict of authority between the associated organizations at the EIA meetings.	O	O	O	O	O
20. The scope and quality of EIA and preliminary EIA reports are satisfactory	O	O	O	O	O
21. EIA procedures are generally completed in a reasonable time.	O	O	O	O	O
22. The Ministry possesses sufficient amount of technical personnel regarding the EIA implementations.	O	O	O	O	O
23. There is an agreement upon the aim and definition of EIA between all associated organizations.	O	O	O	O	O
	BENEFITS OF EIA				
	Strongly Agree	Agree	Neither Agree Nor Disagree	Disagree	Strongly Disagree
24. The EIA procedures provide project developers with different alternatives.	O	O	O	O	O
25. EIA and preliminary EIA procedures contribute much to the prevention of environmental pollution since they provide proactive solutions.	O	O	O	O	O
26. EIA procedure provides proponents with great contributions as an effective planning tool	O	O	O	O	O
27. The project developers are able to benefit from the views of different experts during the EIA process.	O	O	O	O	O
28. The benefits of EIA are well-known by all the stakeholders.	O	O	O	O	O

APPENDIX 6

Frequency Distribution as Percentages for the Staff Questionnaire

Quest.	Str. Agree (%)	Agree (%)	Neither Agr, NorDisagr.(%)	Disagree (%)	Str. Disagree (%)
	TECHNICAL INFRASTRUCTURE				
1	6	4	4	58	28
2	2	6	4	62	26
3	0	10	10	50	30
4	0	6	30	40	24
5	0	6	6	56	32
6	2	14	24	48	12
7	2	16	32	34	16
8	2	32	32	26	8
9	0	30	28	34	8
10	0	14	24	34	28
11	2	22	26	36	14
12	6	34	30	22	8
13	0	8	8	62	22
14	4	14	10	54	18
15	10	14	14	40	22
16	2	16	38	28	16
17	2	18	28	34	18
	MANAGEMENT				
18	4	22	28	40	6
19	4	12	24	40	20
20	4	16	20	48	12
21	4	36	26	30	4
22	4	14	20	44	18
23	4	62	12	16	6
24	8	50	26	10	6
25	2	20	30	28	20
27	2	26	20	34	18
28	14	40	26	14	6
	COMMUNICATION WITH OTHER ORGANIZATIONS				
29	2	30	30	32	6
30	2	24	58	14	2
31	0	36	40	22	2
32	2	50	32	16	0
33	2	28	32	30	8

Frequency Distribution as Percentages for the Staff Questionnaire (Continued)

A GENERAL OVERVIEW TO EIA					
34	2	26	26	32	14
35	0	24	38	32	6
36	2	32	40	22	4
37	18	28	22	30	2
38	0	0	36	52	12
39	0	4	30	52	14
40	4	54	30	10	2
41	2	36	32	24	6
42	2	32	36	22	8
43	0	8	34	48	10
44	6	42	24	20	8

Frequency Distribution as Percentages for the Provincial Directorate Questionnaire

Quest.	Str. Agree(%)	Agree(%)	Neither Agr, NorDisagr.(%)	Disagree(%)	Str. Disagree(%)
TECHNICAL INFRASTRUCTURE					
1	30	35	10	25	0
2	10	40	5	45	0
3	5	50	20	20	5
4	0	20	35	40	5
5	0	15	15	55	15
6	10	30	20	25	15
7	25	35	15	20	5
8	0	5	5	50	40
9	0	5	5	60	30
10	0	10	25	45	20
11	5	20	10	55	10
12	0	10	25	35	30
COMMUNICATION AND COORDINATION WITH MINISTRY					
13	5	35	25	30	5
14	5	40	35	20	0
15	0	50	30	20	0
16	5	45	45	5	0
17	10	50	40	0	0
18	15	50	25	10	0
19	0	25	35	30	10
20	5	40	50	5	0
A GENERAL OVERVIEW TO EIA AND PRILIMINARY EIA					
21	5	50	25	20	0
22	0	10	5	75	10
23	0	10	10	55	25
24	0	20	35	35	10
25	0	20	30	45	5
26	10	70	10	10	0
27	0	15	20	60	5
28	25	40	25	5	5
29	15	45	25	15	0
30	10	85	0	0	5
31	0	5	45	50	0
32	0	55	30	15	0
33	5	10	30	55	0
OTHER ASSOCIATED ORGANIZATIONS					
34	0	45	15	25	15
35	0	30	20	40	10
36	0	30	10	30	30
37	0	15	35	45	5
38	0	35	20	40	5

Frequency Distribution as Percentages for the Provincial Directorate Questionnaire (Continued)

