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Perspectives on Iran's Environmental Policy Process

Issues and Constraints

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ABSTRACT

Due to the increase in environmental problems in Iran at the national and regional levels, it is crucial to establish sound and sustainable environmental policies. Further, it is also important to incorporate environmental considerations in the current policies being implemented in sectors such as the agriculture or energy sector. This paper applies the kaleidoscope model to understand the current policy process in Iran. Using this analysis and a literature review, we present a framework that can be applied to develop environmental policies. Studies show that the best instrument for environmental policymaking in Iran is to use the spatial planning with the double approach of activity and resource planning (based on power assessment and resource management, respectively). However, due to the environmental pressures on resources in Iran over the past decades, the current planning approach is not enough and needs to be completed in the form of resource planning.

Keywords: Environmental policymaking, policy process, kaleidoscope model, developing countries, Iran.

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I. INTRODUCTION

The global community is experiencing several imminent environmental threats (Harring 2018). Rapid industrialization and urbanization have led to serious environmental problems. These concerns have been in the public domain for centuries (Hsu, Lee, and Wang 2017), and environmental issues have become an important goal in the policies adopted across the globe. Increasing sustainability of all human activities has become a priority for most countries (Arbolino et al. 2018). This has resulted in several countries signing treaties at the national level such as the Paris Agreement in 2016 (Galeotti et al. 2018). The need for integrating environmental considerations in policy-making has become a central concern as governments try to achieve the Sustainable Development Goals (SDGs), adopted by the UN General Assembly in 2015 (Nilsson and Persson 2017).

Consistency during the policy-making process is a crucial especially for environmental policies since it is a multidimensional and multi-scale issue and has been raised along with sustainable development and ecological modernization in the late 20th century (Runhaar, Van der Windt, and van Tatenhove 2016). After the environmental revolution of the 1960s and early 1970s, widespread structural changes and political reforms were observed throughout the western world (Runhaar 2016). However, in the 1980s, it became clear that environmental protection is passive and probably incomplete in most respects (den Exter, Lenhart, and Kern 2015). Therefore, consistency of environmental issues was considered as one of the main principles of ecological renewal and a predecessor of sustainable development in other political aspects such as energy, agriculture, and transportation (Nilsson and Eckerberg 2007).

Environmental policy is a political principle that expresses a progressive and general approach to solve environmental problems at the onset of their formation and to provide a win-win approach for all involved groups (Vermeulen 2015). In fact, the environmental policy fills the gap between the common environmental protection policy and socio-ecological sustainability (Hemous 2016).

Environmental policy integration (EPI) in different stages of the macro-level policy-making process has been missing in Iran. EPI is important at all levels of the policy process (Visseren-Hamakers 2018; Berkhout et. al. 2015; Pollack and Hafner-Burton 2010; Nilsson, Pallemaerts, and Homeyer 2009) and implies an integration of environmental considerations into all stages of policy-making regardless of sector. Despite the increased emphasis on the considerations of environmental issues in policy making (Babu, Mavrotas, and Prasai 2018; Nilsson, Pallemaerts, and Homeyer 2009), EPI remains relatively unexplored in Iran. Due to the limited understanding of the policy

integration process and to develop a knowledge base, we apply, in this paper, the Kaleidoscope Model (Resnick et al. 2018) to identify drivers influencing Iran's policy-making process and factors resulting in the development of weak environmental policies. Further, we use a recently developed analytical tool to provide more insights into the dynamics around policy integration in Iran and underlying factors influencing the policy integration process and attempt to answer the fundamental questions: How can we explain the process of policy integration for a relatively new cross-cutting policy in Iran? Using the Kaleidoscope Model, we evaluate 16 possible drives for policy change during different stages of the policy-making process. The majority of the literature available on Iran's policy-making process focuses on the energy sector, neglecting current and emerging issues such as climate change adaptation, so this paper seeks to make a contribution to this knowledge gap by taking an in-depth case study approach.

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Unfortunately, similar to other developing countries, environmental policy is an unknown area in Iran. The majority of the environmental authorities do not pay much attention to the environmental policy debate or they have applied macro-organizational goals instead of a genuine environmental policy concept. However, environmental pressures have increased in Iran due to an increase in public awareness and an understanding of the impact of human activities on the environment. This view is not currently justifiable without the scientific approaches of the authorities (Hedayati Aghmashhadi 2018). It is important to understand the policy environment of a country to develop and

implement the required policies. This paper investigates the issues influencing environmental policy in Iran. Further, it provides an overview of the structure of the country's policy-making process. Using an extensive literature review, we apply the kaleidoscope model to understand Iran's policy-making process. We conduct an extensive desk review to understand the policy-making process in Iran. Using the results from the kaleidoscope model, we present a framework which can be used to develop environmental policies in Iran.

The rest of the paper is organized as follows: Section 2 presents the overview of environmental policies both globally and in Iran. Section 3 presents the methodology used in this chapter. Section 4 explains the results of the kaleidoscope model and presents the framework developed using this analysis. Policy implications and concluding remarks are presented in sections 5 and 6 respectively.

II. LITERATURE REVIEW

The term "environmental policy" was not coined until the 1960s. During his presidency, Dwight Eisenhower (34th President of the US) discussed key policies of the country; however, environmental problems were not discussed. Just five years later, President Johnson openly discussed the issue of environmental protection in the context of the "Great Society" program, and in 1969 the US Congress approved the National Environmental Protection Act. This act is one of the most important environmental laws in the world. In 1971, the first environmental program was launched in the United States. Along with being an example for other countries, it was arranged in conjunction with the United Nations Conference on Humans and the Biosphere in 1972 (Knoepfel 2007).

In the 1980s, the rate of approval of environmental laws in the member states of the Organisation for Economic Co-operation and Development (OECD) was acceptable. However, due to different geographic, topographic, and statistical characteristics, as well as different environmental conditions (such as high levels of pollution in urban areas) and the structure of national industries, the rate of environmental laws and regulations' development varied among the different OECD member states (Galeotti et al. 2018). Further, differences in the understanding of environmental issues, political judgments, and powers influenced the development of environmental policies in these countries (Roberts 2004).

