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Original Article

Neoliberalization, Separations, and Environmental Crises - Emphasizing the Ecological Crisis of Lake Urmia, Iran

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Abstract

Purpose- The ecological crisis of Lake Urmia began in 1995, and its critical state was announced in 2014. Previous studies have demonstrated that farmers and water management in agriculture sector are the main contributors to the crisis. Therefore, the purpose of this study is to investigate the role of neoliberalization in water financing, commodification, and privatization programs in reducing the water level of Lake Urmia.

Design/methodology/approach- This research is descriptive-analytical in terms of method. The method of data collection is also documentary and field interviews. The documents include the laws of First Plans (1990) to the Fifth (2011) of the Islamic Republic of Iran, the Fair Water Distribution Acts (1982), and the Provincial Agricultural, and Water Development Documents. The documentary analysis approach corresponds to the interpretive analysis paradigm of information analysis.

Findings- What the represented results and the discussions indicate is that when politics and economics are together (as it always is today), separation becomes a neoliberal trick to restore order and self-preservation, and it causes, "The separation of the elements of water, the exploiter, the private interest from the public interest, and from each other". In this way, by using fake tricks in the name of development and protection, it uses the environment and water resources to gain legitimacy and capital accumulation and transfers the costs of these conspiracies to the environment and the water source.

Original/value- Nevertheless, it seems that the policies of structural adjustment and implementation of programs in different governments have created different "separations" and they have imposed enormous environmental costs on water resources.

Keywords: Lake Urmia crisis, Commodification, Commercialization, Financialization, Separation.

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1. Introduction

Neoliberalization has been introduced in the form of discourse and political economy theory since the 80s (Springer, 2012). Its main axes are market-based competition, private property and elitism (Harvey, 2007). The main purpose of neoliberalism is the redistribution of capital (Kotz, 2018; Harvey, 2007; Cahill, 2018) and legitimacy of social class power (Bonal et al., 2003; Igoe & Brockington, 2007). The pursuit of this goal has been through privatization, commodification (Chaves et al., 2017), and financialization (French et al., 2011). However, the most controversial part of neoliberalism is its results, which have brought diverse sorts of separation. "Separations" is the term used to explain the neoliberals and governments' tricks in rebuilding the power of the class and redistributing capital, which David Harvey calls it "dispossession". Nevertheless, it is believed that this Separation is not solely in ownership and it occurs in another topic as well.

Studies demonstrate that there are some disappointing crises and consequences in environmental realms. In contrast to the obtained results, neoliberalists have no single policy (Harvey, 2007). Some believe in controlling the crisis through neoliberalism (Higgins, 2008). Nevertheless, most studies show that neoliberalism has caused many environmental crises through the commodification and privatization of natural resources (Fioret, 2018). Today, the disapproving consequences and results of neoliberalisation in the field of the environment (Allen, 2018; Boda, 2018; Polanyi, 2001; McCarthy & Prudham, 2004) have become the most crucial topic of the debates. One of these crises is the destruction of water resources (Halpin & Guilfoyle, 2004); Higgins & Lockie, 2002. However, the impact of neoliberalization on the water was examined in the 80s (Furlong, 2010). Due to its vital role in the rural communities, especially in arid areas like Iran, water has become a zone of competition for investment (Brisman *et al.*, 2018; Furlong, 2010) and a means for the legitimization of the dominant class, and this very issue has cast a harmful impact upon the environment.

Today, in public opinion and discussions in domestic and foreign academic communities, the ecological crisis of Lake Urmia or the shrinkage of its water level is constantly being raised. The water level of Lake Urmia has been shrinking since 1995 (Khazaei et al., 2019) until its critical state is announced in 2014. With the announcement of the state of Lake Urmia's ecological crisis, a restoration headquarter is set up by the government. The purpose of this campaign was to identify and investigate factors affecting Lake Urmia's water level and to plan for its management. To this end, the restoration headquarters carried out many studies with the assistance of various research institutes and universities. In the outcomes of these research, based on the over projective nature of neoliberalism (Lindroth & Sinevaara-Niskanen, 2018), farmers and water management in the agricultural sector (Lake Urmia Restoration Program, 2017; Khatami & Berndtsson, 2013)were introduced as ecological crisis factors of Lake Urmia which were identified as neoliberalism "**Separation**" consequences. A review of resources and studies in Persian and English medium journals (Khazaei et al., 2019; Jalili et al., 2016; Alborzi et al., 2018; Ashrafi et al., 2017; Nouri & Agayie., 2012; Hassanzadeh et al., 2012) illustrates that there has not been a structural viewpoint towards the factors involved in the shrinkage of the Lake Urmia water level, and, in none of these studies, the effect of structural adjustment policies of the government in the late 1980s and after that is mentioned in the environmental crisis of the lake. However, it seems Neoliberalism, as a theory of political economy, has been the cause of Lake Urmia's ecological crisis. Adjustment policies and implementation of programs in different governments, by creating different "separation", imposed substantial environmental costs on natural resources. Privatization policies and special financial systems in the programs facilitated the uncontrolled water withdrawal from the basin, which led to a sharp shrink in the lake's water. Exporting agricultural products, eliminating the export tariffs of products, encouraging the flow of capital toward the water sector, etc., were among the policies that the government implemented in the programs' rules. According to these programs, by the year 2014, the water withdrawal from the catchment area (drainage basin) reached up to 74% (Ministry of Energy, 2017) and caused an ecological crisis in Lake Urmia. Concerning the fact that out of all gained water, about 94% is being used in agriculture with an efficiency rate of 30%.

The study of programs of the agricultural sector is a priority.

Studying the ecological crisis of Lake Urmia socially, economically, and environmentally is critically important. About 6 million people live in the Lake Urmia drainage basin (ULRP, 2017), and the majority of them are subsistence agriculture. By the reduction of the lake's water level and desertification of its bed, a potential condition has been formed for salt storms (Azizpour et al., 2015), threatening the livelihoods of Lake Urmia's verge residents. If not properly managed, migration, unemployment, social challenges, income reduction and income instability, groundwater pollution, air and soil pollution are highly expected. Therefore, the purpose of this paper is to investigate the role of neo-liberalization programs in the ecological crisis of Lake Urmia of Iran based on the interpretive paradigm and the evidence-based analysis method.

2. Research Theoretical Literature

From the perspective of David Harvey (2007), neoliberalism is a theory of political economic practices that serve to redistribute capital and restructure of class power. In his seminal work called "Brief History of neoliberalism", he proposed specific ways for the purposes of neoliberalism. Financialization, privatization, and commodification are ways of redistributing capital and restructure of power, which are the views of Harvey in his work.

2.1. Commodification

Commodification is an important principle in the reconstruction of class power and the redistribution of capital (Igoe & Brockington, 2007).

