



**DISPLACEMENTS WITHIN THE FRAMEWORK OF
ENVIRONMENTAL AND CLIMATE JUSTICE:**
CONCEPTS, DEBATES, AND CASES

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Development- Induced Displacements

Economic growth, which is determined by criteria such as income per capita, the share of the labor force in the industry, and added value through export, aims for the constant extension and increase of the distribution and consumption relations. In addition to involving all aspects of growth, development entails the purposes of distributing social and economic products and services, increasing prosperity, democratic governance, and eliminating discriminations and differences based on class, gender, and ethnicity.¹ Besides, within the dominant understanding of development intertwined with economic growth, renewing, establishing, and restoring the infrastructures of the economy's producer powers and their facilitating factors stand as prominent elements in promoting development.² "Development projects" aim to provide all the necessary raw materials, energy, infrastructure, and services for such elements through using natural resources. In the most general sense, mega development projects refer to projects which, biologically, geologically, and physically change/transform a part of nature through technology in a quick, extensive, radical, conscious, and—in many cases—irreversible manner. Depending on their purposes, such projects are divided into four categories:³

- Infrastructure projects (transportation projects such as ports, airports, railways, roads and highways, urban water and sewerage systems, etc.)
- Extractive sector projects (mining projects including minerals, metals, coals, petrol, and gas)
- Production and trade projects (industrial arboriculture, export areas, industrial areas, etc.)
- Consumption-oriented projects (tourism, shopping malls, theme parks, real estate projects, etc.)

According to the propounded argument, the benefits from development projects done and managed by private and public sectors in different areas with different purposes will generally enrich economies through producing economic value; then, the effects of such benefits will reflect on society through providing "prosperity". However, the insufficient and unequal distribution of the benefits allegedly provided by development projects causes inequality and injustice. Besides, these projects contain several ecological, social, and economic costs/damage that are externalized or ignored. Generally, in terms of ecology, development projects cause several local and global problems such as excessive exploitation of resources, air, water, land pollu-

A HOLLOWED CONCEPT: SUSTAINABILITY

The discussions on the concept of “sustainability,” which supports growth compatible with the environment, started in the 1960s. The first research related to the impossibility of unlimited growth was *The Limits to Growth* report, published in 1972. In this report, it was pointed out that humans’ current production and consumption activities are not sustainable based on the emphasis that the planet has certain boundaries and carrying capacity. It was also argued that although the continuation of the current growth model would push the planetary boundaries and thus would bring economic and ecological destruction, there could be a sustainable economic model to provide basic needs.¹ In the mid-1980s, the concept became more popular on the public agenda and for political/economic actors outside academia. The turning point of this evolution was the publication of the *Brundtland Report*. The report, which draws attention to poverty with international and intranational inequalities around the world, emphasized that there is a need for a sustainable development model that is harmless in terms of social and ecological terms. On the other hand, the report also argued that a new growth model that accepts the planetary boundaries, does not exceed these boundaries and the planet’s carrying capacity, is respectful to nature, and can provide for current generations while not endangering the future generations is possible.²

The concept of “sustainability” was broadly recognized in the 1990s and became mainstream. Thus, the concept was adopted by the business world, governments, and the media. In 2015, the UN accepted the *Sustainable Development Goals* (SDGs)—which involve a series of social and economic goals, including “humanely business and growth,” eliminating poverty, reducing inequality, gender equality, responsible production and consumption, climate action, and accessible and clean energy—and started its activities to achieve these goals worldwide until 2030.³

On the other hand, as can be observed in many other concepts, as “sustainability” is spreading to different fields and has started to be used by various actors to refer to different things; it is turning into an empty signifier.⁴ Although several economic and political actors, from international institutions to companies and governments, regard sustainability as a fundamental element of their activities and policies, there is no consensus in terms of the content of the concept and the ways of actualizing it; the meaning gradually becomes

blurred. Besides, the approach called ecological modernization has become the most accepted interpretation. According to this approach, the damages done to the planet due to growth can be fixed with advancing technology; at the same time, implementing new technologies and green implementations can contribute to economic growth with their booster effect on employment.⁵ In time, the conflicting situation between economic system and ecology, frequently emphasized in early discussions on the concept of sustainability, started to be diffused in the background. Instead, it can be noted that in addition to continuously predominant idea and aim of growth, reformist approaches toward intrasystem implementation, such as efficient use of resources, technological applications, and/or administrative regulations and planning, are the preferred solutions for sustainability. Reformist approaches toward eliminating the negative results of development-induced displacements are also based on a similar understanding of sustainability. As the political ecology approach emphasizes, when the concept “sustainability” is used as such within social, economic, and political structures, it faces the risk of turning into a tool for *greenwashing*⁶ for the “sustainability of companies.”⁷

1- Donella H. Meadows, et al., *The Limits to Growth: A Report for the Club of Rome's Project on the Predicament of Mankind* (New York: Universe Books, 1972). It effects people living in the shores of rivers under dams, their livelihoods and food security and thus prevents the suitability of their social and cultural existence in their living spaces. Big dams, which ruin the fish population and the habitats and life cycles of other species on the rivers that they are built, damage rivers and their surrounding ecosystems. Communities which sustain their lives depending to an ecosystem centered around river become to be unable to carry out fishery and lose their livelihoods.

2- World Commission on Environment and Development, *Our Common Future* (Oxford: Oxford University Press, 1987).

3- UN Turkey, *Our Work on the Sustainable Development Goals in Türkiye*, <https://turkiye.un.org/en/sdgs> (Accessed: June 19, 2022).

4- Ingulfor Blühdorn, “Sustainability—Post-sustainability—Unsustainability,” in *The Oxford Handbook of Environmental and Political Theory*, ed. Teena Gabrielson, et al. (Oxford: Oxford University Press, 2016), pp. 259-273; David Carruthers, “From Opposition to Orthodoxy: The Remaking of Sustainable Development,” *Journal of Third World Studies* 18, no. 2 (2001): 93-112; Hande Paker, *Ekolojik Dönüşüm İçin Kültür ve Sanat*, 9. Kültür Politikaları Çalışmaları Raporu, (İstanbul: İKSU, 2021).

5- Andrew Dobson, “Are There Limits to Limits?,” in *The Oxford Handbook of Environmental and Political Theory* (2016), pp. 289-303.

6- Greenwashing refers to instances when companies (and governments) seem like they embrace projects and programs based on sustainability principles but they also continue their investments, activities, productions, and policies which harm the environment and climate; they mostly maintain a fake green stance to escape criticism and to obtain prestige.