In Eastern European countries in 1989, shortly before the profound political changes that took place in these countries, significant efforts were made. These countries' environmental policies were often hastily crafted, however, and were adopted to alleviate the environmental protests in these countries due to an increase in public awareness (Knoepfel 2007).

Undoubtedly, the most important international agreement on environmental policy in the 1990s was the Earth Summit on Environment and Development held in Rio de Janeiro, Brazil. The Summit's resulting agreement was Agenda 21, which held that when the countries formulate their development strategies, they should consider sustainable development considerations, including economic, social, ecological and environmental issues. At the second Earth Summit in Johannesburg, South Africa, in 2002, these issues were evaluated (Larcombe and Ridd 2018).

The United Nations Conference on the Human Environment, held in 1992, placed a strong emphasis on environmental protection by integrating environmental considerations into development policy making (Babu, Mavrotas, and Prasai 2018). After this conference, several countries have made political commitments to include environmental issues in their national development policies, such as national Poverty Reduction Strategy Papers (UNEP 2002). Further, international goals such as the SDGs, established in 2015, include targets to decrease the impact of climate change and increase sustainability (Connor and Dovers 2004; UN 2002; UN 1997). SDG 13 specifically focuses on combating climate change by 2020. Despite the increased interest at the global level, policy making at the national level continue to neglect environmental concerns when developing sectoral policies (Hogl, Kleinschmit, and Rayner 2016; Nilsson and Eckerberg 2007; Biermann 2005; Mäler and Munasinghe 1996).

III. METHODOLOGY

This paper builds upon the literature focusing on the policy making process and EPI (Resnick et al. 2018, Adelle and Russel 2013). Studying the policy-making process in a country can increase the effectiveness and efficacy of policy development and program implementation (Sabatier 2007; Watson 2013; Meier 1991). Understanding the policy-making process can help us to understand the capacity gaps present in the current system, identify priority investment area, and generate evidence which can be used to improve policy outcomes (Babu, Mavrotas, and Prasai 2018). The process of policymaking includes a set of rational activities undertaken in a process that necessarily consists of political actions. These political actions can be considered as a policy process, and as a set of scheduled, intertwined steps. William Dan illustrates the process of policymaking in the framework of agenda preparation, policy formulation, policy adoption, policy implementation, and policy evaluation (Pour-Asghar Sangachin 2015).

Policymaking is complex and multidimensional. The concept of environmental policy is a set of principles, methods, and guidelines for better management of natural resources and the environment (Xie 2006). In order to develop environmental policies and integrate environmental considerations in the current policies, we need to build

an enabling environment. Also, the environmental policy in each region should be made according to the status of the region, and ultimately, any policy can be of the developmental or sustainability type (Hedayati Aghmashhadi et al., 2015a). In development policymaking, monitoring the policy outcomes can result in lower standards and more economic considerations. However, in sustainability policymaking, policy outputs should be more carefully monitored and economic considerations should be carefully evaluated (Hedayati Aghmashhadi et al., 2015b). The best planning approach in Iran to achieve the objectives of environmental policy is spatial planning, which is, itself, the result of a complex interaction of politics, management, economy, culture, human activities, and environment (Gyawali et al. 2013). However, over time, these concepts may be revised and criticized and new definitions and concepts introduced.

Since different interpretations of environmental politics are provided, the question arises what is the best approach for environmental policymaking? and what are the key factors and barriers and instruments to achieve more effective approaches to environmental policymaking? (Wiering, Liefferink, and Beijen 2018) According to the framework of issues and problems and due to the nature of policymaking, four approaches (procedural, organizational, normative, and corrective) can be used to develop environmental policies to be put forward. These are not entirely exclusive approaches and concentrate on the specific type of variables because environmental policy is a multi-dimensional subject (OECD 2008; EEA 2005). For example, the procedural approach involves imposing procedural changes in policies or adding specific environmental policies, such as expanding environmental impact assessments, formulation of greening requirements, environmental reports of units, and environmental management systems (Meijer and Der Berg 2010).