Commodification is defined as the conversion of factors of manufacture and natural resources into marketable goods (Castree, 2003). In the school of neoliberalism, the commodification of natural resources is complemented by marketization and commercialization (Gómez-Baggethun & Ruiz-Pérez, 2011), through which the redistribution of wealth and the reconstruction of class power are facilitated**.**

2.2. Privatization

Privatization is among the other methods of neoliberalization (Bakker, 2007; Islar, 2012) and is one of the most controversial and contradictory practices of neoliberalism (Hanlon, 2018**)**, which is proposed in the slogan of social justice and in practice leads to the reconstruction of class power as well as redistribution of capital. Harvey (2007) argues that neoliberalism is the theory of practices in political economics, which grows by the expansion of entrepreneurial liberties under the framework of powerful private property rights. neoliberal privatization practices are the rental utilization system and short-term contracts (Harvey, 2007), removing supervision, reducing investment in groundwater resources, transferring the ownership of public water resources to the private sector (Bakker, 2007) by modifying water distribution laws.

2.3. Financialization

Financialization is another way of transferring wealth from the people to the entrepreneurial elites and promoting class power (Christophers, 2015). Water financialization occurs through subsidies for agricultural water (Liang et al., 2019), special taxation system (Deckard, 2016), **Separation** through brokerage systems, wealth transfer traps and legitimacy of the ruling class power. However, there lies very few benefits and interests for farmers and agriculture.

3. Research Methodology

3.1 Geographical Scope of the Research

Lake Urmia is Iran's largest inland lake. This lake is located in the northwest of Iran. The Lake Urmia catchment area is approximately 52,000 square kilometers (Bakhshianlamouki & et al, 2020) with approximately 6 million inhabitants. The basin is located between the provinces of West Azerbaijan (46%), East Azerbaijan (43%) and Kurdistan (11%). The total volume of water in the basin is 7136.46 million cubic meters, out of which 5289.23 million cubic meters are being consumed (MoE, 2017) which is 75% of the total basin water, which is about three times of renewable water capacity, is being extracted. With this amount of consumption, the shrinks in Lake Urmia began in 1988 and reached a critical point in 2014. Over these years, the lake area has decreased/diminished from 52,000 square km to 2000 square km, that is, by 2014, more than 90 percent of the area and 70 percent of the lake's water have shrunk.

Figure 1: Dry trend of Lake Urmia 2000-2018

3.2. Methodology

The purpose of this research is to explain the ecological crisis of Lake Urmia corresponding to structural adjustment policies in the form of neoliberal economic-political theory. Analysis of documents as a method of qualitative analysis in studies Bowen (2009) and Xu and Croft (2017) has been introduced. In this manuscript, the source of information for analysis are the regulations related to the First (1990) to the Fifth (2011) programs of the Islamic Republic of Iran, the laws for fair water distribution (1982), and documents related to agricultural and water developments of the provinces. The evidence-based analysis method (Ahmad, 2010), which corresponds to the paradigm of interpretive analysis (Burrell and Morgan, 2017), is the method of information analysis**.**

The method of data collection is both field and evidence-based (interviews with farmers). In the evidence-based method, the word analysis unit has been used to extract information (Germain, 2012). In this research, the ecological crisis of Lake Urmia, the financialization, privatization, and water commodification are aspects of document analysis. According to the theoretical foundations and objectives of the research, marketization, commercialization, economic restructuring were key factors in the water commodity dimension; Transfer of ownership, rent system and short-term contracts, reduction of investment of government are the identified key factors in the water privatization aspect.

Implemented policies, goals, and plans of water and agriculture section of development programs in the catchment (five programs of 5-year plans), 1966 and 1982 fair water ownership and distribution laws, regional water projects, as well as statistics were purposefully specified as analysis documents of the study.

The field method was used to document and present examples. In this method, after extracting key information and rules of the programs based on keywords, research questions for interviewing farmers have been proposed. In the field data collection, 20 farmers from the catchments of Shaharchay, Godarchay, Nazlouchay, and Barandouzchay have participated as samples of the population. The reason for the selection of these catchments is due to the dam structure in the two Godar and Shaharchai rivers and the transitional channels in the other two basins. Interview questions consisted of: Why has Lake Urmia been into this situation? How do you assess the government's actions regarding supply, consumption, and distribution of water? What roles do the government's actions in agriculture play in the current situation of Lake Urmia? Moreover, what was the role of farmers in the supplying, distribution, and consumption of water, and what is it now? The above questions were translated and simplified into an understandable farmer's native language and were asked from them.

Table 1. Aspects and components of analysis

Aspects of Analysis	Components of analysis	Examples
Ecological crisis of Lake Urmia	Increase in water consumption and withdrawal from the basin (dam construction, inter-basin transport, drilling wells) and decreasing lake's water level	Reports on Lake Urmia by restoration headquarters
Commodification	Restructuring the economy, commercialization and market-making	Related reports and narratives from farmers
Corporate Governance and Privatization	Transfer of ownership, short-term renting and contracting systems, reduction in governmental investment	narratives from farmers
Financialization	Credit facilities, water pricing, taxation system	narratives from farmers

4. Research Findings

The purpose of this manuscript is to answer the question of whether the ecological crisis of Lake Urmia is due to structural adjustment policies. It is assumed that neoliberalization in the form of commodification, privatization, and financialization programs facilitated the withdrawal of water more than the basin's feed capacity and reduced the levels of the lake's water.

4.1. Commodification, water laws, programs and plans

Commodification is one of the important methods of neoliberalization (Islar, 2012). Today, water is one of the most important sources of investment. Currently, water has become an important commodity in commerce grounds and aids the redistribution of wealth (Furlong, 2010). To clarify, this question can help us: What does water have to do with commodity logic? The productive role of water, its scarcity, and its vital importance are important features of this natural element that, in combination, have made water a commodity that, in practice, has brought about the opportunity to rebuild class power and redistribute capital; nevertheless, which mechanisms in the government-run programs and documents made these features a commodity? There seem to have been at least some historical mechanisms that have made these two aspects of water ultimately subject to commodity logic and to commercial commodities.

