Organizational Features and Challenges of the US EPA

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Abstract. The Environmental Protection Agency (EPA) is a federal regulatory agency outside of the US cabinet departments, with the mission of protecting national environmental and human health. Since it was established in 1970, it has been growing in terms of employees, budget, and functions. This paper employs Bolman and Deal's four-frame model to analyze the EPA's organizational features, presents key challenges and responsibilities the agency shall address, and consequently provides recommendations on measures how to improve its organizational performance.

Keywords: EPA, four-frame model, organizational development

1. Introduction

The U.S. Environmental Protection Agency (EPA) was established in December 1970 under the Richard Nixon Administration. As a federal regulatory agency outside of the cabinet departments, the EPA is charged with a variety of federal research, monitoring, standard-setting and enforcement activities to protect health and safeguard the natural environment. Some of the activities and programs are consulted and cooperated with state and local governments. Throughout the four decades, the regulation and enforcement effort by the EPA has been in general consistency with the Congressional legislation on environmental and human health issues.

EPA has never been a small agency since establishment. In 1971, it had about 5700 employees with a budget of $4.2 billion. By 1980, the agency had grown to more than 13000 employees with budget more than $7 billion. The EPA budget shrank during the Reagan Administration but resumed its growth later. By 1999, EPA had more than 18000 employees and a budget of $7.6 billion. Since the mid-2000s, the workforce and budget of the EPA has stabilized at around 17000 employees and $8.3 billion [1]. It should be noted that although the budget provides some guidance as to the agency's capacity, its spending authority is less important than the costs incurred by those subject to the agency's various regulations. Portney and Stavins take an example of the year in 1998, the EPA's budget was $7.4 billion, while those costs for complying the EPA regulations reached to $127 billion, about 17 times of the budgets. Meanwhile, the study shows the environmental or other regulatory programs unlikely exert significant impacts on the overall performance of the economy [2].

With changes of political, economic and social environment, the EPA has consistently confronted challenges of reforming the agency and improving environmental regulations and enforcement. Great effort has been given to the EPA's organizational restructuring and program management [3-5]. With the benefit of the hindsight, this paper reviews the development of the EPA and assesses the agency performance by using the Bolman and Deal's frame theory [6]. It comments on the power of four-frame theory in analysing the organizational features of the agency and proposes some recommendations.

The paper is organized as follows. It begins by a brief overview of Bolman and Deal's organizational four-frame model. Second, it critiques the four-frame approach of reframing the EPA and presents key

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challenges and responsibilities the agency needs to address. Finally, the paper provides recommendations on measures of improving the organizational performance.

2. Bolman and Deal's Four-Frame Model

The organizations exist in ambiguous and complex conditions. To gain a control of this fractious and uncertain environment, researchers and observers need to use a stratagem to frame realistic conditions. The most common frame is the individual way of observing, interpreting, and acting in the world that one believes or knows to be true of the world [7]. However, there are gaps in the personal perception, knowledge, experience, ability which may impair the individual decision making and organizational coordination. There are other frames that can take time, moral-ethics, leadership, function, and professionalism into consideration.

In the book, Reframing Organizations, Bolman and Deal suggest an integrated set of four frames to decode organizational complexity and use it to study the development and changes of the organizations [6]. They expected that reframing can "inspire inventive management and wise leadership", because the managers and leaders "require a high level of personal artistry in response to today's challenges, ambiguities and paradoxes. They need a sense of choice and personal freedom to find new patterns and possibilities in everyday life at work" and "versatility in thinking that fosters flexibility in action".

The four created frames are the structural frame, the human resource frame, the political frame, and the symbolic frame. The four frames view organizations as factories, families, jungles and theaters or temples. Besides, Bolman and Deal claim that each of the frames has a particular salience in itself but their combination with leadership and ethics is the greatest strength. They reframe the "narrow and oversimplified" leadership and summarize the four images to capture a holistic picture of leadership in practice. The organizational frames and characteristics of effective leadership are shown in Table 1below.