7- Blühdorn, 2016, *Ibid*.

Between 2001 and 2010, it is calculated that 15 million people per year, 150 million people per decade, forcefully lost their houses and/or lands worldwide.

tion, deforestation, and destruction of ecosystems. Thus, such projects result in rapid consumption of the planet's limited resources, exceeding the nine essential planetary boundaries, and increasingly continuing massive and devastating ecological crises such as climate change. This is still the case, in spite of the increasing popularity of the "sustainability"—a concept underlining the need for a different development and growth approach by claiming that the current understanding of growth pushes the planetary boundaries and does not eliminate poverty.

One of the most critical social risks and problems created are displacements. With the effects of the emergent ecological risks, millions of people worldwide lose their houses, lands, livelihoods, and their living spaces in a general sense. According to the estimations of the World Bank, due to hydroelectrical power plants, infrastructure, and transportation projects, 10 million people were displaced in 1994. This indicated that around 100 million people are displaced every ten years worldwide. Between 2001 and 2010, when other projects were added to dam, infrastructure, and transportation projects, it is calculated that 15 million people per year, 150 million people per decade, forcefully lost their houses and/or lands worldwide. In the following decade, on the other hand, with the increasing numbers of development projects, it is estimated that 20 million people per year, 200 million people per decade, were displaced.⁴

Development-induced displacements (DID) due to intertwined ecological and social destructions cause a quite extensive and multidimensional environmental injustice. Social groups, such as the poor, indigenous communities, ethnic minorities, women, the elderly, and the disabled, are situated in a disadvantaged position due to the social, economic, and political conditions that they are in and due to the general unequal distribution of power. Thus, experiencing several injustices simultaneously, they are affected by the harmful and devastating costs/damages resulting from the development projects to a larger and more intense extent. This indicates that development projects create distributive injustice in terms of costs. The recognitional and participatory injustices are also an essential aspect of development-induced displace-

ments. The losses of these groups, who cannot have a say against ecological and social risks and are not included in the decision-making processes, are mostly unseen and rejected. It is possible to come across many such examples in the past. For example, in India, between 1951 and 1990, it is estimated that 2% of the population was displaced due to development projects; indigenous communities constitute 40% of the displaced population. Individuals from the indigenous communities constitute 8% of the population of India, which implies that these individuals constitute a large part of the displacements and are affected by the development projects more in an unequal manner.⁵

APPROACHES TO DEVELOPMENT-INDUCED DISPLACEMENTS

Especially during the 1970s and 1980s, the massive extent of development-induced displacements due to mega projects, such as dam, mining, and infrastructure works, brought an increase in research, works, and policy seeking related to the issue. Scudder and Colson, who gave one of the first examples of such research, specified that people displaced due to mega projects go through a traumatic process and benefit from their relocations in later phases. According to this approach, a successful relocation process can be thought through a four-phase model: There are phases of planning and recruitment, adjustment and coping, community formation and economic development, (administratively) handing over (the relocation area to the local authorities) and incorporation (of the local authorities).⁶ This approach does not look at the effects of social, economic, and political factors, substantially overlooks local differences, excludes the actors' agencies, and defines the process beforehand and linearly through definite phases determined from outside.

Sociologist Michael Cernea, one of the experts at the World Bank, found Scudder and Colson's model insufficient in terms of understanding the problems related to displacements due to development projects and programs that the World Bank finances, and proposed the model *Impoverishment Risks and Reconstruction (IRR)*⁷ in the 1990s, which became a reference for Development-Induced Displacement and Resettlement (DIDR) programs. Cernea emphasized that for most projects financed by the World Bank, DIDR programs ended with failure and argued that all displacements carry risks.⁸ Common risks that are encountered in development projects are listed as:⁹

- *Landlessness* occurs when indigenous communities' private or collective lands are partially or entirely dispossessed due to development projects, and as a result of partially or entirely losing access to such lands, when their production practices, trading opportunities, and their livelihood opportunities and activities are eliminated or hardened,
- *Joblessness* occurs when jobs of landless workers and lands of small farmers in rural are taken away, and when jobs of workers in the service sector, owners of small shops and their workers, and craft and related trades workers in urban are eliminated and not replaced,
- *Homelessness* occurs when housing opportunities are for a while or perpetually annihilated which causes sociocultural alienation and poverty,
- *Marginalization* occurs when there is a retrogradation in the social hierarchy, which manifests itself in cases that all cause economic loss, such as loss of social status, class differentiation, elimination or inactivation of social capital, loss of individual assurance,
- *Increased morbidity* that occurs when, due to displacements, psychological, healthy, and clean living conditions are not provided as a result of the feelings of stress, trauma, and insecurity; access to healthy and clean living conditions is restricted as a result of the ensuing economic depression; there are health problems such as vulnerability against epidemics and diseases,
- *Food insecurity* occurs for a while or persistently when, there is a loss of access to collective spaces and agricultural lands in rural areas or loss of jobs and income in urban areas which threatens several social groups, especially women, children, and landless peasants,
- *Loss of access to common property resources* that are one of the fundamental elements of the economic and social life of a population, especially indigenous communities living in the rural such as grasslands, pastures, water sources, forests,
- *Community disarticulation* occurs when social capital, articulated through many ages and is the foundation of sustaining the continuance and reinstatement of the identity and cultural existence, is lost.

As he also emphasized in his later works, Cernea argues that such risks can be eradicated through some regulations developed by considering social, economic, and political conditions with a human rights perspective. He states that, as seen in several examples, the traditional way of compensating loss and damages with monetary com-

compensation results in further impoverishment. Instead, he argues that development projects should be designed and implemented in a way that can facilitate development for the locals.¹⁰ The way to do this is first following the criteria with regard to such risks, sustaining political will for this, and preparing and implementing actions and action plans to overcome such risks. Against the eight risks that are listed above, solutions based on the principles of “land-based resettlement,” “reemployment,” “house reconstruction,” “social inclusion,” “healthcare,” “adequate nutrition,” “restoration of community assets and services,” and “networks and community rebuilding” are highlighted respectively.¹¹ One of the main methods proposed in this direction is benefit sharing, that is, to share the benefits produced in a way that mega projects develop the region where they are located with local communities.¹² For example, when the electricity produced by a dam is also used in the surrounding region or when the local farmers also benefit from irrigation opportunities.