4.1.1. Economic restructuring of production to meet consumption towards export

The first mechanism is the economic restructuring of production to meet consumer needs towards export-oriented production. The purpose of this mechanism of agricultural commercialization has been to increase the volume and value of exports and to increase the share of the agricultural sector in economic growth (Section 5 of the first program, 1990. Note 21 of the second program, 1995, Paragraph and Article 109 of the third program, 2000). To achieve this goal, various strides have been conducted in the past 27 years. Providing foreign exchange facilities (Note 29,

The First program, Clause J, Article 25 of the Second Program, Clause M, Article 113 of the Third program, Clause A, Article 104 of the Fifth Program, 2011) providing information on trade technical information and providing credit to farmers who are exporting (macro-policies of first program., article 116 of third program., clause J, article 37 of second program) mutual trade agreement with countries to increase exports of agricultural products (note 25 of the law of second program), removal of tariffs of customs and commercial benefits of exports of agricultural products (note 21 and 24 of second program's law., article 115 of third program., article 33 of fourth program., article 104 of fifth program), excising of taxes and Duties of agricultural exporting products, removal of legal restrictions, including obtaining an export license (paragraph J of article 33, fourth program, paragraph B of Article 104 of the fifth program), issuance of export licenses for subsidized agricultural commodities (paragraph F of article 114 of the Fourth program, note 4 of article 104 of the fifth program), granting purchasing facilities to the purchasers of Iranian goods in the export target markets (clause S of article 84 of the fifth program) are the most important programs and policies implemented during the five programs in the agricultural sector. As a result, of these programs, for example, in West Azerbaijan, the weight of agricultural exports in 2005 was 60197 tons, which in 2012 reached to 115706 tons, whereas exports value for 2005 were $5056 million and for 2012, $5702 million (Central Bank of Iran, 2019).

The economic restructuring of production to meet consumer needs towards production aims at exporting, most of all is the witness of the productive role of water and structures created on surface water, so there are numerous mechanisms, plans and projects in the water and agriculture sectors, particularly operations related to irrigation and land drainage networks were the highest priority in the programs (clause 3 of the first program, 1990). In addition, the policy of the first development program (1990) emphasized the growth of capital and intermediary productions of the economy with emphasis on agricultural inputs, water, and soil. The government financed the surplus funds for water projects from non-absorbed civil development credits in the second development program (note 74 of second program). In the third development program (2000), establishment and development of census networks, measuring water consumption in the agricultural sector (article 106 of the third program), increasing irrigation efficiency and water productivity and increasing the level of area under cultivation, adjusting the route of water by creating diversion tunnels (clause b of article 109 of third program) was actions taken by the government and the private sector. In the fourth development program (2005), the focus on the role of water production over pre-existing programs is increased. In this program, actions such as the use of modern irrigation and deficit irrigation methods, irrigation efficiency, and a 25% increase in water efficiency per cubic meter and its allocation to high economic value crops (clause A of Article 17, Fourth program), allocating 2% of the total appropriations for surplus capital assets plans to water sector credits for containment and transfer of border waters (paragraph J of Article 17, Fourth program), development of irrigation and drainage networks in two million hectares of irrigated agricultural land (paragraph A, Article 18, Fourth program), spending on reuse and surplus water resources from water resources in water network development (Article 63 of fourth program) was implemented. Implementation of structural and non-structural projects (paragraph A of Article 19 of the fairwater distribution law 1982) across all plains of the country, reinforcing at least 25% of groundwater with control of 12.5% of surface water control and 12.5% through watershed and aquifer management (Article 140, fifth program), annual reduction of at least 1% of existing water volume, especially in the plains with negative groundwater balance, use of water savings for development of new agricultural lands (Article 141, program 5), providing the needed water of the farmers in volume based on harvesting pattern (Article 143 of program 5) was of the most important actions, which are done in the Fifth development program. Development of agricultural export policies and other complementary policies, such as establishing food security and reducing dependence on other countries, increased the value of water and increased the capital's focus on these natural resources. It was based on this program that in the Lake Urmia catchment area, 200,000 hectares of dry land had been converted into irrigated land (Lake Urmia Revival Headquarters, 2015) through 52 dams operated by the Ministry of Energy and

the Ministry of Agriculture and increased the area of cultivated land by 8 times. Today, the volume of water gained from these structures is 2356 million cubic meters per year, which accounts for about 167% of the programmable basin's water (Ministry of Energy, 2017), which refers to the "**Separation**" of rivers from the lake. The rationale behind this economic restructuring is, in fact, water conversion policies as an important intermediary commodity in agricultural production and capital redistribution. Creating structures on surface water and controlling 90% of flow of the water toward the lake, creating structures of transferring water to dryland, transboundary water transfer (Revival Headquarters Report, 2015), "Volume-based water sale to beneficiaries by regional water companies, hourly sales of water by farmers, water right transfer, selling water utility license by farmers (farmers quotes, 2018) is an important example of water commodification in the region, which is very tangible.

4.1.2. Marketing and Commercializing Water

The second mechanism is the marketing and commercialization of water. This mechanism is more related to water itself and the results of the first mechanism. This mechanism created two types of separation - which we will discuss later - here is the argument that water must be commercialized, that is, to be able to buy and sell the water, which is somehow "separated" of water from the natural resource group and conversion of it into a commercial commodity, so it must have a supplier and an applicant, which is the first separation of this mechanism. The second "separated" took place when the water producer was separated from the consumer. Thus, this formed two types of water market separation. With the creation of regional water companies in 2004, water producers and distributors were created and on the other hand, it was farmers, government agencies, private companies, and the public who formed the water market applicants.

> *"When we were running the water system we were dredging and drilling the canals ourselves ... We spent on water and brought water to the farm ... But since the companies came and built the dams we no longer spend on transporting and storing water and we buy our own water right from the dams and canals of the regional water company[1]....."*

Important processes have been involved in the marketing and commercialization of water. Assigning new water gain rights to farmers and receiving subscription rights by regional water companies (Article 63 of fourth development program), water management economization (Article B first program, Article 17 of fourth program, Article 53 of fair water distribution law 1982), exchanging the water gain right documents (Paragraph B of Article 141 of fourth program), licensing the sale of high- discharge wells to other farmers by owners of wells (article 17 of the fair water distribution law 1982), water export and import programs (Article and clause 17, fourth program, Article F, Article 140, Fifth program), Strengthening local water markets (Article 106, third program), guaranteed purchase of surplus water by private sector investors by the government (Article 142 fifth program), development of water tourism in the form of orchards villas, crop cultivation expansion of the strategic products (Article 109 of the third program, Article 141 Fifth program) by the government and the private sector such as beetroot, apples, etc., abolition of water infringement law, removal of water supervision rights (Islamic parliament of Iran ., 1982), drilling unauthorized wells and ratification of the licensing law (article 3 of the fair distribution of water law; IPI., 2010), removing water police from water preservation laws (Rooh-Alamini, 2018), issuing licenses to deepening the wells of the licensed wells instead of destroying the drilled wells in other wells frontage that have resulted in their water depletion (paragraph A of Article 14 of the Fair Water Distribution law 1982) are the most important actions that have played an important role in marketing and creating greater demand for water. Converting the dryland farming to water land farming in the lake catchment market had its role in the marketing for selling the water. Because of forming more water demand, dam construction and licensed as well as unlicensed well drilling projects in the catchment is being performed with high intensity. Tender announcement for water projects such as dam construction, well drilling, change of system and transfer for production and distribution of water

1. Interview with Farmers 2018, The fourth note

has been increased in the commercial market; in a way that after the construction of regional water companies, 13 dams in Lake Urmia catchment has been constructed. Water supply from all surface structures reached about 2356 million cubic meters per year that make up more than 74 percent of the total water inflow of the basin (Ministry of Energy, 2017), which is about three times more than the standard water gain (Figure 2).