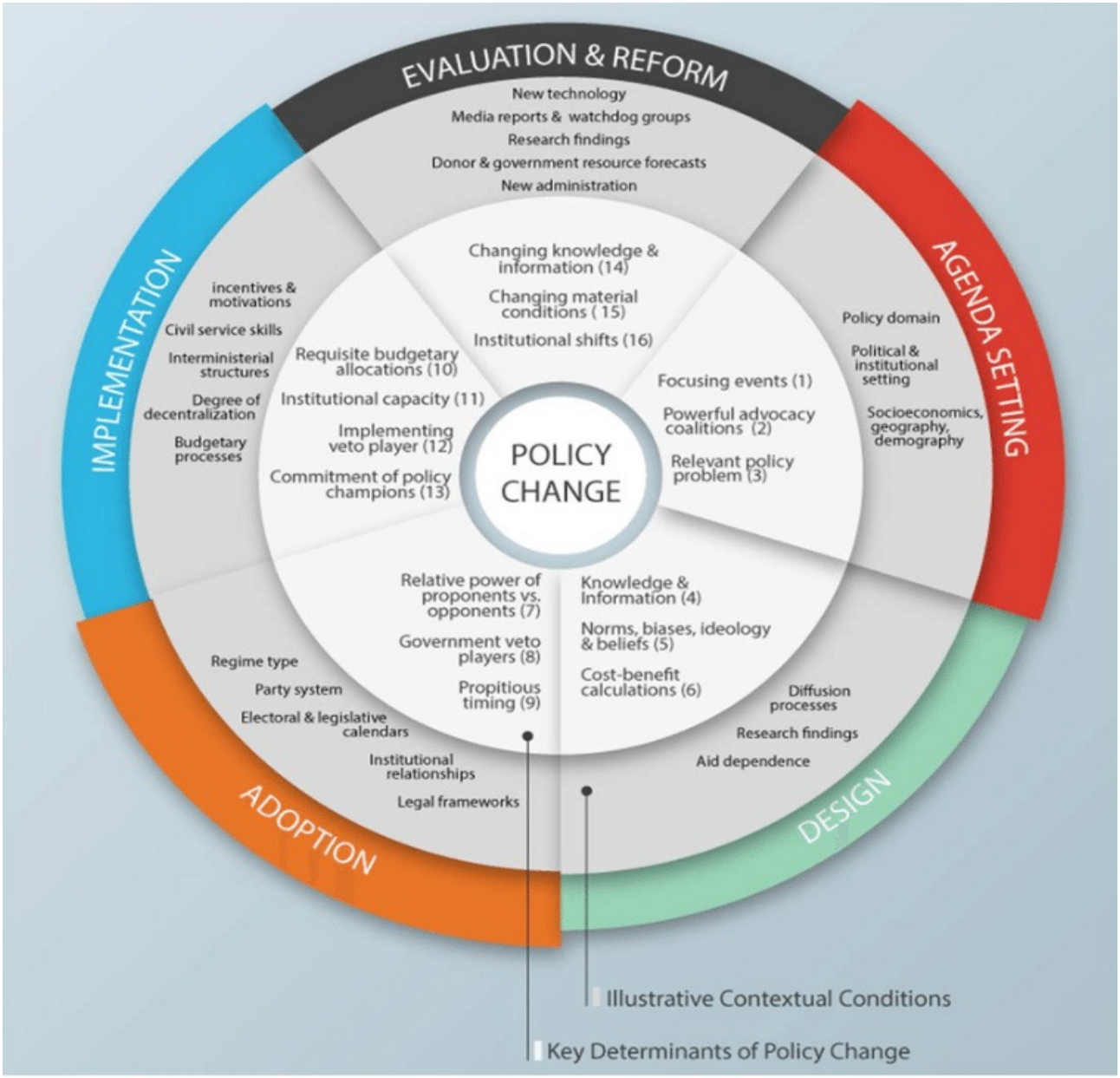
Other approaches include organizational approach, normative approach, and corrective approach. An organizational approach consists of reconstructing the policy structures to change competencies and authorities, connections of issues and problems, lack of resources and capacities, and imbalance of power (Jordan and Lenschow 2008). The normative approach, compared to procedural and organizational ones, directly addresses context subjects and measures environmental policy parameters, thus completing the infrastructure of environmental policymaking. The corrective approach pays attention to how in the long-term to review and modify, based on rationalism, the sectional embedded and applied ideas (Lafferty 2002).

The simplest model for analyzing the policy process is the linear model. The linear model includes six sequential states that move in a cycle and repeat themselves. The stages include agenda setting, policy formulation,

stakeholder discussion, implementation, impact monitoring, and policy revision. Despite being extremely useful, this method is often criticized for being too simplistic (Babu 2013; Sabatier 2007). Other models include the interactive policy process model, the multiple stream approach, the rational choice model, and the learning and diffusion model. All of these new models were developed to provide an innovative method to study the policy-making process (Sabatier 2007; Kingdon 1984; Court and Young 2006; Ostrom 2011). However, these models are not suitable for understanding the policy-making process in developing countries since they do not factor in power and conflict.

To analyze Iran's environmental policies, we use the kaleidoscope model as a starting point since it identifies different stages of the policy-making process and the stakeholder involved at each level. Using the kaleidoscope model, we aim to develop an understanding of the policy process of Iran's food and agriculture sector and analyze the extent to which environmental considerations are taken into account. Further, we measure the degree of policy integration using the analytical tool. Figure 1 below presents the kaleidoscope model and Table 1 presents key variables of change affecting policy.

Figure 1: The kaleidoscope model of food security policy change



Source: Resnick et al. (2018).

Table 1: Kaleidoscope model hypotheses: Key variables affecting policy change

	Policy stage		Key variables affecting policy change
1	Agenda setting	1.1	Powerful advocates
		1.2	Focusing event
		1.3	Recognized, relevant problem
2	Design	2.1	Pressing vs chosen problem
		2.2	Ideas and beliefs
		2.3	Cost - benefit calculation
		2.4	International design spillovers
3	Adoption	3.1	Propitious timing
		3.2	Veto players
		3.3	Relative power: Proponents vs opponents
4	Implementation	4.1	Institutional capacity
		4.2	Requisite budgetary allocations
		4.3	Commitment of policy champions
5	Evaluation, reform	5.1	Changing conditions
		5.2	Changing information or beliefs
		5.3	Resource availability relative to cost

Source: Resnick et al. (2018).

IV. BACKGROUND OF STUDY (TIMELINE OF IRAN'S ENVIRONMENTAL POLICY)

At present, environmental considerations are not included when a policy is being developed or implemented in Iran. The first attempt towards establishing new and organized facilities for protecting the environment in Iran dates to 1956, when the "Iranian Hunting Center" was established to take the initial steps to protect the wildlife and to monitor the implementation of its regulations (Sa'ed and Tila 2004). The organization was active for about a decade and after the adoption of the Hunting and Fishing Act, the Hunting and Fishing Organization was established in 1967. According to Article 1 of the Hunting and Fishing Act, the organization was under the supervision of a committee consisting of ministers of agriculture, interior, finance, and war and six of the competent authorities.

The victory of Iran's Islamic Revolution meant that the issue of environmental protection and the Environmental Protection Agency's work was marginalized. The approval of the Islamic Republic of Iran's constitution, Article 50 of which emphasizes environmental protection, greatly moderated the negative view of protecting the environment, however. According to Article 50, the protection of the environment is considered as a public duty and present and future generations must have a growing social role.

Since the Islamic Revolution, environmental policy and its influencing factors in Iran can be divided into four periods: the recession period, period of environmental pressures, period of environmental problems and awareness of environmental issues, and period of valuation and positioning the environment along with other macro-policies of the country. The following paragraphs provide the overview of each of these periods.

1. Recession period (1979-1987)

After the Islamic Revolution in Iran, the drafting of the constitution, along with the adoption of Article 50, and the formation of institutions in Iran, Iraq attacked Iran, resulting in a war between the two countries beginning in 1980.

