Distributed Leadership in Drainage Basin Management: A Critical Analysis of ‘River Chief Policy’ from a Distributed Leadership Perspective

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Abstract. Water resources management has been more significant than ever since the official file stipulated ‘three red lines’ to scrupulously control water usage and water pollution, accelerating the promotion of ‘River Chief Policy’ throughout China. The policy launches creative approaches to include people from different administrative levels to participate and distributes power to increase drainage basin management efficiency. Its execution resembles features of distributed leadership theory, a vastly acknowledged western leadership theory with innovative perspective and visions to suit the modern world. This paper intends to analyse the policy from a distributed leadership perspective using Taylor’s critical policy analysis framework.

1. Introduction
Distributed leadership is a remarkable leadership style theory in western leadership and management studies in recent decades. It demonstrates new perspective and visions of leadership styles and illustrates a more democratic and flat management pattern that suits the current world better.

‘River Chief Policy’ was at first a contingency plan of the Taihu blue algae crisis in 2007. Because of its great success in controlling the emergency, the policy got nationally promoted. The policy initiated innovative practices such as involving different administrative levels of people and distributing rights and responsibilities to maximize the drainage basin management efficiency. In 2011, three ‘red lines’ of water resources was marked to strictly stipulate water usage amount in China. The new phase of water resources management advanced the breeding of ‘River Chief Policy’ and its evolution.

The policy pioneered in distributing powers and obligations, which displays possible similarities to distributed leadership approaches. Therefore, this paper tries to define distributed leadership, critically analyse ‘River Chief Policy’ and examine it from a distributed leadership perspective.

2. Literature Review

2.1 Introducing ‘River Chief Policy’

2.1.1 Water Resources Management Practice Stages
China’s water environment serves as a place of residence, a supply station, as well as a waste storage. The three functions are ‘basic functions of environment’ which compete against each other for space. It is stated in Jiang et al.’s research that the domestic water resources management in China has gone through three phases: first, decentralized phase, then branch management phase and in the last decade, strict management step. The government has been actively working on the construction of legal system and policy framework for water resources management for the last two decades. In 2011, an official file
was proposed which stipulated the total amount of water usage, the efficiency of water usage and the water functional area restrictions, drawing ‘three red lines’ to strictly control water resources in China.

2.1.2 The Evolution of ‘River Chief Policy’

The ‘River Chief Policy’ was originated by the government of Wuxi, Jiangsu, during the Taihu blue algae crisis in 2007. It is a policy that derived from water pollution control policy, river water quality improvement supervision policy and environmental responsibility policy. The policy suggests that the people in charge from every level of the party and the government should be elected as ‘River Chief’ of an individual watershed, taking precise responsibility of the pollution control of the drainage area. It aims to promote the green development concept and the construction of ecological civilization, which are the inherent requirements of China’s complex water problem management. The kernel of the policy is to maintain the health of rivers and lakes with effective measures, improve the water management system, and protect the institutional innovation of national water security. After being practiced in Wuxi, it received massive attention in Jiangsu Province for its remarkable effectiveness and then got promoted all around China.

The policy operates under basic principles as follows: First, keep ecological green development as priorities to respect the nature herself; Second, practice under the leadership of the party and government with highly-functioned departmental linkage hence every hierarchy coordinate while supervise each other; Third, keep the work problem-oriented and adjust to local conditions accordingly, namely no fixed, machine-parsable methods for every single problem; Fourth, strengthen supervision by establishing strict assessment criteria and expanding public participation channels, creating a favourable atmosphere for the whole society to care and protect rivers and lakes.

At the beginning of 2008, Kunming, Huanggang, Dalian and other places successively implemented ‘River Reach Responsibility Policy’ accordingly. For a time, the river protection and pollution control model like this has been the primary choice across the country and so far, still prevailing. It is estimated that by the end of 2018, the full establishment of the ‘River Chief Policy’ system will be completed. At present, 8 provinces and cities as Beijing, Tianjin, Jiangsu, Zhejiang, Anhui, Fujian, Jiangxi, Hainan have fully implemented the policy. Meanwhile, 16 provinces and municipalities have partially finished implementation.