This approach, described as reformist-managerial, which argues that risks related to displacements can be prevented by a series of regulations and administrative interventions within the system, became a model that is frequently referenced in academic research and the processes of policy-making; and, though partially, it became the foundational approach in World Bank programs.¹³

Another approach toward development-induced displacements is called “radical-movements.” The root of this approach is based upon social movements which resist against disentanglement of their fundamental rights, such as the right to individuals and communities’ self-determination, right to housing, right to access to land and water, and right to live in a healthy and clean environment, and which, at the same time, try to protect their identities and cultural existences.¹⁴ In addition to being movement-based, the alternative radical approach which became a standpoint that is defended with its different forms in the academic world takes human rights as its focus as opposed to reformists approaches. Development is described as a totality of processes and practices which, instead of increasing people’s prosperity, intervene negatively in people’s lives by depriving them of the opportunities of shelter and livelihood at the local and lead to human rights violations. In contrast to the reformist point of view, they claim that development projects do not provide “welfare” and “prosperity” for people. Accordingly, displacements are not considered as the “undesired” effects resulting from insufficient management, lack of rules or faulty implementations of development projects, Rather,

INTERNATIONAL STANDARDS OF DISPLACEMENT

There are regulations and standards related to development (projects) induced displacement introduced by several international organizations and institutions. Between 1990 and the mid-2000s, several international and regional financial institutions, such as the European Bank for Reconstruction and Development (EBRD), African Development Bank (AfDB), Asian Development Bank (ADB), and the Inter-American Development Banks (IADB), published standards that would be implemented in the projects that they provide resources for. All these standards and regulations are based on the works and initiatives of the World Bank, one of the primary financer of development projects worldwide.

The development projects that the World Bank financed between the 1970s and the 1980s worldwide caused social and economic damage in the regions that they were built. With the deepened and widespread poverty due to the projects, the pressure by social movements, which were rising on local and international levels, increased.

The World Bank started developing some standards related to displacements that would be implemented in the projects it financed in the 1980s.¹ As a result of works under sociologist Michael Cernea's coordination and guidance, in 1980, the first institutional policy standards related to displacement and relocations, the OMS 2.33 guide, was published. In OMS 2.33, to which governments that are involved in the World Bank projects have to oblige, it was emphasized that in the making of the projects, displacements should be the last option; and in case it is applied, planning of housing for displaced people and financing of this should be integral parts of the projects. After some regulations were developed in the guide between 1980 and 1990, OD 4.30 (Operating Directives) was published in 1990. In 2016, Environmental and Social Standards 5 was published, and these standards became operational in 2018. In this framework, the World Bank published the Environmental and Social Framework (ESF) and Environmental and Social Standards (ESS) to implement them in the projects financed by the World Bank. In time, the World Bank, while updating ESF and ESS, aimed to improve the livelihoods of the displaced people as compared to before the projects, and, if that is not possible, to provide

the same level of livelihood after the projects are completed. However, despite these standards and framework, it is observed that in half of the projects that the World Bank financed between 1990 and 2010, even the criteria of providing the livelihoods of the displaced people on the same level compared to before could not be met. In the updated ESF and ESS in 2016 by the World Bank, policy outlines and principles presented in a single article related to the issue replaced the formerly presented, ten-article, detailed policy recommendation related to displacements.² At the same time, ESF and ESS do not identify risks, such as loss of houses and lands; food security; marginalization, and disappearance of access to commons that displaced people encounter. The last update led to criticism that the World Bank does not take responsibility; that it is leaving all the responsibility to the governance of the project owner and debtor countries. Besides, the updated ESF and ESS were also criticized for the fact that the frameworks do not involve any obligation for project owner countries to implement the standards, and they only involve general information, which is insufficient in actualizing the aim of preventing poverty.³

1- Sanjeev Khagram, 2004, *Ibid.*; Anthony Oliver-Smith, 2010, *Ibid.*

2- The World Bank, "World Bank board approves new environmental and social framework" (August 4, 2016), <https://www.worldbank.org/en/news/press-release/2016/08/04/world-bank-board-approves-new-environmental-and-social-framework> (Accessed: June 19, 2022).

3- Michael Cernea and J. K. Maldonado, 2018, *Ibid.*

they are considered as an integral part of development projects that signifies how results and costs of development are unequally and unjustly distributed. Accordingly, the “reformist” IRR model is criticized in terms of how it approaches displacements, more specifically its oversight of power inequalities in various forms and participatory, distributive, and recognitional injustices displacements cause.¹⁵ Furthermore, critics claim that reformist approach ignores political and economic dynamics on local, national, regional, and global levels as well as the historical development that has impacts on the current situation. In that regard, the IRR model, criticized for holding a modernist and neoliberal outlook, is accused for not elaborating on the structural causes of poverty, loss of livelihood, and inequalities sufficiently.¹⁶ Additionally, the IRR model does not consider constraints and opportunities of host countries in relation to their position within the global economic system.¹⁷ Last but not least, it is claimed that even though the reformist IRR approach that certain vulnerable groups such as women, children, and indigenous communities are among the more severely affected. it avoids analyzing these groups’ disadvantages and vulnerabilities by situating them in a social, economic, and political context.¹⁸

Although the IRR approach argues that the free and open participation for all should become an essential part of the process, this principle has been violated almost in all development projects. Communities that face the risk of displacement are not included in the planning and preparation stages of projects. This culminates in the lack of mutual exchange of information between locals and project owners and failures in terms of taking priorities, demands, and needs of local populations into account. This inevitably turns what is labelled as relocation processes under development projects into displacement processes.¹⁹ Even if participation principle is exercised in certain projects, its reach is kept limited. When the principle of participation is—though insufficiently—implemented, it is constrained within the limits of eliminating negative effects of already decided and implemented development projects. For instance, indigenous communities and individuals are generally not included in the decision-making processes during the initial phases of development projects that would be located in their living areas. As long as indigenous communities cannot decide on their own whether they want a development project in their vicinity in the first place, there is a participatory injustice. Thus, procedural justice, which is essential for environmental justice to be instated, can only be possible when local inhabitants are involved in the decision-making processes about implementing projects from the very