Pollution and degradation of the environment cause poverty, injustice, and dissatisfaction, and lead to increased insecurity and instability in countries. The imposed Iraqi war against Iran had devastating effects on nature and the environment (Ashqali Farahani 2005) and the physical and psychological well-being of the Iranian people (Hosseinzaki 2007). War and violence create complications and have both short-term and long-term harmful effects on the environment. In particular, the use of advanced weapons of mass destruction or the use of weapons containing dangerous and harmful substances, such as chemical weapons, are a serious threat to all generations. The imposed war had both direct and indirect impacts on the Iranian environment, specifically, population growth during the war, which reached its highest rate in the Iranian history in 1986: between 1976 and 1986, the population growth rate in Iran was 91.3%. Further, Iran's economic growth was negatively impacted due to the decrease in oil prices in the global market, and the massive sanctions against Iran due to the Islamic Revolution and the war. Therefore, issues related to environment and sustainability took a back seat during this period (Ashqali Farahani 2005).

2. Period of environmental pressures (1989-1998)

The second period of environmental pressures in Iran was during the end of the imposed war and the beginning of the country's re-construction period. During this time, the Iranian government sought to recover its position in the global economy and improve the number of products it exported. At this time, Iran was a single-product economy and depended heavily on oil exports (that could lead to economic instability) and imported the industrial goods. Iran had the main development requirements such as oil revenues, rich resources, suitable geopolitical position, and abundant and cheap labor. However, Iran needed accurate and long-term planning to eliminate structural imbalances in the economy. The majority of the development programs in this period were hastily created and lacked long-term environmental perspectives. For example, the major environmental impacts of this period are observed today due to massive construction projects previously implemented.

In addition, the first and second development plans were formulated during this period. However, considering the post-war conditions, most of the environmental objectives were of a qualitative and somewhat ambiguous nature and lacked scheduled and quantitative objectives (Salehi and Pour-Asghar Sangachin 2009).

In the first development plan, the environmental issues were represented in the framework of the quality objectives, but lacked quantitative targets. During the first 5-year development plan, the overall objective of the environmental community was to improve the quality of human life, prevent irrecoverable environmental damage, and eliminate the negative effects of past environmental harms. In order to achieve the objectives of the first development plan and to control the country's civil projects, the Law on Environmental Impact Assessment was adopted during this period.

The second development plan was prepared under different circumstances and the new international perspectives regarding the environment were adopted. Preparing the second development plan coincided with the Earth Summit Conference held in Rio de Janeiro in 1992, resulting in inclusion. This caused the main objective of the second development plan to be influenced by this proclamation, and the concept of sustainable development was introduced into development programs for the first time. On this basis, in the general objective of the second development plan, the sustainable economic, social, and cultural development was approved to achieve balanced development in different regions and to attempt to improve the quality of the environment and recover it from damages. One of the main differences in the second, as compared to the first, development plan was the inclusion of quantitative objectives.

3. Period of environmental problems and awareness of environmental issues (1999-2008)

The third period of environmental policies in Iran started after environmental pressures were intensified due to the war and the reconstruction period. This period coincided with the World Summit on Sustainable Development, held in Johannesburg, South Africa, in 2002, which brought global attention to environmental issues, along with economic development issues and global poverty alleviation. Iranian authorities committed themselves to adopt the development objectives to come out of the World Summit.

Further, this also coincided with the country's third and fourth development plans. The third development plan was influenced by relatively good experiences from previous plans, which is why the plan's program was more comprehensive and was considered a benchmark in the process of environmental development. With the lessons learned from the third development plan and the infrastructures created for environmental protection, the fourth development plan was formulated in the same light as the third development plan, but with a more comprehensive approach. The plan was approved by the Islamic Consultative Assembly. One of the most important differences between the third development plan and the fourth development plan is the fourth plan's emphasis on estimating the

economic values of natural and environmental resources and the costs of environmental pollution and degradation during the development process. These environmental costs were calculated in national audits, which, for the first time, emphasized internalization of environmental degradation's costs and paid attention to environmental costs in the feasibility assessments of development projects. This is considered to be an important step in the rational and optimal use of natural and environmental resources. So, in case necessary facilities and capabilities can be achieved in this regard, a clear perspective on the protection of the environment and the prevention of its destruction can be provided in the future.

The fourth development plan was more evolved than the third plan both from the point of view of its comprehensiveness and also from the point of view of emphasizing the principles and foundations for sustainable development. This is well reflected in the high-level documents, specifically the Perspective Document. In addition to the legal content in some of the legal provisions, other chapters of the fourth development plan also concentrated on environmental considerations, emphasizing the importance of policy- and decision-makers' attention in protecting the environment. Also in this period, the general policies of the Islamic Republic of Iran were formulated in relation to natural resources, and the country's 2025-Vision Document, which referred to the environment's use in a desirable manner, was adopted. In fact, this was the most important document in the country until then, in which environmental protection was raised along with other major Iranian policies country. In this period, like in the previous ones, financial issues were determinants in reaching the objectives of environmental policy, particularly because the global sanctions against Iran were spreading and the world and our country faced a major economic crisis, which caused difficulties in attaining the objectives of environmental policy.

4. Valuation and positioning the environment along with other macro-policies of the country (2009 to date).

The third environmental policymaking period coincided with the emergence of environmental problems and increasing environmental awareness. However, the environment did not become a primary concern in Iran's macro policies due to financial and political issues. Environmental concerns did achieve such prominence in Iran's macro-policies in the fourth period.