Table 1. Effective Organizational Frames and Characteristics

Frame	Organizations as	Effective leader	Leadership process	Contents
Structural	factories	analyst/ architect	analysis, designs	organize and structure groups and teams to get results
Human resources	families	catalyst/ servant	support, empowerment	tailor organizations to satisfy human needs, improve HR management, build interpersonal and group dynamics
Political	jungles	advocate/ negotiator	advocacy, coalition building	cope with power and conflict, build coalitions, hone political skills, and deal with internal/ external politics
Symbolic	theaters or temples	prophet/ poet	inspiration, framing experience	shape a culture meaningful to work, stage drama for internal/ external audiences, and build team spirit

3. Commenting on the Four-frame Theory

The four-frame model provides a unique and holistic perspective on organizations. This section summarizes some findings after conducting EPA organizational analysis with the framework.

3.1. Priorities of the Frames

Limited by the psychological and intellectual skills, the notion of framing something is to focus on a moment in time, a scene, or a set of ideas, whereas an effective leader should understand the history, the present conditions and embraces the future vision for the organization. The four-frame model facilitates the understanding of the situation, but far more work than just reframing is needed to find solutions to the problems and make final decisions.

In addition, making full sense of a situation by integrating four frames helps leverage the best possible solution, but in reality, some frames may have more relevance in certain situations than others; people often need to prioritize the frames to seek solvability. Although the authors provide suggestions on choosing the

most effective strategies through several guiding questions, the conclusive frame choices are arguably practicable.

3.2. External Environment of the Organization

The Bolman and Deal's four-frame theory gives more emphases on the multiple perspectives of the internal issues of an organization and find solutions uniquely by individual effort. In Bolman and Deal's arguments, it all depends on the creative leaders that can "integrate frames for effective practice". The leadership skills permeates the processes of strategic planning, decision making, reorganizing, evaluating, approaching conflict, goal setting, communication, meetings, and motivation. Thus the organizational development becomes more self-controllable and more of artistic. However, in the EPA's case, as we have described in the political frame part, EPA is only a regulatory agency under the executive branch. The responsibilities for the environment are divided within the branches of federal government and state and local governments. The environmental regulatory policy made by the EPA at any given time has to be shaped by interaction of long term social, economic, technological and political forces and short-term fluctuations in the political climate. It is far beyond the EPA or its leaders' capacity to bypass the key actors and dominate the policy process.

3.3. Features of the Agency

Generally, the four-frame theory deals with the organization with relatively simple structure and small number of the business directions. For the federal agency like the EPA, the pictures from the four-frame theory are still broad and unclear, which need to investigate in further. However, a simplified picture enlargement would complicate a unique situation, thus bypassing the interaction of the other factors. Therefore, the best approach is to reframe the organization based the missions or visions of the organization, and the leadership provides the innovative spirits into the reorganizing work which balances well all the interests and synergizes all the positive factors. The EPA's regulatory and policy enforcement duties can be divided into three broad categories: (1) setting of national environmental standards and approval of standards promulgated by states; (2) contaminated site clean-up decisions; and (3) implementation, enforcement and other associated activities [8]. From the beginning, the program offices, usually called the media offices, have been the most important organizational units in the EPA. Each office lives with its own statutory support system and is populated by a variety of professionals. "Any proposal to change the EPA's organizational design will incite apprehension of the possible damage to existing programs". [4]

4. Challenges that EPA Confronts

To address the organizational development, reframing effort is needed; however, the key point is to put the organization under its specific changing and complex context and study the main factors that have influenced the organizational performance. Thus the leader's role is to encourage and inspire others within the agency to reach for and achieve same visions for the organization at all levels. As for the EPA, the key factors that impact on the environmental regulatory implementation and organizational performance is summarized as follow:

4.1. Responsibility Overlapping

The responsibility collision among presidential leadership, congressional accountability and sound science has been mentioned in the political frame. As part of the federal regulatory branch, the EPA and its administrators are expected to be responsive to the presidents' policy initiatives and to the White House political leadership. The Congress, at the same time, expects the EPA to enforce a multitude of scientifically complex environmental laws. The conflicting expectations and responsibilities are inherent in all the aspects of the EPA's mission and the administrator's job. It thus becomes less difficult to understand that the administrator walks in the tightrope under high political pressure. Rosenbaum argues that understanding this feature "is essential to understanding all facets of the EPA's activities and explaining its behaviour". [4]