DISPLACEMENTS AND GENDER INEQUALITY

One of the main social groups that is predominantly and traumatically affected by the harmful effects of development-induced displacements is women. In addition to poverty, women are situated in a more disadvantaged position than men due to gender inequalities. In addition to existing injustices stemming from gender inequalities, the fact that men are given a central role in the excogitation and implementation of development projects (e.g. men's income is included in the calculations of economic loss, whereas the unpaid labor of women is excluded) makes women more vulnerable during displacements.¹ As a result of displacement processes, the unequal and unjust situation of women worsens and deepens. Some of the problems and obstacles that result in women facing recognitional, distributive, and participatory injustices in the DIDR processes can be summarized such as:² First of all, women face recognitional injustices. In many DIDR processes, the share of women in lands, family properties, and collectives is not acknowledged. Thus, women, whose shares and rights are invisible, benefit less from compensation processes in comparison to men. In the case of relocations, on the other hand, women who live alone are generally not given access to lands or other resources that are provided as compensation unless they reach a certain age or through the medium of a man. For example, in India, during the construction of Sardar Sarovar Dam, the losses of women from indigenous communities, who traditionally do not have land property rights, were not compensated.³ Another reflection of this is that due to a series of reasons, such as low rates of literacy and education among women and the obstacles to women's transportation in terms of distance and duration, participation of women in project information and decision meetings with local communities is limited.⁴

Regarding the traditional division of labor, access to commons in rural regions, such as water resources, is considerably crucial for women who take care of domestic work and childcare. Due to the closure of common areas to use or the destruction of common resources, the burden on women who maintain traditional roles increases. Similarly, the far distance of relocation areas from areas and resources that are used collectively causes women to have difficulties.⁵

Job opportunities to maintain their livelihoods in relocation areas or new living areas that they settle in with their own means are more restricted for women. These are caused by factors like restricted mobility in everyday life compared to men; lower education levels; working less than before, and thus limited opportunities to acquire skills to transfer to new jobs.

Not having a job in their new areas of settlement, not having access to common resources, and substantially losing their social networks cause women to lose their statuses. In addition, it is recorded that violence against women and children increase during and in the aftermath of DIDR processes.⁶ When all of these are combined, women participate less in the public sphere in their new areas of settlements and join in social life in a more limited manner. Thus, the ratio of their dependency on house and men increases and they experience disempowerment.⁷

1- Vandana Asthana, "Forced Displacement: A Gendered Analysis of the Tehri Dam Project," *Economic and Political Weekly* 47, no. 47/48 (2012): 96-102.

2- Michelle Hay, et al., 2019, *Ibid.*; WCD, *Dams and Development: A New Framework for Decision-making*, World Commission on Dams Report (November 16, 2000), https://archive.internationalrivers.org/sites/default/files/attached-files/world_commission_on_dams_final_report.pdf (Accessed: June 19, 2022).

3- WCD, 2000, *Ibid.*

4- Michelle Hay, et al., 2019, *Ibid.*; WCD, November 16, 2000, *Ibid.*

5- Michelle Hay, et al., 2019, *Ibid.*; WCD, November 16, 2000, *Ibid.*

6- *Ibid.*

7- *Ibid.*

beginning or such decisions are taken directly by the locals. This is essential in terms of creating opportunities that enable local communities to establish control over their own lives, living spaces, and livelihoods.²⁰

The reformist approach evaluates aforementioned risks in relation to displacements in a reductionist manner by treating each separately without building their links. However, the eight risks that are individually listed under the IRR model are related to each other: each of them interacts with the others, leading to new risks. For example, landlessness is a complicated and multidimensional problem that cannot be overcome by simply substituting a new land. When farmers lose their lands, they lose the ways of farming that they had been practicing for a long time, the potential to cultivate specific products depending on the type and fertility of the soil, and they are also devoid of traditionally used arrangements and practices such as renting/sharecropping.²¹

In the IRR model, an important role is attributed to international institutions such as the World Bank. It is assumed that in the development projects financed or implemented by international institutions, operating DIDR processes by following specific standards and rules is expected to eliminate risks. However, even though these standards and rules are introduced as compulsory elements, there are structural obstacles to actualizing them. First, on both international and national levels, there is a shortage of personnel with enough knowledge, experience, equipment, and understanding to actualize the implementations. In addition to lack of capacity, proposed standards and principles are situated in a general framework, and they are far from providing the specific conditions and needs of the local unless they are adapted to specific conditions. Furthermore, it is difficult to measure whether people's living standards are improved or not as a result of relocation programs even if standards are applied. Another obstacle is that, as it is the case in many other international agreements, internationally introduced standards on development induced displacements are nonbinding. In addition to insufficiencies in terms of international rules and organizational capacities for monitoring the lack of international structures with binding power prevents the effective implementation of the proposed standards.²²

In short, different approaches that analyze development-induced displacements propose different arguments regarding the causes and solutions of displacements. From the perspective of environmental justice that overlaps with the radical movement ap-

proach in many respects, various forms of development induced displacements resemble each other. Even though each case is unique to a certain extent depending on local dynamics, it is generally the socially and economic vulnerable groups that are affected the worst, and they face similar risks and problems amounting to a shared process of deprivation.

FUNDAMENTAL PROBLEMS AND RISKS OF DEVELOPMENT-INDUCED DISPLACEMENTS

Displacements resulting from mega development projects are multidimensional and multifarious; they also occur in various forms in time-space. First of all, the displacement of individuals and communities whose living spaces are on lands where such projects would be done is in question. Especially in the phases of preparation and construction of the projects, human communities are *physically* displaced. *Physical displacements* are described as local inhabitants physically transporting their lives and living areas from their current location to another location and processes which result in the loss of their housing spaces, production tools, livelihood sources, and access to their livelihood resources.²³

Within the framework of physical displacement, houses and lands of people are taken away through various procedures such as buying, expropriation, monetary compensation, and allocation of new houses or lands. We encounter three different types of displacements in terms of the points of arrival:

- Relocation/resettlement in cases where displaced people are relocated in new settlement areas created by project owner/executing companies or governments or allocated lands,
- Individuals/communities that are given monetary compensation settle in an area of their choice,
- Or, in the simplest sense, expulsion/evacuation/expropriation/land grabbing when displacement programs or compensation mechanisms are not executed.²⁴

The method of monetary compensation, used in development-induced displacement in different places and times, leads to several common problems and violations of rights that extent to the deepening of poverty. Foremost among these are determin-

ing the amount of monetary compensations for houses, lands, and other immovable properties at low levels; delays in paying the compensations, and the impossibility of providing new houses and lands with the given compensations due to the increasing prices of lands and houses in the relocation area.²⁵ Another significant problem is that the destruction of common areas, such as grasslands, forests, and water resources, and the restriction of access to such resources are not counted in as elements of compensation. On the other hand, due to displacements, people are also exposed to social and cultural problems such as loss of social capital and identity, psychological stress and risks. The monetary compensation method, which is a market-oriented mechanism, is unable to compensate such unquantifiable losses of individuals and communities. Meanwhile, compensations in the form of cash are most of the time used to provide for other basic needs due to the difficult conditions that individuals and communities are in; thus, displaced persons are unable to obtain new houses and lands with the compensation.