Due to the lack of attention given to environmental issues during the past two decades, in this period the country faced severe environmental issues (drying up of the Urmia Lake and other wetlands, microparticles, desertification, etc.), which not only necessitate large spending to compensate for these problems but also threaten vast parts of the country and even neighboring countries. This period also coincides with the fifth development plan

for the country and the provision of the sixth plan. In the fifth development plan, the issue of sustainable development, sustainability indicators, and strategic environmental assessment, which are among the most important pillars for achieving sustainable development objectives, were addressed for the first time. Also, in addition, because of the emergence of serious environmental problems in our country, Iran's sixth development plan was formulated with special attention to the issue of the environment, water, and energy. The sixth development plan approach entails the formulation of a comprehensive program with special attention to issues up to administrative programs and for the sections and trans-sections up to strategic programs, and for the provinces up to the formulation of the operational programs in the sections, according to the national land planning rules. Also, in this period environmental issues were taken more seriously among the country's affairs. Signs of this new attention to environmental issues were policy makers' attention in 2009 to reforming consumption patterns and carrying out a subsidy reform plan. Also, Iran's Nuclear Deal (formally known as the Joint Comprehensive Plan of Action agreement) paved the way for achieving this by reducing all-embracing sanctions and improving the economic situation. In addition, a sharp decline in global oil prices in this period, unlike previous ones, made an opportunity to increase the use of clean energies and reduce greenhouse gas emissions. So, in the sixth development plan, use of clean energies was brought to the attention of the authorities.

5. Applying the kaleidoscope model to the integration of environmental considerations into the policy processes.

To understand the policy-making process in Iran, we apply the kaleidoscope model of policy change. The kaleidoscope model explains drivers of policy change. The model focuses on why a policy change occurs in one country and not the other, or why some policies are implemented over others during specific periods of time. The primary level of analysis is focused on understanding policy change based on the influences on and the actions of national policymakers in developing countries. In this paper, we use the kaleidoscope model to explain the determinants of policy change. In Iran, there are multiple factors (economic, environmental, political, and demographic) that over time influence policy change. Table 2 below presents different factors influencing Iran's environmental policies from 1979 to the present. Using information from other policymaking studies (see Loomis and Helfand 2001), the kaleidoscope model focuses on five key elements of the policy cycle: agenda setting, design, adoption, implementation, and evaluation and reform. Table 3 applies the kaleidoscope model to the current policy-making process in Iran.

Table 2: Factors influencing Iran's environmental policy

Year	Environmental issues	Economic issues	Political issues	Demographic issues
1979-1985	• Approval of Principle 50 of the Constitution in relation to environmental issues • Convention on the conservation of Wild Species	• Extensive sanctions against Iran due to Islamic Revolution; • Oil price collapse	• Iran's Revolution • Iraq-Iran War	• Iranian government encourages population growth.
1986-1990	• Vienna Convention for the Protection of the Ozone Layer Montreal Protocol on Substances that Deplete the Ozone Layer	• The beginning of the reconstruction period (simultaneously with the fifth government)	• Improving Iranian diplomatic relations after the war	• Population growth caused by war
1991-1995	• Rio Earth Summit, Agenda 21 • The Basel convention on the control of transboundary movements of hazardous wastes and their disposal • Approval of Environmental Impact Assessment law • Rio Earth Summit, agenda 21	• Iran's first program of economic development	• The United Nations Security Council identifies Iraq as the aggressor in the Iran–Iraq War • Improving relations with neighboring countries, particularly Persian Gulf countries	• More attention to the status of women in society
1996-2000	• Climate Change Convention • Biodiversity Convention • United Nations Convention to Combat Desertification (signed by Iran) • Iran announces general natural resources policiesd	• Iran's second program of economic development	• Development of relations with European countries	• Extension of higher education (universities) in Iran
2001-2005	• Johannesburg Summit, World Summit on Sustainable Development	• Iran's third program of economic development	• Oil prices begin to rise to their highest levels	• Increased demand for jobs due to population growth

Year	Environmental issues	Economic issues	Political issues	Demographic issues
2006-2010	• Stockholm convention on persistent organic pollutants	• Iran's fourth program of economic development • World economic crisis	• Codification of Iran's 2025 vision • Extensive global sanctions against Iran • Naming this year in Iran as "toward reforming consumption patterns"	• Increasing public awareness due to the development of communications technology
2011-2015	• Attention to environmental issues as one of the top priorities of Iran's 11th government • Iran announces general environment policies	• Iran's fifth program of economic development • Global oil prices drop	• Iran's nuclear deal	• Decline in Iran's population growth rate • Increased unemployment, especially among educated people
2016-2020	• Forecast of increasing pressures on the environment of Iran	• Announcing Iran's sixth program of economic development (focusing on environment, water, and energy)	• US withdrawal from the nuclear deal and increased sanctions on Iran	• Increased unemployment, especially among educated people

Source: Authors' compilation

Table 3: Application of kaleidoscope model in Iran's case

Policy stages	Determinants of policy change	Application in Iran's case*
Agenda setting	1. Recognized, relevant problem	Inconsistent policies and limited integration of environment policies with other policies.
	2. Focusing event	Conflicts and revolutions. Further, economic, political, and demographic influences as discussed in Table 2.
	3. Powerful advocates	Government and commander in chief.
Design	4. Knowledge & research	Evidence-based knowledge shapes feasible design. Despite awareness of the importance of evidence-based policy, Iran has limited capacity (individual, institutional and system) to produce research.
	5. Norms, biases, ideology, & beliefs	The most important difference between Iran's third and fourth development plan is the emphasis on estimating the economic values of the development process.
	6. Cost-benefit calculations	Iran's fourth development plan accounts for environmental resources and the cost of environmental pollution and degradation during the development process.
Adoption	7. Powerful opponents vs. proponents	The need for integrating environmental policymaking has become a central concern as governments try to achieve the Sustainable Development Goals (SDGs) (Nilsson and Persson 2017).
	8. Government veto players	—
	9. Propitious timing	Iran's sixth development plan approach entails the formulation of a comprehensive program. Since 2009, environmental issues are taken more seriously since the consumption patterns of the population changed after 2009. Also, Iran's Nuclear Deal (Joint Comprehensive Plan of Action) Agreement paved the way for achieving a comprehensive development programby reducing all-embracing sanctions and improving the economic situation.
Implementation	10. Requisite budget	—
	11. Institutional capacity	Despite progress, Iran lacks an implementation strategy at the institutional level. At present, most environmental authorities do not pay attention to the environmental policy debate, or they have applied macro organizational goals instead of genuine environmental policy concepts.
	12. Implementing stage veto players	Government and commander in chief.
	13. Commitment of policy champions	—
Evaluation & reform	14. Changing information & beliefs	The increase in environmental pressures in Iran show that environmental-related views of the people and authorities are getting closer to each other. Also, public awareness of environmental issues is improving.
	15. Changing material conditions	—
	16. Institutional shifts	—