Dam	The volume of water/2019
Mahabd	185
Bookan	808
Alavian	123.4
Hasanloo	94
Shahr Chay	157
Qaleh Chay	40
Sarooq	40
Zola	60
Tajloo	3
Gerdkandi	6
Cheraqvis	86
Drik	21
Nahand	26

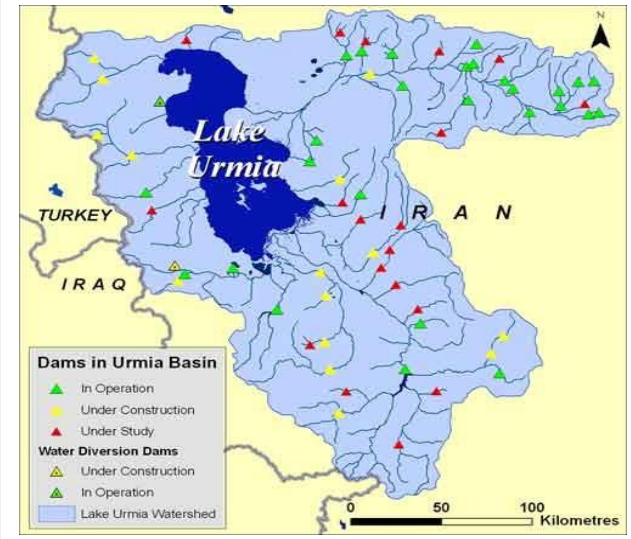

Figure 2. Water volume of important dams and distribution of dams in the watershed

4.2. Corporate Governance and Privatization, programs and water laws

Water privatization has been introduced since the 1980s (Hall & Lobina., 2008). The term privatization refers to "the processes by which water resources are used by the private sector to generate profits with a commodity that was previously a common resource" (Karunananthan, 2019, p. 5). Speaking of water privatization, this question is raised: which properties of water are subjected to privatized logic and create profitability for the private sector? Production services, distribution services and water itself as a marketable commodity have made water an important source of private-sector profitability and investment. Water is a public natural resource and has been referred to in all land development programs and laws, but in practice by specific mechanisms has caused it to "separation" from its actual role, which Harvey (2007) calls it invisible dispossession. It is water privatization processes and mechanisms that include the transfer of ownership, short-term renting and contracting systems and the reduction of government investment that provides the legal framework and conditions necessary for the private sector to generate profits.

4.2.1. Transfer of ownership

The first mechanism is the transfer of ownership through which the owner has the right to exploit, transfer, sell, etc. Due to public ownership of water, there is no transfer of ownership of water itself, and water-dependent production and distribution services have been transferred to the private sector, through which the water itself has been owned by the private sector. **Separation** and wealth assembling has been done through specific laws in the programs and laws of fair water distribution.

Issuance of water documents to right holders and owners (article 107 of third program), transfer of ownership of water facilities to companies (paragraph A of article 133 third program), transfer of property, facilities, machinery ownership and any ownership of water facilities to companies (article 7 of N clause fourth program, article 29 and 32 of the fairwater distribution law of 1982), removal of government supervision right over the distribution and consumption of water in accordance with the 1966 water distribution law of 1982, restraining water in cooperation with the private sector (article 75 fourth program), issuance legal act of water utilization for all right holders and holders of water allocation license (article 141

of clause b of the fifth program); delivering water distribution to the nongovernmental sector (Article 143 of clause b of the Fifth program) were programs implemented by the government.

> *"... the cooperative water company is making our water flow poor and they no longer possess their past power ... so we can no longer control the water gain of the people who live in the upstream of the river, the government also does not control ... in the villages of the upstream parts of the river due to the large cultivation and expansion of orchards in the fields, the water gain is abundant and unrestricted, and people draw large quantities of water from the river. Nowadays the water does not reach the villages in the downstream parts of the river ..."*[1]

The laws approved in 2004 paved the way for the formation of regional water companies, the entry and control of contractors in the water production and distribution sector. In the form of these companies, the following activities were practically transferred to the private sector (Regional Water Company of west Azarbaijan, 2004).

- Conducting studies needed to identify, develop and exploit water resources
- Preparation and implementation of water supply and water transfer plans and projects for different consumption sectors, irrigation and drainage networks
- Operation and maintenance of water supply and transition facilities and structures
- running the law on fair distribution of water and other laws and regulations related to the water
- Granting subscriptions to applicants based on specified tariffs within the framework of the laws and regulations.
- Delivery of needed water to subscribers in different sectors of consumption based on tariffs approved by the relevant legal authorities.
- Purchase of services from a non-governmental sector for the study, administration, operation and maintenance of water facilities and structures.
- Offering domestic corporate bond and pre-sale of water subscriptions
- Engaging the public and NGOs in implementing water resources development, irrigation and drainage projects
- Performing business operations and transactions within the framework of General Assembly approvals and related laws and regulations that are necessary for the purposes and benefits of the company.

4.2.2. Short-term rental and contracting system

The second mechanism is the short-term renting and contractual system, whereby the water or water share of a beneficiary are transferred to another individual contractor for a given period. This contract is concluded between farmers, government and farmer, company and farmer. Important processes have contributed to the formation of the tenancy system. Transfer of water resources and arable lands to the villagers under appropriate and provisional conditions (Article 108 Third and Fourth program); conditioned issuance and extension of gaining license to reduce water pollution by consumers (article 134 third and fourth program, article 23 of the fair water distribution law 1982), exchange of operational documents by short-term contracts (article 141 fifth program), issuance of temporary licenses for use of water to farmers by the ministry of energy (article 18 of the fair water distribution law 1982) are the laws that has led to the instability and disruption of agricultural water resources. These "separation" laws created an emotional sense of owning and protecting from water resources; the result and the reaction of the farmers to these laws, the short-term view toward the water use, surplus use of water, stealing water and drilling of unauthorized wells were for supplying secure agricultural water in the region. According to the Urmia Lake Restoration headquarters and Ministry of Energy (2017) report, more than 40,000 unauthorized wells have been dug in the area over the last 30 years in the Lake Urmia catchment, which drains about 1.5 billion cubic meters of water annually.