As for resettlements supported by the reformist approach and actualized in many development projects, they also carry several risks and problems, some of which are similar to the ones above and some of which are distinctive in themselves. Not creating new settlement areas that are large and sufficient enough for the displaced people; insufficiency of health, education, and other services; low quality of housing, and low living standards in settlement areas are among the series of problems that people are exposed to. As for allocating new lands, due to differences in soil fertility and quality, people cannot transfer their local knowledge and experiences that they have long cultivated, and they cannot continue the agricultural activities, relations, and techniques that they are used to. In the meantime, those who go out to find new lands with their own initiative face the problem of being unable to find sufficient and proper agricultural lands.²⁶

The majority of compensation and displacement programs are restricted in scope and implemented selectively. People who do not own lands or do not formally own the property rights of the lands they use, such as nomads, landless peasants, and indigenous communities, are excluded from these mechanisms. The losses and damages these groups suffer due to their houses and lands being taken away are not compensated. This shows that nearly all development projects involve some form of expulsion/evacuation/expropriation/land grabbing.²⁷

Apart from spreading to vast lands, mega development projects also extend to the regions that they are situated in and have multiplier effects; they cause biological, geological, and physical transformations/destructions that are irreversible in most cases. This indicates that nature is also displaced in the form of a) considerable amounts of rock and soil, b) hydrologic structures, c) natural habitats, d) plant and animal species, and e) livelihood opportunities.²⁸ This situation has devastating effects on individuals and human communities who live in areas surrounding development projects and whose livelihood depend on activities such as agriculture, forestry, and fishery. *Economic displacements* are described as the temporary or permanent decrease, interruption, or annihilation of local inhabitants' livelihood resources and activities as well as their tools, resources, and areas necessary for production.²⁹ Deforestation; soil, air, and water pollution; changes in the fertility and quality of soil; reduction of water sources, and many other ecological destructions caused by development projects result in local inhabitants living in the areas of development projects losing their livelihoods. In addition to economic displacements, these people's rights to live in a healthy environment, food security, and living standards are at risk. In the meantime, individuals and communities whose will to sustain their ways and sense of their own lives have been taken away might have to abandon their living spaces in time.³⁰ In other words, much as development projects cause *direct* physical displacements in the phases of preparation, construction, and expansion, they also cause *indirect* physical displacements that are spread to wider areas and over time. One of the possible outcomes of this is that, in the mid and long run, economic displacements cause physical displacements. However, although indirect displacements can constitute conditions for physical displacements, it is not an inevitable result. Inasmuch as when the external factors, such as deepened poverty, lack of opportunities for employment and housing in other places, and the availability of usable and accessible lands, are combined, the capacity of individuals and communities to establish life through migrating to somewhere else may decrease. Thus, the situation of "involuntary immobility," in other words, being trapped, may occur.

In the case of many displacement processes worldwide, detentions, use of violence, unlawful and illegal punishments, and political oppressions take place, and freedom of speech is usurped; thus, the civil and political rights of people who are displaced are violated.³¹ Furthermore, indigenous communities being local communities in the first place have emotional, cultural, and spiritual ties with the lands they have been living on

THE EXAMPLE OF MANWAN DAM¹

The massive Manwan Dam, located on the Mekong River in the Yunan State in China, started to be built in 1985 and was put into service in 1996, causing the displacement of 7260 people living in 114 villages. However, the number of people affected by the Manwan Dam is not limited to this. It is estimated that around 70 million people who lived in Myanmar, Taylan, Laos, Cambodia, and Vietnam, where the Manwan river passes through after China, whose primary nutritional source depended on fresh-water fishes and products and who sustained their drinking water and water usage from the low flowing water of the river, were economically displaced, although at different levels and to different extents. Nearly all the physically and economically displaced population was constituted by poor small farmers from 25 different ethnic minority groups doing subsistence farming and fishers living along the river. These groups, already poor and with low living conditions, encountered a multidimensional environmental injustice centered around losing their living spaces.

Only a small part of these poor and disadvantaged communities was included in the scope of the relocation program that was implemented to compensate for the losses of displaced people because of the dam. After all, according to the statements by the project executives, the number of people that would be displaced was kept to 3042 in the preparation phase of the dam project.

However, those who were allocated to houses in newly created settlement areas were exposed to displacements again due to low-quality houses that could not even provide their former living standards and were unstable with risk of landslides.

To the majority of people, the company did not directly provide houses or lands, instead, monetary compensations were paid, assuming that these people would find houses on their own or build them. However, these monetary compensations, determined via estimated prices for houses in very bad conditions, were so low that the displaced villagers could not find new houses or build new ones. In addition, because the majority of the villagers living in this region were not acknowledged as formal owners of their lands according to the land laws of China, the paid compensations were not determined through their properties; instead, they were determined according to the loss of income at that time. Not taking into account future loss of income, in addition to not calculating lost houses and lands, was another reason why the paid compensations were low. Losing access to forests and other commons, through which the villagers were sustaining part of their livelihoods, was also not counted among the losses that would be compensated.

1- IDMC, *China: Lessons Learned from the Manwan Dam*, Case Study Series (April 11, 2017), <https://www.internal-displacement.org/sites/default/files/inline-files/20170411-idmc-china-dam-case-study.pdf> (Accessed: June 19, 2022).

for centuries. Displacements cause these ties to be severed. In short, development-induced displacements also mean that the right to maintain identities and cultural existences are also overridden.³²

One of the main causes of rights violations in relation to development project is that companies and governments externalize social and ecological costs of these projects. While the costs of lost houses and lands, which are economically quantified, are kept at low levels, a series of social and ecological costs that are problematic to quantify in terms of the market mechanism criteria, such as severance of social ties, the

loss of spatial belonging, and threats to biological diversity, are excluded. In addition, governments present development projects as symbols of national development and power. States and governments, who play the role of “actors” as the executive/facilitator of the processes and “judges” as the implementer of the law, mostly introduce the loss of displaced people and ecological destructions as hardships/costs that are necessary to bear in the framework of “national benefits” that they also determine.³³ The processes of displacements consist of multiple actors and conflicts. The primary conflict is between project owner/executive governments, companies, and financial institutions and local communities who are at risk of losing their living spaces and resist this risk through local movements. Besides, inequalities in the distribution of power between local actors are also reflected in such processes. Some communities and individuals might gain advantages and ensure particular profits, demands, and needs for the groups/individuals that they belong to via establishing favoritism, patronage, and corrupt relations with the ones who hold power, such as project operators and owner companies, central governments, local governments, and leaders of villages/communities. For example, during the expansion operation of the Theun-Hinboun Dam, located on Nam Gnouang River in Borikhamxay Region in Laos starting in 2011, inhabitants of four villages were displaced and relocated to another region. Phonkeo and Sensi, whose livelihood activities and preferences are different than the other villages and who are more dependent on the Nam Gnouang River, were able to choose the location of the new settlement area according to their own needs and preferences through their political ties and close relationships with the local administrators and political parties.³⁴