2.1.3 Execution of River Chief Policy

The implementation of ‘River Chief Policy’ started in 2007 during the time Taihu had blue algae outbreak. Later that year, Wuxi, the city that suffered most from the incident became the first city executing ‘River Chief Policy’ in the country. The policy practice involved party leadership, departmental linkage, social participation, comprehensive co-ordination of river upstream and downstream. Major governors and party officers from Wuxi served as river chiefs of 64 rivers respectively, inspecting pollution control and other related businesses. After approximately one year of the implementation, the water quality index rate of 79 rivers within the area increased drastically from 53.2% to 71.1%, suggesting high effectiveness of the policy.

‘When there are problems, find the river chief.’ This slogan not only expresses the obligated responsibility of party and government leaders, but also demonstrated their modest attitude to take the social supervision. Mutually, with the surveillance of the river chief, people live along the river became more aware of protecting the water quality and the ecosystem. ‘In the past when there’s no one in charge, majority of people throw garbage and dump polluted water into the river without concerns. Now that with river chief’s supervision, inspectors’ patrol, cleaning workers’ garbage salvage every day, people are too embarrassed to pollute the river.’ A villager from Tongshan District, Xuzhou delivered his experience as the policy practiced in his living area. His observation pictures the implementation of the ‘River Chief Policy’ solving the problem of water environment vividly. In the past, even with repeated treatment, centralized governance could not effectively solve all the issues accordingly but with the new policy, now each river is treated with the exact cure it needed, maximizing the administrative efficiency of water environment management.
2.1.4 The Insufficiency of ‘River Chief Policy’

The policy has advantages such as clear attribution of responsibilities and power, high efficiency pollution control and innovative diffusion mechanism. However, it cannot eradicate the commission-agent situation, thus lack transparent oversight mechanism, which could prone to interest collusion. Additionally, it overlooks social forces, making administrative accountability burdensome\textsuperscript{8, 9}.

Wang\textsuperscript{10} suggested that the policy is essentially people-directed instead of law-directed, consequently its implementation and the actual effect is not dependent on the provisions of the law but on the willingness of local party and government leaders giving attentions to environmental protection and taking responsibility as river chiefs. People’s willingness is a highly unstable variable, therefore the most reasonable means to increase the policy effectiveness seems to be motivate those who are related. Chen and Hu\textsuperscript{11} proposed in their research that new institutional economics argues that the key to this problem lies in the ability to design an effective supervisory incentive contract to induce the behaviour of each agent, such as the true disclosure of his/her private information and level of effort, which will limit the behaviour of agents within the scope of the interests of the commissioner hence achieving ‘incentive compatible’. Subsequently, the agents in the pursuit of their own utility can maximize the commissioners’ utility at the same time. From the present details of ‘River Chief Policy’, it can be estimated that a third party’s join is required to fully compose an efficient supervisory incentive contract.

2.1.5 ‘Folk River Chief Policy’

‘Folk River Chief Policy’ is an adaption version of ‘River Chief Policy’. It initiated in Hangzhou, where ordinary citizens were elected as folk river chiefs in addition to the original river chiefs served by party and government leaders. In 2014, the city established the civil river system by nominating 56 folk river chiefs from various careers such as environmental protecting volunteers, retired steel factory workers and bus repairing mechanics. Then with self-recommendation and voting, 1 general leader and 7 district leaders were chosen. The general leader is in full charge of convening other members to discuss the analysis of the existing problems and sum up the stage of work. All members within the system communicate through telephone, wechat and QQ and hold regular meetings to guarantee the daily operation of the civil river system\textsuperscript{12}. The policy progressed from the traditional version by introducing public forces to the management system, engaging public participation in the environmental governance mechanism, and giving a full play to public wisdom and strength.

2.2. Reviewing Distributed Leadership

2.2.1 The Origin of Distributed Leadership

As time passes, leadership styles and methods change in accordance to the demands of the world to stay effective. Conclusions drew from previous leadership researches suggested that leadership resolutions in the past were prevalently not able to effectively respond to challenges evolved from the process of the transition to the knowledge era—the twenty-first century\textsuperscript{13-16}. Numerous assumptions related to management and leadership practices were extremely out of date\textsuperscript{17} and because of that, the methods that used to be effective are no longer applicable in the current world\textsuperscript{18, 19}.