4.2.3. Reducing government investment

The third mechanism is to reduce government investment in the water sector and attract private investment. This mechanism can be defined as the "separation" of the benefactor of the people's interest from the people. Investing in water is done in three parts: production, distribution and consumption. Increase in the cooperation with the private sector in new water resources investment (Article 75 Fourth program), investment and

1. Interview with farmers 2018, The second and 17th note

ownership, management and operation of dams and water supply networks by the private sector in compliance with the general policies of article forty-four of the constitution law (clause b, article 142, fifth program) and co-investment with non-governmental sectors up to 49% in agriculture and water resources (article 149 of the fifth program) has been the rules of investment in the water sector. Under these rules, more government investment has been made in the area of surface water containment and transition of it, and in the consumption sector, the government has drastically reduced its investments; even in the water production sector, its share has dropped to less than half. The private sector is more eager to invest in the area of surface water containment and transition because of its high profit and benefit. Most of these laws expanded private-sector investments to gain benefit from public resources. Extensive dam constructions, inter-basin transmission of Zarrineh Rood water to Tabriz (150 million cubic meters per year), Zola to Gharabagh and Govarchin Ghaleh!! (3.7 million Cubic meters per year), Silve to Naghadeh and Lake Urmia (190 million cubic meters per year), and Zab River to Naghadeh plain and Lake Urmia (under construction) were instances of such investments.

4.3. Financialization, programs and plans

The term financialization refers to allocation mechanisms such as facility payment credits, pricing the water, and water taxation systems, which its aim is to transform water resources management and water services into financial assets (Karunananthan, 2019). Aspects of water distribution and production are characteristics of water that, in combination with several specific mechanisms, have been the function of the financialization logic.

4.3.1. Separation of People from Public Interest

The first mechanism is to dispose people from the public interest. This separation is through the provision of low-interest credit facilities from public credits to investors; this mechanism has been introduced in most of the development programs, thereby creating a significant opportunity for greater profitability in the water sector that can be exploited. This can be defined as "separation" of people from the interests of public resources. Definite allocation of 30% of annual water credits as transferable facilities to private sector investors (Note 76, second program,) paying 70% of interest and fees on transferred water facilities to private sector (Note 77, second program), allocation of 25% of banks' annual facilities to the water and agriculture sector (clause J of Article 106, third program and Article 10, Fourth program), paying low-interest facilities from the National Development Fund to water investors (clause Z of Article 84, fifth program) were programs implemented by the government in the water sector and created the situation for gaining wealth in this sector. According to the Ministry of Agriculture (2011), by the end of the third program, about 14.3 percent of banks and credit institutions facilities specified to the private sector in the water-related drudgeries, and at the end of the fourth program, 20 percent of commercial banks' facilities were allocated to the water sector.

4.3.2. Tariff on water

The second mechanism has been the allocation of tariff on water in water distribution sector and water production services instead of real value of water. Pricing the natural resources has been one of the methods of capital redistribution and class power restructuring (Harvey, 2007). Water tariffs have been emphasized in development programs and the fair water distribution act. Determination of prices according to the law on stabilization of crop water rates (article 107 of the third program), determination of the economic value of water in the basins considering the intrinsic value and investment (clause J of article 17, fourth program), determination of subscription right for water by the regional water company (article 63 fourth program), pricing the water based on the costs of the water extraction (article 53), fair water distribution act 1982 are some of the water laws that have been involved in allocation of tariffs on water. Allocation of tariffs on water has led to the 'Separated' of water from its essence as a natural resource, which is referred to in the commodity sector. Under these rules, regional water companies created numerous dams in the catchment to sell surface water, regardless of ecological issues. According to Lake Urmia Restoration Headquarter (2015), 53 dams were built on seasonal and permanent rivers, and about 90 percent of the surface flow to Lake Urmia was reserved for sale and volume delivery to farmers, in a way that these companies were not satisfied to release the lake's share. This has in some ways demonstrated that the expropriation of public resources has been in the private sector's interests and benefits.

Neoliberals believe that pricing water is effective in maintaining and using it properly (Webber et al., 2008), but it is the actual pricing system that has the most impact on optimal water use. The current form of water pricing in the Lake Basin has been inefficient and in practice has been led to separation of the public ownership and resulted in the transfer of capital to service providers and water extractors. Determining the correct price of water is influenced by the economic value of the resources and the level of service provided (Toan, 2016)

However, in the Lake Urmia Basin, water consumption tariffs are not dependent on water value (Article 17 of paragraph J, fourth program) and it depends on water services, extraction costs and harvest rates.

4.3.3. Low rates or elimination of income tax

The third mechanism is decreasing price rates or elimination of income tax on water-related activities. In the direct tax law program, all income from agricultural activities is tax-exempt (Ministry of Economic Affairs and Finance, 2002), the elimination of taxes on agriculture and water sector is applied to all development programs. The tax exemption used by the government to attract private sector funds in the water sector have provided an important platform for investment, most of which has been in water supply and transport. Based on the water tax exemptions and the elimination of water tariffs in groundwater extraction, the number of wells increased from about 45,000 to over 90,000, and on average 7 wells were drilled per square km of the catchment area, thereby increasing the extraction rates of these wells up to 1717.4 million cubic meters (Cultural and Social Committee of Lake Urmia Revival Headquarters, 2015).

5. Discussion and Conclusion

In this article, the purpose of the researcher is to express and reveal the relationship between the adjustment policies and the crisis in Lake Urmia. According to the exploratory studies in the literature review, it was assumed that there was a strong relationship between privatization, commodification, and financialization policies with increasing water extraction over the feeding capacity of the Lake Urmia's catchment. By examining the relevant documents and the programs implemented, it was revealed that the government has shifted pressure on water resources by implementing structural adjustment policies to safeguard the interests of the ruling class. The results, of course, do not support all the theoretical assumptions of neoliberalism as cited in most of the literature, for the weaknesses and inadequacies of experiences in the Lake Urmia catchment severely limit the conclusions.

5.1. Economic restructuring and the water crisis

The restructuring of the economy towards exports has affected the production role of water as the main input of production. As a result, it concentrated water projects more on the production and distribution of water in the form of surface water control and transition and marginalized consumption management programs. In fact, the export of agricultural products is the transfer and export of virtual water. However, the presented results are inconsistent with Carr et al.'s (2013) study because the results of their research indicate that, the distribution of virtual water within a network of exports and imports in the studied countries has contributed to a balanced distribution of water across different geographic regions. However, this result is a little puzzling for Iran, which lies in the dry belt of the world and it has a traditional kind of agriculture.