TYPES OF DEVELOPMENT-INDUCED DISPLACEMENT

Development projects, especially dams, mines and transportation projects, are rapidly increasing worldwide—mainly in the Global South. These projects, aimed at providing energy, irrigation and raw material, cause several ecological problems. Meanwhile, they displace millions of people both physically and economically/in an indirect way. Although these development projects exhibit common attributes in terms of displacements they cause, they also have differences considering how they operate and the effects they create on local communities. For these reasons, to better understand displacements and environmental injustices resulting from dam, mining and transportation projects, it is essential to investigate their distinctive dynamics and similarities:

**TABLE 1:
SOCIAL AND ECOLOGICAL IMPACTS OF MEGA DEVELOPMENT PROJECTS¹**

| | PRIMARY/DIRECT | SECONDARY/INDIRECT |
|--|--|--|
| Ecological effects | <ul style="list-style-type: none"> - Submergence of vast areas, - Changes in a waterbeds or water courses and other hydrological changes, - (In mining projects,) topographic changes such as soil being dug, stream beds or hills, which emerge due to accumulation of waste rock or soil, being filled (with waste), - Decrease/exhaustion of specific minerals, - Deforestation, - Disruption of habitat, - Emergence of obstacles that block the mobility of migrating species. | <ul style="list-style-type: none"> - Landslides, floods, and earthquakes (due to dams and mines), - Decrease in water quality, - Deterioration of aquifers,² excessive usage of overground and underground waters, decrease in the available water due to retention of waters (in dams), - Salinization of soil, - Soil, water, and air pollution due to accidents and routine activities in mega projects, - Extinction of wildlife, animal, and plant species, - Reproduction of insects, viruses, microbes, and bacteria due to ecological changes and consequent emergent diseases, - Extinction of fish species and decrease in fish populations and migrating bird species, - Changes in soil qualities and usage, - Imperilment or extinction of fauna and flora species. |
| Social, economic, and psychological effects | <ul style="list-style-type: none"> - Psychological problems such as stress and future anxiety, - (Planned) displacements and evacuations, - (Planned) resettlements/ relocations, - Loss of livelihood, - Housing problems, - Loss of production tools (foremost agricultural lands), - Interruptions in routine economic and social activities, - Low living standards that people who migrated for jobs in project constructions are exposed to. | <ul style="list-style-type: none"> - Loss of livelihood, impoverishment due to decreases in incomes, - Multidimensional poverty due to restrictive access to education and health, - Destruction, reduction, and extinction of common areas and resources, - Reduction or prevention of access to common areas or resources, - Emergent unemployment (among local inhabitants and incoming migrants) after the project constructions are completed, - Psychosocial stress and other disorders, - Emergent diseases due to pollution, - Loss of lives, injuries, and health problems due to accidents, - Inability to maintain socio-cultural existence, - Social and economic structural changes in cities, - Soil erosion due to using unsustainable agricultural techniques in newly-inhabited lands. |

1- Paul K. Gellert, P. K. and Barbara D., D. Lynch, "(2003). Megaprojects as Displacements, ". International Social Science Journal 175(March 2003)(Mart): 15-25.

2- Aquifers are permeable and impermeable geologic formations which collect and evacuate underground waters.

Dam-induced displacements

Large hydroelectrical power plants are among the development projects which cause displacement of large numbers of people in a mass.³⁵ Although dams, which have been presented as symbols of “development” and “progress” for a very long time are a technology used for various reasons since time immemorial, the building of large hydroelectrical power plants, whose primary purpose is to produce energy, and watering large areas gained pace in the 20th century. While the number of large dams worldwide in 1900 was 600, this number increased to 5000 in 1950 and 45,000 in 2000.³⁶ It is estimated that there are 58,000 large dams worldwide as of 2020.³⁷

First and foremost, dams cause displacement of inhabitants who live on submerged lands by taking away their houses and lands. Although the exact numbers of how many people affected are unknown, it is estimated that many people worldwide are directly displaced due to dams. According to the report published by the Internal Displacement Monitoring Center (IDMC), the number of displaced people due to large dams worldwide is around 80 million.³⁸ According to the official data, in China, which is among the countries that has the highest number of large dams, 10.2 million people were displaced between 1950 and 1990 due to large dams; in India, an estimate of 16 to 38 million people are displaced due to large dams.³⁹ On the other hand, when we consider that in most large dam projects, the number of people who would be displaced is way higher than the estimated numbers at the beginning of the projects, and the numbers reflected in official data are inaccurate and misleading, it can be said that the number of displaced people due to dams are much higher than the official numbers.⁴⁰ Although relocation programs are generally implemented, these programs are deficient, narrow-scoped, and insufficient; and it is recorded that in most of these projects, international standards are not implemented.⁴¹ The existing research shows that nearly all of the adverse social and economic effects, aforementioned in the previous chapter, are observed in dam-induced displacements. The primary effects are displaced people moving to houses that are poorly built, unsafe, and in poor condition; inadequacy of jobs and livelihood resources; inability to access education and health services; restricted access to soil and water resources; disruptions in social relations; decreases in social capital; emergent health and psychological problems; communities’ inability to maintain their identities and cultural existences.⁴²

On the other hand, in addition to direct physical displacements due to dams, many individuals and communities are economically displaced in the larger areas around dams and along riverbeds. According to an estimation, around dams—especially in areas where the river flow is lower and in the downstream areas where the ecosystem is destructed—the number of economic and cultural displaced people reaches six to twelve times higher than the directly displaced ones; this number was calculated as 472 million at the end of 2010.⁴³ This is due to the ecological effects caused by dams in the larger areas where they are located. Therefore, those whose livelihoods depend on ecosystem services based on forest and river products and agriculture lose their livelihoods due to deforestation, decreases in water availability, and the destruction of biological diversity. Looking at the ecological effects of dams in more detail helps us to understand the level and extent of such economic displacements.