4.2. Environmental Federalism

State and local governments now leverage considerable expertise and resources towards environmental protection. The state governments often need more of the EPA's help as a partner. This partnership between

state governments and the EPA, while generally cooperative, is also contentious. Although the states need the EPA to provide them with new, flexible solutions and the scientific and technical support to meet environmental goals; there are sometimes, the states complain the EPA's excessive or inappropriate intervention. As state regulatory experience and competence grows, pressure has increased within the Congress and the EPA to promote more collaboration and less command-and-control in working with states. A recent example is that California and dozens of other states sued the EPA over regulating the greenhouse gas emissions from vehicles.

4.3. Cross-media Management

The original plan was to organize EPA according to functional categories (e.g., monitoring, research, standard-setting, enforcement, assistance) rather than along media lines. This approach was to "recognize the interrelated nature of pollution problems, acknowledge that pollutants cut across media lines, encourage balanced budget and priority decisions between component functions, and permit more effective evaluations of total program performance" [5]. Today, environmental issues are more complex than ever before, however, the programs and offices in EPA are still narrowly tailored that cannot effectively or efficiently handle pollutants that cross multiple environmental media or state and international boundaries [9]. It is thus of vital importance to establish a consistent, holistic approach and cut across all environmental media.

4.4. Reliable Information and Science

EPA's regulatory performance depends heavily on scientific information about the health and environmental effects of chemicals and pollutants. These data often are not reliable or even do not exist. This has led states to develop different performance measurements and use different methodologies to collect data. On the other side, EPA does not always utilize reliable science when making decisions on environmental regulations. EPA's science program is impacted by numerous congressional mandates, as well as being affected by national politics.

5. Some Recommendations

This paper employs Bolman and Deal's four-frame model to observe the mechanism of the EPA and its program operation. Although the theory provides a multi-dimensional model to decode the confusing and troubling organizational situation; however, to enhance the agency's performance in regulation and enforcement, it is argued that unique characteristics of the agency and the complexity of the organizational context need to be considered in order to identify challenges and find solutions. Based on the above evaluation and analysis of the EPA regulatory performance, this section provides a list of recommendations for guiding the agency reframing work.

- Integrate the reframing approaches. Under the core mission of promoting the comprehensive environmental management, the leadership at EPA shall draw insights from successful practices, and be flexible and creative in restructuring the organizations. Seen from Bolman and Deal's model, depending on where the changes start, the reform process can be "top-down" (structural frame), "bottom-up" (human resources and political frames), or the combination of both (symbolic frame). The role of the strategic leaders is to direct the change in many subtle and important ways.

- Address environmental issues from a cross-media approach. The EPA shall develop and implement strategies that enable the agency to quickly organize cross-media teams to work on specific issues related to ecosystems, geographic locations, or pollution prevention initiatives. Besides, The EPA shall seek statutory change and update from the Congress in order to integrate environmental protection efforts across media.

- Reorganize regional offices by eco-regional boundaries. The EPA's efforts to carry out its mandate and achieve its mission are hampered by the geographic disparity of environmental problems. The EPA can replace the traditional administrative division by establishing eco-regions as new jurisdictional area. This will help the agency overcome the difficulties of fragmentation and provide institutional momentum for the integrative ecosystem management.

- Strengthen the environmental information management. EPA should improve and expand the present activities of the Office of Environmental Information (OEI) in data collection and exchange, information

technology and access service. In addition, as suggested by many researchers, the Congress can create an independent bureau of environmental information or statistics to provide better information on environmental conditions and trends, and to assess the EPA program performance.

- Improve the credibility of science in EPA regulations. The controversy with respect of the integrity of the EPA's science frequently involves how the political leadership uses the scientific evidence to serve the political requirements. Even so, science is the base for policy making. It is recommended that the EPA shall evaluate current policies concerning the use of science at the EPA and provide publicly available scientific findings associated with regulatory proposals. The scientific activities should receive oversight by respected scientific societies and research institutions.

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