Another point in the economic restructuring is the emphasis on economic growth through export of products, which its expansion has been highlighted in the results. The link between economic growth and water distribution in the area, which was the case of the study, is in line with the studies of Tamea et al, (2014), who identified economic growth as the propellants of water export. The relationship between water consumption and economic growth has also been clearly stated in the studies of Ebrahimi, (2016), Barbier, (2004) and Yue et al. (2017). The interpretation is that creating economic growth and increasing agricultural share in it requires trade and more consumption of natural resources in the first place. According to the presented results, this growth in the Lake Urmia's catchment has occurred more by increasing the area under cultivation with more water consumption, than increasing productivity; Heidari's (2014**)** study confirms this idea, but one should bear in mind that strong economic growth are eminently linked to the consumption of water resources, and it could result in its "**Separation**" from environmental consequences and water crises. This is the issue that David Harvey (2007) has repeatedly mentioned in his book entitled A Brief History of Neoliberalism, but it should also be

noted that this "separated" is not merely explained by the logic of redistribution and accumulation of capital. It is deduced that in addition to the redistribution of wealth, the adoption of food security policies without dependency on other countries by the political ruling class to rebuild the power has fueled this “separated”.

5.2. Food security and the water crisis

The creation of food security by government (abundance of subsidized/low-priced food) has led to the withdrawal of water beyond the capacity of the catchment in two ways. First, creation of the food security which is done by keeping crop prices down; to reduce food prices, adding tariff on water without calculating the intrinsic price of water itself, and under the "Crop Water Stabilization" act, which reduced the price of water in food production and it has reduced the conservation value of these resources, which has led to high water consumption**.**

> *"... We get the crop but their price is low. It is not cost efficient for us and we have to cultivate our land for more production every year so we can get more crop and increase our income ... we changed our seeds for more production, and these seeds need more water. Previously we used to plant wheat and irrigate two or three times, but now, we plant wheat and irrigate six times…"*[1]

Nonetheless, this should not be interpreted like the way that real pricing reduces water consumption. In fact, this rise in the water prices have helped the commodification of these natural resources to be bought and sold on the market, which has led to the extraction of water for trade, whether in the form of direct sale or in the form of the product trade**.**

5.3. Commercialization and water crisis

A study by Sangameswaran (2009) in India shows that the commercialization of water is rapidly expanding and is being emphasized by the scientific and legislative communities. The results of the present study also indicated that the government has taken significant indirect steps to expand the water trade. Water trading has been studied in various research under the title of virtual water trading (Hoekstra, & Hung, 2002; Hoekstra, & Hung, 2005). The important point is that virtual attribute does not mean unreal, but frankly, it should be said that virtual water is completely real water. The business appears to have proposed a strategy to mitigate water scarcity in geographic areas but in practice has acted as a private sector profit gaining strategy. If this were not the case, a country like Iran with extremely severe water shortages would not have exported any agricultural crop, even though the results showed an increase in crop exports (virtual water). In addition, the results presented indicated that water trade has been common among farmers in local level in the catchment areas. The water transfer in the catchment, which is mentioned in the results, is an example of this trade. The difference between this paper and previous studies is its potential in providing some indications of the local water trade.

There may, of course, be another interpretation that scarcity, an attempt to protect the vital value of water, creates its trade. However, these three characteristics have created the conditions for private sector activity to enter the field under the title of development (increased productivity), with the aim of protection, and the invisible, behind-the-scene logic of profit maximization in the region. It is these characteristics of water, of course, that have posed a major problem in the empirical expression of the water trade for the purpose of capital accumulation and redistribution. Water conservation and productivity enhancement under the title of development and social justice can be implemented without water privatization (Lobina & Hall, 2000); nonetheless, Hall and Kuiper (1998), Bawa et al (2009) show that commercialization has been accompanied by privatization

5.4. Privatization of ownership and water crisis

Privatization of ownership of water itself in the form of transferring water ownership has not been done in a specific pattern. McKenzie et al., 2003 have also pointed to this issue in water privatization. Water itself, distribution monitoring and allocation, pricing, and services are features that have been addressed in the privatization debate (Draper, 2008**)**, which our results confirm these factors as well. The main problem in this part is the weakness of the experiences of water privatization in agriculture sector and its environmental impacts. Therefore, from this perspective, this study is unique. Given the general rights and legal limitations of water ownership transfer, lien, tenancy system and short-term contracts in the agricultural water sector, also seen in the studies of Lefkoff and Gorelick (1990), has been the private sector profit maximizer trick. These short-term

1. Interview with farmers 2018, The third and furth note

contracts, or in another term, "separation" of the sense of ownership and protection, have been involved in the water crisis, because, first, short-term contracts have failed to make profitable expenditures, no protection-related investment, which is not invested on water, and water only used to produce high-value goods with high levels of consumption without supervision of government in pricing has been allocated and used in line with bad environmental consequences. Second, short-term contracts and renting systems are not a guarantee of profitability against environmental threats, such as drought in coastal surface water, but by creating water structures such as dams by these companies, this has provided confidence to temporary tenants, and guarantees a renting and contract-based system.

The expansion of privatization and the spread of the renting and contracting system have been subject to a decline in government investment. Since the creation of water companies, government investment in water consumption management has fallen sharply. These investments by government have also fallen to less than half in production and transmission. Studies indicate that government investment in water is effective in reducing the water crisis. In many countries, street protests against privatization have shown the effectiveness of presence of government in the water sector (McKenzie et al., 2003; Prasad, 2006). According to the results, it is not claimed that the government did not have the necessary investment; rather, it is probable that government investments were more in the production and control of water than in consumption, distribution, and protection. Reducing government's direct investment in the water sector has benefited the private sector in three ways; first, the space for private sector investment has been wide open and regional water companies have invested in water production. Second, the small investment made by the government in the production sector has played a role in creating the water market for consumption and private sector investment. In other words, government's investment in water production has caused a "separated" of water producer with water consumer, which this "separated" is filled with water distribution and transition system service companies and modified seeds, the effects, which are mentioned above. Third, the results also show a decline in government's investment in water production. Nonetheless, wherever there is no direct investment in water production, it has played a role by the provision of credit facilities to the private sector.

> "…in the past due to water scarcity (the river as the main sources of agriculture) the value and importance of water was high and people regarded it as one of the sacred and magical blessings of God ... since the expansion of privately dam building, water canalization and drilling of wells in agricultural fields the sanctity of water disappeared, and people used God's blessings without thanksgiving, without restraint and without a culture of saving it... When the government canalized and constructed dams and drilled wells, the quantity of the water grew and people used it countlessly and planted new crops and have transformed their lands to the gardens and entertainment fields to earn more money …"[1]

5.5. Water sector credit facilities and water crisis

Water sector credit facilities have been offered as loans from public sector sources to the private sector with low-interest, which has been addressed in Prasad's (2006) study. These facilities are more for the production and distribution of surface water than in the conservation and consumption part, as evidence suggests that investments in surface water have taken place and no specific action have been taken for groundwater. In the part of surface water, the designation of water control and transition structures projects is high and it is highly attractive to the private sector in maximizing profits; in other words, credit facilities have been in favor of private investor firms to increase water productivity. Providing low-interest credit facilities from public sources has led to greater control of the water for sale through the private sector and the regional water company without letting the lake share to be released.