In general, proponents of the developmentalist approach defend hydroelectric power plants by emphasizing the benefits that are expected to be received. One of the propounded benefits—as in nearly half of the large dams—is using dams for irrigation. As a result, large dams have become vital in agricultural production and maintaining the food chain at the global level. Dams are also given an essential role in fighting against the climate crisis. The total amount of electricity produced by hydroelectric power plants, considered renewable energy that can replace fossil fuel, constitutes 17% of the total energy produced in the world. Since 2020, 63% of the energy produced from renewable energies is provided by hydroelectric power plants. It is predicted that the existent hydroelectric power will increase by 17% between 2012 and 2030 worldwide.⁴⁴

There are also claims related to hydroelectric power plants that they involve many other benefits such as controlling floods; providing water for cities; providing transportation in terrestrial regions, and creating employment.⁴⁵ However, hydroelectric power plants have many adverse and destructive effects on nature and ecological balance. First, hydroelectric power plant dams destroy rivers and ecosystems around them immensely. As a result of decreased water levels in rivers due to water being kept in dams and decreases in sediments carried by water, the food sources of fish species drastically decrease; their migratory routes are blocked and/or changed. Both dam lakes, connection routes, and other structures cause massive damage to ecosystems in the areas where they are situated and the surrounding biological diversity leading even to deforestation and ecosystem disruption.⁴⁶

TABLE 2: EXAMPLES OF DAM-INDUCED DISPLACEMENT

| Hydroelectric Power Plant Dam ¹ | Kariba Dam ³ Rhodesia-Africa | Akosombo Dam ⁴ Ghana | Sobradinho Dam ⁵ Brazil | Tucuruí Dam ⁶ Brazil | Pak Mun Dam ⁷ Thailand | Sardar Sarovar Dam ⁸ India | Three Gorges Dam ⁹ China | Manwan Dam ¹⁰ China | Inga 3 Dam ¹¹ Democratic Republic of Congo | Ilisu Dam ¹² Turkey |
|--|---|--|---|--|--|--|---|---|--|--|
| DATE² | 1956-59 | 1961-1965 | 1973-79 | 1975-1985 | 1991-1994 | 1987-2017 | 1994-2003 | 1985-1996 | In the making | 2006-2018 |
| NUMBER OF DISPLACED PEOPLE | 57,000 people | 78,000 to 80,000 people | 70,000 people | 25,000 to 35,000 people (plus indigenous communities who are not reflected in official numbers.) | 1700 families | According to official numbers, 46,507 families; according to Narmada Bachao Andolan (NBA), an umbrella organization of indigenous communities against the dam, 85,000 families (around 500,000 people) | More than 1.2 million people | 7260 people living in 114 villages | 10,000 people | 78,000 people (including 23,000 people who left the region due to the conflicts but still owned houses and lands in the area.) |
| PROFILE OF DISPLACED PEOPLE | Poor farmers and indigenous communities living in 199 villages. | Mostly small-scale farmers engaged in subsistence farming and fewer numbers of communities working in fishery, living in 740-756 villages from nine different ethnicities. | Small farmers and landless peasants maintaining their lives with subsistence farming. | Small farmers, fishing communities, pastoralists, and people engaged in agricultural activities in the riverside lands. | People engaged in agricultural activities (rice) and fishery in the rural area. | The indigenous communities of Adivasi (nearly half of the displaced population), small farmers, landless peasants, and communities living on the riverside. | Mostly poor peasants who were living in 13 cities, 140 towns, and 1350 villages that were submerged. | Poor small farmers and fisherpeople living along the riverside from 25 different ethnic minorities. | The indigenous communities of Basangela, who maintain their livelihoods with agriculture and forestry in the Bundi Valley, which will be submerged by the dam lake, people who were already displaced by the Inga 1 and Inga 2 dams, and other small farmers. | Peasants with small lands or no land, living in severe poverty and low levels of education and standards; different ethnic and religious groups, mostly Kurds, fewer Arabs, and Yezidis; and around 20 to 25,000 nomads who were using Tigris River. |
| OTHER AFFECTED GROUPS/ COMMUNITIES | | | 50,000 people, constituted by small farmers and river communities living in the lower regions of the river. | 100,000 people (farmers, fishing communities, and communities living on the riversides who lost their livelihoods due to water pollution and deterioration, decreases in fish population, and destruction of agricultural lands in the river basin). | 6000 farmer and fishing community families whose livelihood resources were disrupted or annihilated. | Millions of people, mostly from indigenous communities living at the downstream of the dam; the indigenous communities of Dalit and Adivasi, farmers, and fishermen who were living in Madhya Pradesh and Maharashtra and whose houses and lands were submerged by floods because the height of the dam is higher than it was planned. | Millions of fisherpeople in China and in neighboring countries which share their river resources with China, whose livelihoods were damaged, and farmers whose water resources were adversely affected. | It is estimated that 70 million people, who were living in Myanmar, Thailand, Laos, Cambodia, and Vietnam, whose primary food resources were freshwater fishes and products, and who were obtaining their fresh water from the low-flow parts of the river were economically displaced. | It is estimated that 75,786 people around the dam and 144,945 people living in the downstream regions were exposed to several adverse effects such as losing livelihoods; multidimensional impoverishment; living in an environment which lacks health conditions; lack of access to clean and healthy food and water, and being unable to benefit from educational opportunities. It is predicted that the lives of another 211,920-333,424 people living in the broader region where transmission lines pass will be adversely affected. | Around 15 to 20,000 landless peasants are not given compensations; to eliminate these people's loss, they are only offered unspecified occupational training in exchange for a loan with a low-interest rate. |

1- The dates given in this section refer to estimated date ranges of displacements, starting from right before the constructions of the dams until the constructions are finished.
2- Dates refer to the beginning and end of the constructions during which displacements took place as well.
3- WCD, November 16, 2000, Ibid.; IDMC, April 11, 2017a, Ibid.