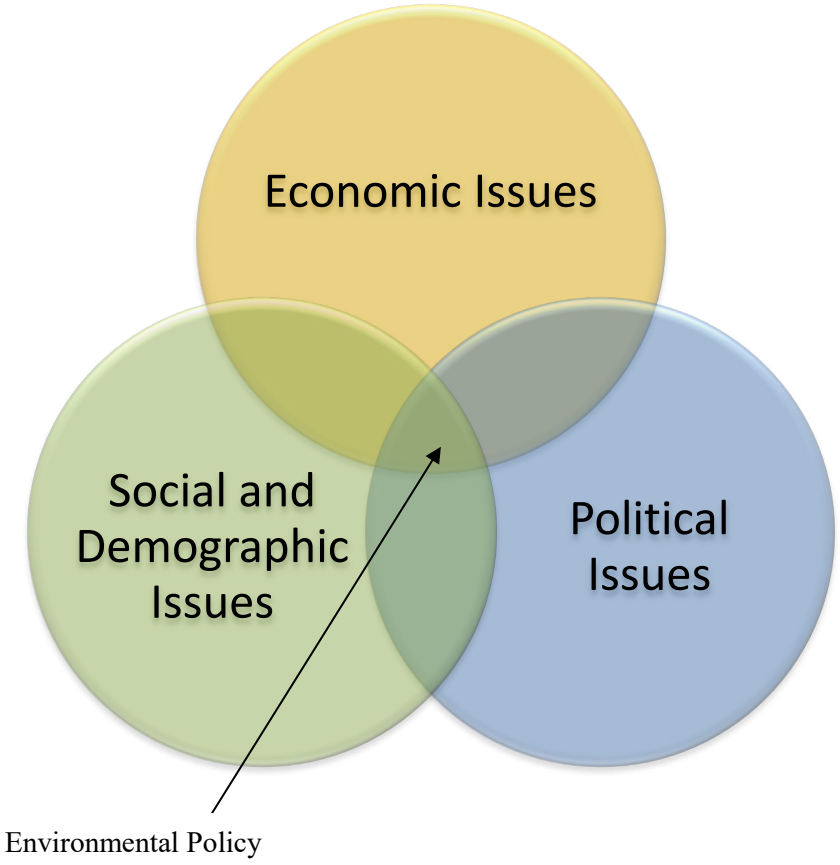
Source: Based on Resnick et al. (2018)

Note: * = Author's compilation based on the literature review.

V. RESULTS

Generally, the environment and environmental policies have been influenced by various internal and external pressures after the Islamic Revolution, including economic, political, social, and demographic concerns. According to certain circumstances, time after time following the Revolution, these concerns were affected by the environmental objectives and plans of the Environmental Protection Agency and organizations involved with environmental issues (Hedayati Aghmashhadi 2018). In general, Iran did not have a clear and distinct environmental policy over the years. In fact, Iran's environmental policy changed with the various economic, political and demographic concerns that affected Iran's condition Figure 2.

Figure 2: Position of Iran environmental policy over the past decades.



Source: Author's compilation.

Based on the literature review, we observe that there is a lack of integration of environmental polices with development policies in different sectors. Table 4 presents findings regarding the scale of EPI.

Table 4: Scale of environmental policy integration.

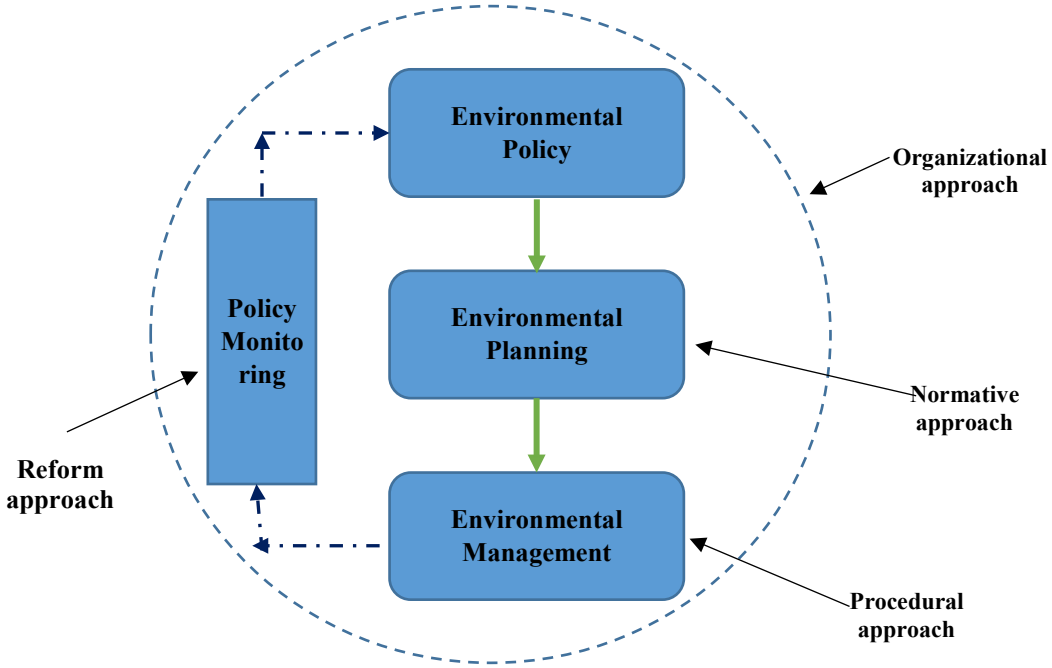
Indicator	Key aspects which can be observed
Inclusion	1. Policymaking process is centralized 2. Limited by no environmental integration with the policymaking process within different sectors
Consistency	1. The policy making process has differed due to changes in the political system 2. Inconsistency between objectives and tools, organizational capacity building, as well as structural, procedural, and legal obligations 3. Lack of attention given to environmental growth
Weighing	Relative priority given to Energy sector due to high exports of oil
Reporting	1. No scheduled evaluation of monitoring or reporting indicators such as CO2 emissions or methane emissions (to calculate the impact of climate change) 2. No reporting procedure for climate adaptation evaluation

Source: Indicators: Author's compilation.