In addition to providing low-interest facilities, eliminating taxes on production, investment, and value-added from agriculture in general and from water in particular in all economic programs and laws of Iran, was among the other government actions in the water sector, which were in benefit of investors and companies, which was called **Separation** of people from the public interest resources, as mentioned above. The elimination of taxes and consequently the elimination of government spending in the water sector have

1. Interview with farmers 2018, The 13th note.

imposed and transferred costs on water resources and have resulted in the loss of water resources. This interpretation is consistent with the results of World-Ecology and Ireland: The Neoliberal Ecological Regime (Deckard, 2016), Kilimani (2015), and Bluffstone (2017) studies of environmental taxation in transition economies. Spratt (2012) also stated in his study that taxing environmental resources has a great impact on controlling pollution and water loss. The interpretation of the government's intention in elimination of the tax on agriculture and the environment is not too complicated. The government has two major goals in tax evasion. First, lowering agricultural product prices and creating food security and preventing public discontent with the ruling class. Second, attracting private sector investment and lowering their costs. Since the tax is not levied on agriculture and water, the government has not invested in the protection of surface and groundwater, and the private sector and the beneficiaries have not invested in water conservation as well, especially in groundwater, for the reasons mentioned above. All the costs has been transferred to the environment and the water crisis in the Lake Urmia catchment is the result of it. In other words, tax evasion eliminates incentives to safeguard public property and act for the benefit of private investor companies. Tax cuts, in addition to environmental impacts, have also been effective in tariffing water, thereby exacerbating the water crisis.

5.6. Tariff and water crisis

Water tariffs were in the water production and distribution services sector and were not for water itself. Tariffing on water without the price of water itself or the **Separation** of water from its natural value has moved most of the costs from the investor to the environment. It should not be thought that pricing alone can reduce consumption (Berbel & Limon, 2000), but it is a solution, in which the protection of public rights and water is an important principle. Pricing is efficient only when investment and cost is also being done in consumption (Watto & Mugera, 2016) and conservation (Abu-Zeid, 2001). The most important issue here is not the price of water, but the system of pricing. The real price of water is the cost, which includes three components: supply and distribution costs, economic costs and resources, environmental costs (Toan, 2016) that the operator and investor must pay. The main problem in this section is the lack of evidence, statistics, and information from water price and its pricing, which has made it difficult to analyze the results. However, the results showed that none of these three components was observed. According to water laws and regulations, it is inferred that economic costs, distribution and resources, have not actually been realized due to subsidies in the form of tax exemptions and low-interest facilities. In addituin, environmental costs have not entered into the play in the pricing system at all, which in a way led to shift of public interest to the pockets of the operators and the investing companies and by not paying the environmental costs, the water crisis has been formed.

Theoretical framework of the article, findings and discussion to answer the research question about the role of neoliberal programs in the ecological crisis of Lake Urmia indicate that neoliberal discourse with methods and tricks of privatization, commodification and financing, has had a clear impact on the crisis of Lake Urmia. Privatization and commodification have been achieved by achieving economic growth through agricultural development, increasing agricultural exports and foreign exchange earnings, increasing employment, ensuring food security and, in general, developing the commercialization strategy of the agricultural sector through minimization. Environmental watersheds and the development of irrigated lands have been achieved with the least attention to increasing productivity. Also, the trick of financing the neoliberal discourse in the Urmia Lake crisis is being pursued by directing credit facilities to the private sector and water companies to invest in production and distribution, failing to implement the pricing system and setting real water tariffs, reducing government investment. In the consumption management and protection sector and finally the elimination of taxes from the water consumption sector.

It is not claimed that this study addresses all issues related to the relationship between structural adjustment policies and the water crisis. However, in its own capacity, it can provide a new understanding of the social relationships in the organization of water production and consumption mentioned in the studies of Jepson et al., (2017), the relationship between the power/legitimacy with water resources and the good governance of water management of Empinotti et al. (2019) and Loftus (2015). The results and the arguments presented here show that when politics and economics are together (as it is always today), separating

becomes a neoliberal trick to restore order and self-preservation, and it causes, the "separated" of the elements of water, exploitation, private interests from public interest, and providing the environment and water resources for legitimacy and accumulation of capital through fraudulent trickery under the title of development and protection of class sloganistic values (capitalist and of course the ruling class) and they transfers the costs of these conspiracies to the environment and the water source.

To develop knowledge of the relationship between class power restructuring and capital redistribution with scarce resources such as water, it is necessary to study the relationship between the power and water in non-liberal political systems as well as governance and ruling over the operators of water. I will leave the first issue as an open issue and continue the second, showing how forms of governance with particular subjectivity are linked to the system of water exploitation and water resources in Iran.

This paper has a theoretical and fundamental approach to the relationship between political economy and power with biological resources (water). Researchers consider it necessary and effective to study thematic and spatial-spatial studies at geographical scales to expand knowledge in this regard.

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نئولیبرال سازی، جداشدگی‌ها و بحران‌های زیست‌محیطی- با تأکید بر بحران اکولوژیکی دریاچه ارومیه، ایران

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چکیده مبسوط

۱.مقدمه

بحران اکولوژیکی دریاچه ارومیه از سال ۱۳۷۷ شروع و در سال ۱۳۹۴ وضعیت بحرانی آن اعلام می‌شود. مطالعات نشان می دهد که کشاورزان و مدیریت آب در بخش کشاورزی به عنوان عاملان اصلی بحران هستند. ولی به نظر می رسد سیاست‌های تعدیل ساختاری و اجرای برنامه‌ها در دولت‌های مختلف «جداشدگی» های مختلفی را ایجاد کرده و هزینه‌های زیست‌محیطی زیادی را بر منابع آب تحمیل کرد. در حوضه آبریز دریاچه ارومیه، حدود ۶ میلیون نفر زندگی می‌کنند که اکثریت آن‌ها دارای معیشت مبتنی بر کشاورزی هستند. با کاهش سطح آب دریاچه و بیابانی شدن بستر آن، شرایط مناسبی برای طوفان‌های نمکی ایجاد شده و معیشت ساکنان حاشیه دریاچه ارومیه را تهدید می‌کند. در صورت عدم مدیریت صحیح آن، وقوع مهاجرت، بیکاری، چالش‌های اجتماعی، کاهش درآمد و ناپایداری درآمد، آلودگی آب‌های زیرزمینی، آلودگی هوا و خاک بسیار محتمل می‌باشد. لذا هدف این تحقیق بررسی نقش نئولیبرال سازی در قالب برنامه های مالی سازی، کالایی سازی و خصوصی سازی آب در کاهش سطح آب دریاچه ارومیه می باشد.