Therefore, no leadership style or method can endure the time and keep unchanged. Johansen\textsuperscript{13, 14} believed that the current world is progressively changing into a more ‘volatile, uncertain, complex and ambiguous’ place in various aspects so that under such circumstances, ‘business as usual is not enough’\textsuperscript{15}. The ascending complexity of working environment due to globalisation is craving for modification in leadership styles and methods to meet public expectations\textsuperscript{20}. Consequently, since the previous leadership skills are no longer convincing\textsuperscript{21}, a more flexible, versatile, and ‘agility imperative’\textsuperscript{22} new leadership style, which can respond to continual fluctuations and change\textsuperscript{16}, is needed.

Pearce and Conger\textsuperscript{23} suggested that ‘new models of leadership recognize that effectiveness in knowledge based environments depends less on the heroic actions of a few individuals at the top and more on collaborative leadership practices distributed throughout an organisation’\textsuperscript{18}. Similarly, Spillane\textsuperscript{24} suggested that leadership should move over the ‘Superman and Wonder Woman’ phase, and
focus on counting all the leaders in a working space taking various actions to reach some more comprehensive leadership. Bennett and Hempsall\textsuperscript{25} held the same view and added that effective leadership is based on teams rather than heroes.

In summary, it is a consent fact that distributed leadership theory is the trend of leadership in every aspect\textsuperscript{18, 26, 27}.

2.2.2 Defining Distributed leadership

Scholars have been trying to define distributed leadership ever after this term was invented, but gradually they realized that there is no widely adopted terminology as a broadly acceptable definition. Despite this, there are some descriptions of its features that can approximately illustrate the spirit of it.

Jones et al.\textsuperscript{28} depicted distributed leadership as a form of shared leadership strengthened by a more collective and inclusive philosophy than traditional leadership theories, and focuses more on skills, characteristics and behaviours of individuals. Ramsden\textsuperscript{29} pictured this style of leadership by claiming that leadership should involve supports, management, development, and inspiration of everyone. Ramsden\textsuperscript{29} noted that leadership should be demonstrated by how people relate to each other, which corresponds to Spillane’s\textsuperscript{24} opinion that distributed leadership is not just shared leadership, but the collective interactions among leaders, subordinates, and their paramount situation.

Spillane\textsuperscript{24} believed that a distributed perspective motivates people to take leadership responsibilities voluntarily. It was perceived that leadership is more collective than individual, so that both administrators as leaders and non-administrators as leaders should cooperate practicing leadership simultaneously as a professional community—building instructional visions, developing knowledge, and acquiring resources\textsuperscript{24}. English\textsuperscript{30} interpreted distributed leadership as assigning functions of leadership to roles other than senior leaders in an organisation by emphasizing the social constitution of leadership as a contextually obliged social process and learned behaviour.

It seems that the descriptions above have pictured distributed leadership to some extent, yet some scholars argued that they were not comprehensive enough. From Gronn’s\textsuperscript{31} perspective, defining distributed leadership requires more clarification because numerous aspects of practice as leadership were described in a permissive, discursive way. Corrigan’s\textsuperscript{32} concurred that it was not thorough apprehending distributed leadership as a discrete concept, since it lacks both consolidative theoretical foundation, and management of power when conducting leadership research and practice in the long term. Corrigan\textsuperscript{32} further explained that leadership as a concept is both elastic and permeable, making leadership behaviours difficult to quantify, so that transferring power cannot adequately explain distributed leadership.

Overall, distributed leadership is a conceptual and interpretive means to explain how work of leadership happens among people and in context of a complex organization. It requires distributed power\textsuperscript{33}, focuses on features of individual leader or that of the situation, and prospects how crews participate in are distributed across the organization. It is a characterize element of leadership practice\textsuperscript{24}, a method to seek how leadership can be practiced more effectively, a framework for cogitating and examining leadership in new and creative ways\textsuperscript{24}. In other words, distributed leadership is a form of leadership that can motivate innovative management and subjective initiative supported by high power liquidity and individual voluntariness. It was originated and primarily used in education research, but has gradually been applied to other fields\textsuperscript{34}. To comprehend leadership from a distributed perspective means perceiving leadership activities as a situated and social process at the intersection of leaders, followers, and the situation.