The environmental policies in Iran show that the infrastructure of the formation of environmental policies exists in procedural terms. Therefore, we need to use organizational and normative approaches to policy development and use a corrective approach to review and monitor environmental policies. In fact, using these approaches will lead to conflict resolution and an understanding of the mutual benefits between environmental needs and policies and other policies, as well as helping to identify and assess environmental and economic objectives and so on to achieve sustainable development. Further, using these approaches can help in understanding environmental and ecological elements as the basis of sustainable development without losing their original concept.

Accordingly, the use of different approaches for formulating an environmental policy structure in Iran can be shown as Figure 3.

Figure 3: Structure of environmental policy in Iran



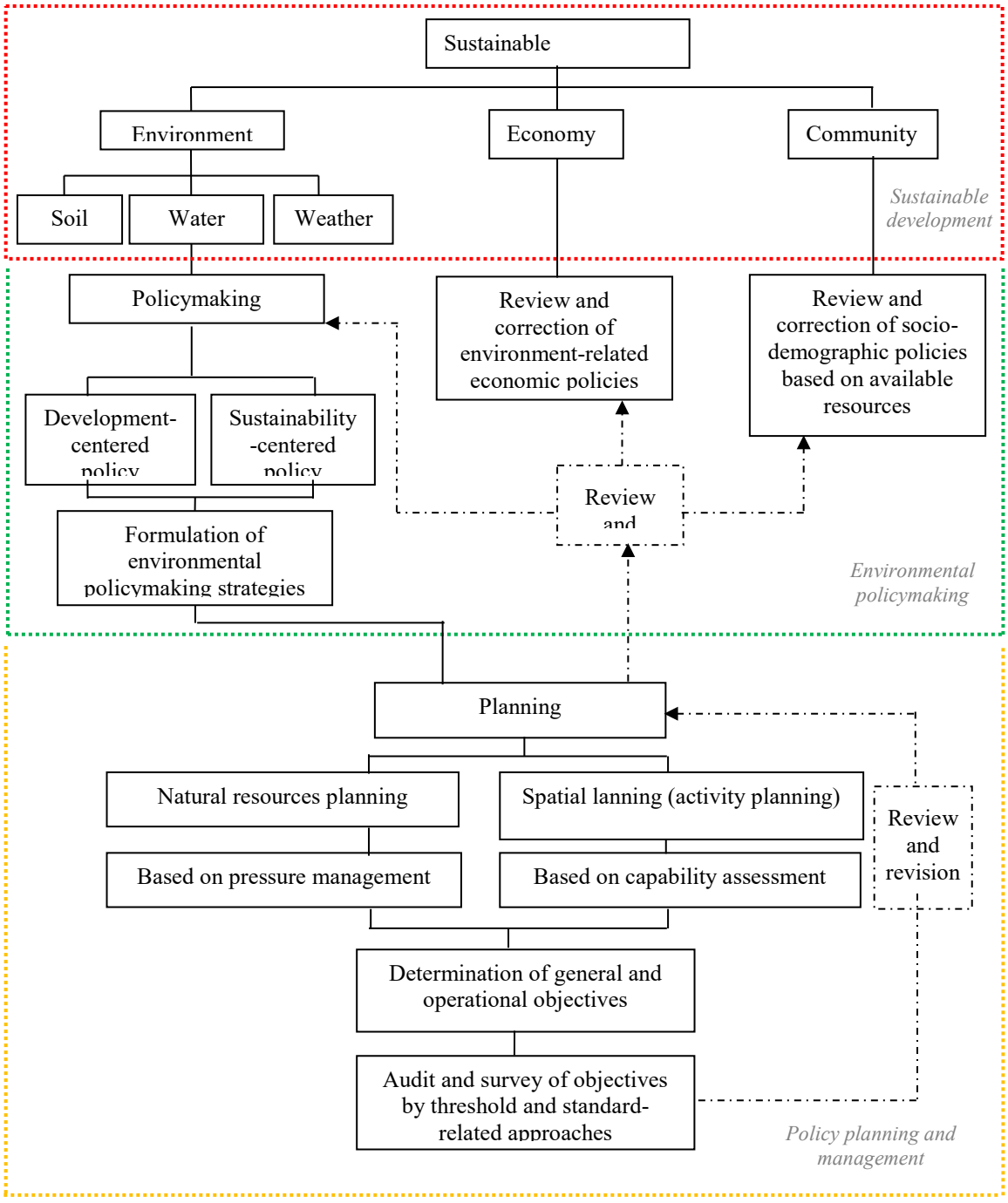
Source: Authors' compilation.

Figure 3 illustrates the proposed environmental policy framework in Iran. The framework has several components, each of which has a role in pursuing sound and sustainable policies. These include the following:

1. Environmental policy, presented in the framework of the perspective and objectives of this framework
2. Environmental planning, which, in the form of a roadmap, takes the responsibility for strategy and how to achieve goals in terms of time, location, scales, and budgets
3. Environmental management, which, in the framework of micro and operational objectives, turns perspectives into reality
4. Policy monitoring, which investigates the objectives of the plan at different time intervals and, if necessary, even reviews the policies based on survey results

The policy making process is a concept that will be operationalized by various instruments and methods at different scales. Accordingly, the proposed environmental policy model in Iran can be represented as Figure 4.

Figure 4: The pattern of achieving environmental policy in Iran through land planning



Source: Authors' compilation.