۲. مبانی نظری تحقیق

نئولیبرالیسم از دیدگاه دیوید هاروی (۲۰۰۷)، نظریه‌ای در مورد شیوه‌های اقتصاد سیاسی است که در خدمت بازتوزیع سرمایه و بازساخت قدرت طبقه است و در اثر خود بنام تاریخ مختصر نئولیبرالیسم، شیوه‌های خاصی را برای اهداف نئولیبرالیسم ارائه داد. مالی سازی، خصوصی‌سازی و کالایی سازی از شیوه‌های بازتوزیع سرمایه و بازساخت قدرت از دیدگاه هاروی در این اثر است. نئولیبرال سازی از دهه ۸۰ در قالب گفتمان و تئوری اقتصاد سیاسی مطرح شد. محورهای اصلی آن، رقابت مبتنی بر بازار، مالکیت خصوصی و نخبه‌گرایی است. هدف اصلی نئولیبرالیسم، بازتوزیع سرمایه و مشروعیت‌بخشی به قدرت طبقاتی است. شگرد دستیابی به این هدف، خصوصی‌سازی، کالایی‌سازی و مالی‌سازی بوده است؛ اما بحث‌برانگیزترین بخش نئولیبرالیسم، نتایج آن است که «جداشدگی» های متعددی را به همراه آورده است. «جداشدگی» اصطلاحی است برای تبیین ترفند نئولیبرال ها و دولت در راستای بازساخت قدرت طبقه و بازتوزیع سرمایه استفاده شده است که دیوید هاروی از آن به‌عنوان سلب مالکیت نام می‌برد. ولی اعتقاد بر این است که این جداشدگی، تنها در مالکیت نیست و در زمینه‌های دیگر نیز اتفاق می‌افتد.

۳. روش تحقیق

این تحقیق از نظر روش، توصیفی- تحلیلی است. روش جمع‌آوری اطلاعات نیز اسنادی و میدانی (مصاحبه با کشاورزان) است. اسناد شامل؛ قوانین برنامه‌های اول (۱۳۶۸) تا پنجم (۱۳۸۹) جمهوری اسلامی ایران، قوانین توزیع عادلانه آب (۱۳۶۱) و اسناد مربوط به توسعه کشاورزی و آب استان‌ها می باشند. روش تحلیل اسنادی متناظر بر پارادایم تحلیل تفسیری روش تجزیه‌وتحلیل اطلاعات است. در جمع‌آوری اطلاعات میدانی ۲۰ کشاورز از حوضه‌های آبریز شهرچای، گدارچای، نازلوچای و باراندوزچای به‌عنوان نمونه همکاری کردند. علت انتخاب این حوضه‌ها به جهت وجود سازه سد در دو رودخانه گدار و شهرچای و کانال‌های انتقالی در دو حوضه دیگر است. سؤالات مصاحبه عبارت بودند از: چرا دریاچه ارومیه به این حال افتاده است؟، اقدامات دولت در خصوص عرضه، مصرف و توزیع آب را چگونه ارزیابی می کنید؟، اقدامات دولت در خصوص کشاورزی چه نقشی در وضعیت موجود دریاچه ارومیه دارد؟ و نقش کشاورزان در عرضه، توزیع و مصرف آب چگونه بود و الان به شکلی است؟

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۴. یافته‌های تحقیق

آنچه نتایج و مباحث ارائه شده نشان می‌دهد، این است که؛ زمانی که سیاست و اقتصاد در کنار یکدیگر باشد (که امروزه همیشه این‌طور است) جداسازی به‌عنوان ترفند نئولیبرالیسم برای برقراری نظم و حفاظت از خود تبدیل می‌شود و این ترفند موجب، «جداشدگی» عناصر آب، بهره‌بردار، منافع خصوصی از منافع عمومی و از همدیگر می‌گردد. از این طریق با بکارگیری مکر و حیله‌های دروغین بنام توسعه و حفاظت، محیط‌زیست و منابع آبی را برای کسب مشروعیت و انباشت سرمایه استفاده می نماید و هزینه‌های این دسیسه‌ها را به محیط‌زیست و منبع آب منتقل می‌کند. با این وجود، به نظر می رسد سیاست های تعدیل ساختاری و اجرای برنامه ها در دولت های مختلف "جدایی" های متفاوتی ایجاد کرده و هزینه های زیست محیطی هنگفتی را بر منابع آب تحمیل کرده است.

۵. بحث و نتیجه‌گیری

چارچوب تئوریکی مقاله، یافته‌ها و بحث برای بررسی پاسخ به سئوال پژوهش مبنی بر تاثیر نقش برنامه‌های نئولیبرال در بروز بحران اکولوژیکی دریاچه ارومیه بیانگر آن است که گفتمان نئولیبرال با شیوه‌ها و ترفندهای خصوصی‌سازی، کالایی‌سازی و مالی‌سازی، تاثیر آشکار و غیرقابل انکاری بر بحران دریاچه ارومیه داشته است. خصوصی‌سازی و کالایی‌سازی با تاکید بر رشد اقتصادی، افزایش میزان صادرات و درآمدهای ارزی ناشی از آن، افزایش اشتغال، تامین امنیت غذایی و به طور کلی، توسعه استراتژی تجاری‌سازی بخش کشاورزی از طریق کمینه‌سازی حقابه‌های زیست‌محیطی و توسعه اراضی زیرکشت آبی با کمترین توجه به افزایش بهره‌وری محقق شده است. همچنین، ترفند مالی‌سازی گفتمان نئولیبرالیسم در بحران دریاچه ارومیه از طریق هدایت تسهیلات اعتباری به بخش خصوصی و شرکت‌های آب برای سرمایه‌گذاری در بخش تولید و توزیع، اهمال در تعبیه نظام قیمت‌گذاری و تعیین تعرفه واقعی آب، کاهش سرمایه‌گذاری دولتی در بخش مدیریت مصرف و حفاظت و در نهایت حذف مالیات از بخش مصرف آب باعث تشدید بحران اکولوژیکی دریاچه ارومیه شده است.

کلیدواژه‌ها: بحران دریاچه ارومیه، خصوصی سازی، مالی‌سازی، کالایی‌سازی، جداشدگی.

تشکر و قدردانی

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