3. Methodology

Policy analysis has various forms and frameworks as policy development is continuous and constantly changing, also because analytical models and evolution experience diverse understanding and interpretation. Moreover, some policies and issues must be considered with certain specific standards\textsuperscript{35}. Baskerville\textsuperscript{36} summarized five representative policy researches as follows: Policy Advocacy – researches which intends to advocate either a single specific policy, or a set of related policies;
Information for policy – researches that tries to contribute information and suggestions to policy makers; Policy monitoring and evaluation – researches with further ambitions to influence the development of future policy, which concern with high level accountability and justification demands, usually delivered by estimating impact and evaluating behaviours; Analysis of policy determination – researches that signify policy process instead of policy impact; Analysis of policy content – researches with prior interests on comprehending the provenance, purposes and practice of specific policies.

These researches can be arrayed as either analysis for policy or analysis of policy, yet very few examines the development progress, or as Bell and Stevenson\textsuperscript{35} suggested, the distinctions offer convenience in determining means to policy research but respectively they neglect the complexity of policy development processes.

Taylor\textsuperscript{37} proposed that policy analysis is simply the research of what governments do, why and with what effects. A couple of questions were then introduced constituting the basis of policy analysis such as: Why has the policy emerged now? On whose terms? In whose interest? What will be the consequences of the policy? How are the proposals organized? How do they affect resourceing and organizational structures? Why was this policy adopted?\textsuperscript{37}

With the above questions, Taylor\textsuperscript{37} established a framework for policy analysis that focuses on three perspectives of policy: context, text and consequences. The framework covers the whole process from the origin to the interpretation of a policy, suggesting utter comprehensiveness. Therefore, it seems to be the appropriate framework for critically analysing the ‘River Chief Policy’ in this study.

4. Analysis

4.1. A Critical Analysis of ‘River Chief Policy’

While China’s water environment supporting the operation of ‘basic functions of environment’, the three competences with each other, breeding numerous environmental pollution problems hence frequent water crisis. ‘River Chief Policy’ is a simple and effective policy the local government introduced to coordinate the three functions, thus develops diffusion effect domestically.

4.1.1 Context of the Policy

‘River Chief Policy’ was at first a contingency plan during the Taihu blue algae crisis in 2007, which achieved great success in controlling the emergency. It pioneered by practices such as distributing rights and responsibilities thus advanced management efficiency tremendously, setting an excellent example of polluted water management. With the official stipulation of water usage amount marking three ’red lines’, water resources control raised unprecedented attention since 2011 in China, signifying a new phase of water resources management. Naturally, ‘River Chief Policy’ became the precise archetype for studying considering the admirable results it accomplished. This simultaneously accelerated the propagation of the policy and the development of its details.

4.1.2 Text of the Policy

The policy aims to alleviate the intricate water problems in China such as water resources abuse and water pollution. The terms articulate high aspiration of green development concept and multi-level participation concept:

(1) Every province establishes a general river chief post, served by one person in charge of the party committee or the government. Within the administrative regions of the provinces, each river and lake establishes a river chief post, served by one provincial head. The cities, counties, and villages alongside the rivers and around the lakes also establish river chief posts for each administrative level and segment of the rivers and lakes, which served by people in charge from respective levels.

(2) River chiefs from each level organise the management and protection work for rivers and lakes accordingly, including water resources protection, waterfront coastline management, water pollution control, water environment management, remediation against prominent issues such as occupation of rivers, reclamation of lakes, excessive sewage, illegal sand mining, destruction of waterways and
electrocution fishing.

(3) Each relevant department supervises the next level to assess their performance and their completion of the objectives and tasks, motivates them to strengthen the incentive accountability. Additionally, responsibility for cross-administrative areas of rivers and lakes are clearly stated.

As the policy was publicized in China after 2008, the terms kept evolving to adapt different environment and various new challenges.