39	0	20	50	25	5
40	10	75	10	5	0
41	0	25	40	30	5
42	0	60	20	15	5
43	0	40	40	20	0
44	5	40	45	10	0

Frequency Distribution as Percentages for the Other Involved Public Institutions Questionnaire

Quest.	Str. Agree (%)	Agree (%)	Neither Agr, NorDisagr.(%)	Disagree (%)	Str. Disagree (%)	Str. Agree (%)
COMMUNICATION AND COORDINATION WITH MINISTRY						
1	0.0	71.4	14.3	14.3	0.0	2.3
2	14.3	57.1	14.3	14.3	0.0	1.5
3	14.3	28.6	42.9	14.3	0.0	1.0
4	0.0	42.9	42.9	14.3	0.0	1.2
5	0.0	71.4	14.3	14.3	0.0	2.3
6	14.3	85.7	0.0	0.0	0.0	3.5
7	0.0	57.1	28.6	14.3	0.0	1.5
8	0.0	57.1	28.6	14.3	0.0	1.5
9	0.0	0.0	28.6	71.4	0.0	2.1
EIA MEETINGS						
10	14.3	28.6	57.1	0.0	0.0	1.5
11	14.3	71.4	14.3	0.0	0.0	2.3
12	42.9	57.1	0.0	0.0	0.0	0.7
13	0.0	71.4	28.6	0.0	0.0	2.1
14	0.0	71.4	28.6	0.0	0.0	2.1
15	0.0	42.9	28.6	28.6	0.0	0.6
16	28.6	71.4	0.0	0.0	0.0	2.1
17	14.3	42.9	14.3	28.6	0.0	1.0
18	14.3	42.9	42.9	0.0	0.0	1.2
19	0.0	42.9	42.9	14.3	0.0	1.2
20	0.0	14.3	85.7	0.0	0.0	3.5
21	0.0	85.7	14.3	0.0	0.0	3.5
22	0.0	71.4	14.3	14.3	0.0	2.3
23	0.0	42.9	42.9	14.3	0.0	1.2
BENEFITS OF EIA						
24	0.0	71.4	0.0	28.6	0.0	2.1
25	14.3	42.9	42.9	0.0	0.0	1.2
26	0.0	71.4	28.6	0.0	0.0	2.1
27	14.3	57.1	14.3	14.3	0.0	1.5
28	14.3	57.1	28.6	0.0	0.0	1.5

Frequency Distribution as Percentages for Company Questionnaire

Quest.	%Strong	%Agr.	Neither Agr, Nor Disagree (%)	%Disagree	%Str. Dis	STD.DEV.
COMMUNICATION AND COORDINATION WITH MINISTRY						
1	28.6	42.9	0.0	28.6	0.0	0.6
2	14.3	57.1	28.6	0.0	0.0	1.5
3	14.3	57.1	28.6	0.0	0.0	1.5
4	0.0	85.7	14.3	0.0	0.0	3.5
5	0.0	57.1	28.6	14.3	0.0	1.5
6	0.0	57.1	14.3	28.6	0.0	1.5
7	0.0	28.6	28.6	28.6	14.3	0.5
8	0.0	28.6	0.0	42.9	28.6	0.6
9	0.0	0.0	0.0	57.1	42.9	0.7
EIA MEETINGS						
10	0.0	14.3	28.6	57.1	0.0	1.5
11	0.0	71.4	0.0	28.6	0.0	2.1
12	14.3	85.7	0.0	0.0	0.0	3.5
13	14.3	14.3	28.6	42.9	0.0	1.0
14	14.3	57.1	0.0	28.6	0.0	1.5
15	0.0	0.0	14.3	85.7	0.0	3.5
16	0.0	42.9	14.3	42.9	0.0	1.2
17	0.0	28.6	42.9	28.6	0.0	0.6
18	0.0	28.6	0.0	71.4	0.0	2.1
19	0.0	0.0	14.3	85.7	0.0	3.5
20	0.0	14.3	42.9	28.6	14.3	1.0
21	0.0	28.6	28.6	28.6	14.3	0.5
22	0.0	28.6	14.3	57.1	0.0	1.5
23	14.3	28.6	0.0	57.1	0.0	1.5
24	0.0	0.0	0.0	100.0	0.0	0
BENEFITS OF EIA						
25	14.3	28.6	28.6	28.6	0.0	0.5
26	28.6	42.9	14.3	14.3	0.0	1.0
27	14.3	28.6	28.6	28.6	0.0	0.5
28	14.3	57.1	14.3	14.3	0.0	1.5
29	0.0	14.3	14.3	71.4	0.0	2.3
30	0.0	14.3	28.6	57.1	0.0	1.5