Based on the proposed model of environmental policy in Iran, achieving a rational policy in line with other major Iranian macro-policies should be made in the following three complementary stages:

a. Environmental policymaking and sustainable development

With the help of a planning approach, achieving environmental policy goals should be within the framework of the sustainable development concept; that is, economic, social, and environmental issues should be considered together. Since environmental policies in the majority of developing countries only consider social and political objectives and ignore demographic and economic policies, there is a need to consider all of the issues when developing a policy.

b. Resource-based environmental policy

"Resource–based policy" refers to specific policy for different natural resources, such as water policy, land policy, air policy, etc. In the next step, we consider the wide structural inconsistency existing in Iran. Further, by considering the natural conditions, economic and social situation, and the infrastructure of different regions, environmental policymaking modes, that is, the concept of sustainability (based on a protective approach with minimal environmental exploitation) will be adopted. Also, the scenarios and strategies for environmental policy will be declared. A developmental environmental policy will not be responsive to environmental needs without consistent monitoring and evaluation in the long run. And a sustainability approach can be helpful with pressure reduction (rest) plans for the natural resources under pressure in the country.

Also, at this stage, and when corrective feedbacks exist, economic and social policies must be in line with environmental policies to reduce the pressure on the environment. For example, if a region is affected by drought, the environment-related economic policies (such as policies related to agriculture, forest, rangeland, energy, etc.) or demographic policies (such as demographic or immigration policies) should be supportive of the environmental policies (such as water sector policies).

c. Environmental policymaking and land planning

After the formulation of the policy environment and its scenarios, we take the necessary steps to achieve political objectives by using the planning approach. Along with the land planning approach that is based on

capacity assessment and is the usual formulation of planning in Iran, we apply the resource planning approach, which is based on the management of pressure parameters on resources in each region. In fact, by analyzing the current status of environmental resources (such as water, air, soil, etc.), the resource planning approach, which plans activities and assesses capabilities, tries to adopt a corrective approach not only to using resources and lands but also to repairing and correcting them. Therefore, after the determination of the planning approach, and in line with the environmental policies, operational plans and subsequently monitoring and corrective programs will also be presented to analyze and revise the political objectives (economic, social and environmental) after reviewing the processes over time.

VI. IMPLICATIONS FOR AN INCLUSIVE POLICY PROCESS

Analysis of the important factors affecting Iran's environmental policy (Table 2) in various years makes clear that economic, political, and demographic policies have greatly influenced environmental policies. Table 5 presents findings regarding the factors that result in weak environmental policies.

Table 5: Factors resulting in weak environmental policies

	Factors
Economical	1. Lack of a realistic long-term strategy for setting objectives 2. Underestimation global markets' impact on Iranian markets 3. Selection of controversial and diverse objectives (often occurs in comprehensive programs) 4. Failure to define indicators and economic-environmental monitoring programs at different scales 5. Inattention to predicting, based on the country's limitations and capacities, the percentage of objectives' realization 6. Development of policies (such as the subsidy reform plan) that disregardthe country's economic and environmental conditions 7. Lack of attention to policymaking 8. Inconsistency between objectives and tools, and organizational capacity building, as well as structural, procedural, and legal obligations
Political	1. Attention to developmental policies, regardless of environmental impacts 2. Lack of attention to structural inconsistency when drafting macroeconomic policies 3. No forward-looking analysis
Demographic	1. No consideration of the country's biological capabilities in population growth 2. Lack of attention to cumulative environmental pressures due to population density in different parts of the country and taking into account the long history of human habitation in Iran 3. Inattention to pressure reduction (rest) and corrective policies in different parts of the country 4. Insufficient attention to environmental infrastructure's role in population growth

Source: Authors' compilation

Environmental policymaking requires considering economic, social and, in particular, environmental status in each region. However, achievement of this vast and complex goal requires instruments to define the scenario and objectives of the policy at a more operational level. Using the land planning approach, we can plan and organize activities according to the capacity of each region in the area. Therefore, in addition to the activity organization approach, a resource pressure management approach should also be adopted. In resource planning, by examining the pressures on natural resources (such as water, soil, air, etc.) in each region, we adopt different and innovative activities depending upon the conditions of resources.

Achieving policymaking objectives in the society requires capacity building at the individual, organizational, and system level. To improve environmental policymaking, it is necessary to understand the objectives of the capacity building between suppliers and policy operators. For this purpose, the following questions should be answered carefully: What capacities should be built, for whom, related to what, and what will we finally get?

Capacity building in environmental policy has three main dimensions: creating awareness, improving analytical capacity, and increasing decision-making power. All of these three dimensions are equally important but may also change their weight when applied by different groups or based on different strategies. Further, adjusting objectives along with the consensus between suppliers and operators of the capacity building process is important to increase the objectives' efficiency, improve compliance, and ensure that the needs are met in each region. In this regard, the stakeholders must demonstrate the objectives of capacity-building plans at the regional and national levels in the context of sustainable development. They should also consider the appropriate implementation plan, the organizations involved, and the required budget for domestic and foreign resources in order to meet the predefined objectives. When defining and designing policies, the consistency of all objectives is crucial. In line with integrated policy design, consideration of capacity building objectives, along with the policy cycle—which ranges from the evaluation of the existing policies to identification, design, and implementation of new policies and monitoring and evaluating corrective ones—can be useful.

VII. CONCLUSION

At present, limited information is available regarding Iran's policymaking process. Using the kaleidoscope mode, we attempt to explain Iran's policymaking process. To understand the policy-making process in Iran, we first conducted an extensive literature review focusing on country context and policy chronology. We then applied the kaleidoscope model using the information collected during a literature review to understand key drivers of policy change in Iran. At present, Iran's policymaking process is centralized and does not include open debate or comments from the public. Despite progress, Iran lacks an implementation strategy at the institutional level. Currently, the majority of environmental authorities do not pay attention to the environmental policy debate or they have applied macro organizational goals instead of genuine environmental policy concepts. Using the kaleidoscope model's analysis, we present a framework which uses spatial planning and resource planning. This framework can be applied to Iran and other countries facing similar developmental issues.

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