4.1.3 Positive Consequences of the Policy

‘River Chief Policy’ showed many positive consequences as can be treated under four headings: Clear responsibility and power distribution; Reasonable developing path based on institutional innovation; High efficiency of pollution control improved by iron fist ruling system; Fair spreading mechanism.

Clear responsibility and power distribution conveys in allocating river pollution control rights to each region of the corresponding government departments and responsible person, clarifying their rights and obligations, abolishing the pattern of long governance, hence consequently improve the efficiency of drainage basin management.

The essence of ‘River Chief Policy’ is the water environment responsibility undertaking system. In practice, environmental responsibility is implemented according to the administrative levels, demonstrating the local governments’ emphasis on environmental protection and strengthening their responsibility consciousness, hence effectively mobilizes the local governments to fulfil the environmental regulatory endeavours and their ruling capacity. Also, the ‘one river one policy’ approach it advocates illustrates customized treatment plan for different rivers and respective problems, which ultimately develops a comprehensive water environment improvement program to strengthen the integration of drainage basin resources management.

‘River Chief Policy’ helps improving the administrative status of ecological environment and gradually makes it become equal with the economic development. Additionally, each administrative department has a special department and a person exclusively responsible for the management process, which drastically improves the administrative efficiency of water environment management. The policy is quite similar to the ‘household responsibility system of land’ in the early days after People’s Republic of China established. In this system, the responsibility is not only very clear but also fully correspond to exact people, so the work could be done more efficiently especially in short term. Further, the accountability mechanism is clearer. Although there is controversy in the implementation process as lacking legal basis, taking the current social reality in China into consideration, solving the present environmental pollution problem is more important.

The spreading mechanism of ‘River Chief Policy’ is another success. The policy was innovated by the Wuxi government then directly taught to other cities’ government, eliminating the intermediate transferring period thus exceedingly enhanced both spreading and comprehending efficiency. This also shows that the learning and innovating ability of local government is upgrading.

4.1.4 Negative Consequences of the Policy

The negative consequences of ‘River Chief Policy’ can be discussed under three headings: Over-reliance on administrative power hence cannot eradicate the commission-agent problem; Inadequate attention to social forces; Inability to efficiently mobilize the enthusiasm of civilians to participate.

Government officials that involved might take advantage of their information benefit and adopt opportunistic behaviour in the events when citizens and governments face asymmetrical information situation because their salaries, additional allowances, monetary goals, nonperforming goals, honour and on-the-job consumption might appear great differences accordingly. This would lead to false governance and other moral hazard issues. At the same time, the existing assessment methods are almost all top-down style with ‘self-examination’ and the current situation expresses that it is more of ‘praise and self-praise’ instead of ‘self-examination’. The original goal to supervise the drainage basin management within the system seems working short.

In the field of environmental protection, governments act better as a ‘watchman’ role, as the little
they intervene environmental law enforcement work, the better social forces perform. Moreover, social forces usually act better motivating the public and raising environmental protecting awareness. Government should force macro intervention representing the interests of the public towards environmental pollution. One of the obvious shortcomings of ‘River Chief Policy’ is that although it completed the internal mobilization of the administrative power system, it did not realize the mobilization of the local society. In the early practice of this policy, the government dealt with the contingency but generally social forces acted as onlookers, which wasted their immense potential and capability. However, in recent years, evolved policy such as ‘Folk River Chief Policy’ started to show attention of social forces, continuously narrowing the gap between government intervention and social forces intervention.

Chinese government has been promoting public participation for many years, yet even in the area where ‘River Chief Policy’ has been implemented, power abuse phenomenon and conflicts between political heads and general society still exist. In some places, there are even those who regard persistent pollution whistlers as ‘troublemakers’ because they hinder them from illustrating a picture of whitewashing peace. In short, ‘River Chief Policy’ is comprehensively still a closed environmental management system that lacks public assistance. With the existing policy, the absence of society and the public directly descends performance of the assessment and accountability of the real effect. The lack of citizen participation in the management process makes the open and fair ‘accountability’ questionable and is essentially contrary to the requirements of administration by the law.

4.2. Discussion of ‘River Chief Policy’ from a Distributed Leadership Perspective

‘River Chief Policy’ started with distributing powers and rights to certain people in charge to advance the management efficiency and effectiveness. The intention of this policy is using power distribution to motivate people taking charges and supervise them by clarifying responsibility. With exact people managing exact segment of rivers and lakes, the management range is clearer than ever and whomever in charge faces tremendous pressure and works under unavoidable inspection from all aspects. Therefore, in short term, the water pollution management and water resources management can reach exceedingly positive goals.

Referring to the original theory of distributed leadership, the beginning is also distributing powers and rights to people from former authorities, trying to reduce the negative effects of bureaucracy. Although ‘River Chief Policy’ first handled the power and obligation to people with certain administrative employment instead of distributing all the way down to every single one that involved, the starting approach is similar to some extent. However, when examining terms of ‘River Chief Policy’ closely, it can be discovered that the power distributing it conveyed is highly different from that distributed leadership proposed. ‘River Chief Policy’ handled power to certain people and let them take full responsibility and control of segments of rivers and lakes within the administrative area they belong, locking the absolute power to these people to grip accountability. It could be recognized as partitioned autocratic in a certain degree. That is possibly why it could receive such extraordinary outcomes in a very short term because autocratic makes it way easier to make decisions thus cuts management process incredibly and saves huge amount of time. Plus, when people take full responsibility and accountability, they tend to work more effectively as they do not want to deal with unfavourable consequences by themselves. It is obvious that the original ‘River Chief Policy’ is utterly different from the ideas distributed leadership expresses despite the distributing power approach.

Nevertheless, it cannot be deduced that ‘River Chief Policy’ is completely incompatible with distributed leadership theory. As stated in the previous sections, distributed leadership requires distributed power but goes beyond that. It concentrates on not only leadership practices within the organisation but also composite skills, characteristics and behaviours of individuals. This indicates that each river chief and their performances weigh in the drainage basin management procedure simulate the elements that distributed leadership is composed of. Moreover, distributed leadership involves collective cooperation and communication among leaders, subordinates and their status, which echoes the primary principles of ‘River Chief Policy’ that every hierarchy coordinates and supervises each other, forming
highly-functioned departmental linkage. Additionally, both the policy and the leadership theory are constantly evolving and the latest development details of the policy displayed more similarity to distributed leadership than ever. ‘Folk River Chief Policy’ excluded ignorance of social forces and citizens’ participation by involving more civilians into the management process. It surpasses distributing power and rights only to those who already in the management team, encouraging more civilians joining the water pollution and resources monitoring work, engaging more aspects of public into drainage basin management. As distributed leadership emphasizes social constitution of comprehensive leadership, ‘Folk River Chief Policy’ certainly introduces more power liquidity and individual voluntariness into the current water environment improvement program.

Considering the current development of the policy and the achievements of its practice, it can be estimated that ‘River Chief Policy’ is advancing towards the direction of distributed leadership and the two may have greater compatibility in the future. With the rapid spreading of implementation of the policy, innovation sparkles and superior interpretations might also add new blood to distributed leadership theory.

5. Conclusions and Reflections

Distributed leadership is a trendy leadership theory in western leadership and management researches these decades. It requires distributed power, and is described as a leadership practice defining element, a method to seek more effective leadership practice, a leadership cogitating and examining framework in new and creative ways. Distributed leadership is considered as a form of leadership that can motivate innovative management and subjective initiative supported by high power liquidity and individual voluntariness.

‘River Chief Policy’ intends to relieve the severe water resources abuse and water pollution in China. It set river chief positions along drainage basin area and requests river chiefs managing their segments of rivers and lakes respectively. The policy delivers clear responsibility and power distribution, experiences good developing path based on institutional innovation, shows high efficiency in pollution control, but relies too much on administrative power, neglects capability of social forces, and lacks efficient means to mobilize general participation.

The policy shared analogous outset of distributed leadership but its original practice depicted entirely different managing style. However, improved version of the policy tried new approaches that are more consistent to distributed leadership. With the piloting of ‘Folk River Chief Policy’ progressing, further compatibility of the two may be discussed.

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