4- Ibid.
5- Ibid.
6- Ibid.
7- Ibid.
8- Gaurav Sikka, "Moving beyond economic analysis: Assessing the socio-cultural impacts of displacement and resettlement by Sardar Sarovar Project, India," *Geography, Environment, Sustainability* 13, no. 3 (2020): 90-101. <https://doi.org/10.24057/2071->

9388-2019-165 ; LSE Blog, *The Sardar Sarovar Dam: Drowning out citizens but who benefits?* (February 13, 2017), <https://blogs.lse.ac.uk/southasia/2017/02/13/the-sardar-sarovar-dam-drowning-out-citizens-but-who-benefits/> (Accessed: June 19, 2022).
9- Li Heming, et al., "Reservoir resettlement in China: past experience and the Three Gorges Dam," *The Geographical Journal* 167, no. 3 (2001): 195-212. doi:10.1111/1475-4959.00108

10- IDMC, April 11, 2017b, Ibid.
11- TMP Systems (n.d.), *INGA 3: Too High a Cost: A Study of the Socio-Economic Costs of the Inga 3 Dam for South Africa*, International Rivers and WoMin African Alliance Report, <https://3waryu2g9363hd-viiici668p-wpengine.netdna-ssl.com/wp-content/uploads/sites/86/2021/08/TPM-INGA-3-report-2021.pdf> (Accessed: August 2, 2022).
12- Doğa Derneği, *Ilisu Barajı ÇED Raporunun*

Değerlendirmesi (February 2006), <https://www.dogadernegi.org/wp-content/uploads/2015/09/Do%C4%9Fa-Derne%C4%9Fi-De%C4%9Ferlendirme-Raporu.pdf> (Accessed: June 19, 2022); Hasankyef Koordinasyonu, *Ilisu Barajı ve Hidroelektrik Santral Projesi Eleştirisi Raporu* (August 2019), <https://www.hasankyefgirisimi.net/turkce-ili-su-barajı-ve-hidroelektrik-santral-projesi-eles-tiri-raporu/?lang=tr#sdfnote8bsym> (Accessed:

June 19, 2022); DSİ, *Ilisu Baraj ve HES Projesi Güncellenmiş Yeniden Yerleşim Eylem Planı Değişiklikleri (GYEPE)* (2006), <https://docplayer.biz.tr/5482224-Ilisu-konsorsiyumu-ili-su-baraj-ve-hes-projesi-guncellenmis-yeniden-yerlesim-eylem-planı-degisiklikleri-gyep.html> (Accessed: June 19, 2022).

Dams also cause loss of fresh water availability. It is estimated that seven percent of the fresh water worldwide is lost because of dam evaporation. In addition, intensive algae formation and heavy metal accumulation in waters result in pollution and acidification of waters.⁴⁷ Algae being carried to oceans and seas via blending in river systems leads to acidification of sea waters which is both a result and cause of climate change.

As opposed to the contentions, hydroelectric power plants do not contribute to stopping climate change; on the contrary, they produce effects that result in continuing climate change. Primarily, they result in the submergence of green areas in the regions where they are built and decreases in natural carbon sinks. In addition, they lead to the emergence of greenhouse gasses, especially coal gas, the most begrimé among all, due to the rotting of plant species submerged due to dams. It is calculated that the total amount of greenhouse gasses blended into the atmosphere per year due to dams is around 1 billion tons.⁴⁸

People who lose their livelihoods and commons as a result of all these ecological destructions can be grouped into four:⁴⁹

- The ones who maintain their lives in the regions around dams,
- The ones who come to these regions to work in the construction of dams and the communities who are house owners,
- Communities who live in the downstream areas,
- The ones who do business with the production of the region.

Large dam projects are among the development projects in which the recognition dimension of environmental justice is violated the most. In most cases, people who do not own lands in the areas of dam projects; indigenous communities; people who live in the areas below dams, and people who would be devoid of livelihood and living areas are not counted among displaced people; thus, they are not included in the processes of relocations and compensations. Among other groups, especially people without lands and those who maintain their livelihoods by doing agricultural works and depending on commons such as forests and rivers, experience recognitional injustice due to the construction of large dams. There is also the added burden of participatory injustice. Decision-making processes related to displacements are mostly carried out Malpractices such as not organizing decision-making meetings open to all, not maintaining condi-

tions for effective participation in meetings, or organizing meetings only for one-sided informative purposes where deliberation is not possible. On the other hand, there are many problems regarding recognition since people and groups who are not acknowledged among the ones that would be displaced are not given the opportunity to participate in decision-making processes.

There are several examples worldwide in which thousands of people are displaced and exposed to environmental injustice due to hydroelectric power plants.⁵⁰ Some of these examples are listed on page 92-93.

Mining-induced displacements

Mining is one of the leading sectors which cause displacements worldwide. There is no precise information available related to how many people the mining sector, which provides the raw material for the ever-growing production activities and which constitutes the foundation of the growth economy, displaced worldwide. Yet, it is possible to come across an estimated total number of displaced people due to mining in different countries. For example, in India, between 1950 and 1990, it is estimated that around 2 million 550,000 people were displaced.⁵¹ On the other hand, data on a national scale are insufficient because displacements due to the mining sector occur in multiple stages, and the national-level records are not kept accurately. Since two-thirds of the mines worldwide are operated as open pits, and this ratio keeps increasing daily, we can assume that the number of direct and indirect displacements due to mining is ever-growing. Open-pit mines which spread to more expansive lands cause a transformation which irreversibly destructs essential elements of the ecosystem, from soil quality to overground biogeological entities. This results in a gradual increase in ecological destruction and a multiplying number of people and communities displaced due to the mining sector.

When we look at the geographical distribution around the world, mining-induced displacements are predominantly concentrated in Latin America, Asia, and Africa. The countries where land ownership relations are unequal and insecure, violations of human rights are common, and anti-democratic structures and relations are dominant are the base for mining sector activities, which are built upon displacements. In these countries, mines are opened and operated in the living spaces of people who experience

MINING-INDUCED DISPLACEMENTS IN EUROPE

Mining-induced displacements in Europe, which had frequently occurred in history, have been gradually decreasing in number and size. However, there have still been a number of recent mining-induced displacements in European countries such as Germany, Poland, Romania, and Serbia. It is observed that there are relatively fewer violations of rights during displacements and relocation processes in Europe as a result of higher standards and lesser deficiencies and malfunctions in the operations.¹ However, just as in many other examples elsewhere, it is also discerned that people had to abandon their living spaces, and various rights, such as living in a healthy environment and protecting cultural existence, were violated. For example, in Germany, where coal mining continues in spite of significant investments in the renewable energy field, several historic villages have been destroyed or face the risk of destruction that puts these communities cultural existence into danger.² It is estimated that in Germany, by the end of the 2000s, nearly 300 local communities and around 100,000 people were displaced due to activities of excavating mining.³ Since the mid-1950s, around 40,000 people have been displaced, losing their houses and lands in Rhineland, the coal region of Germany. As a result of the expansion of Garzweiler

Mine near Cologne, which so far caused a massive amount of agricultural lands to be annihilated and villages to be evacuated and transferred elsewhere, 1200 thousand inhabitants living in Immerath Village were evacuated and a church built in the 12th century was demolished in 2018.⁴ Displacement of six villages located around the area is on the agenda due to the expansion activities of the Garzweiler Mine.⁵

1- Bogumil Terminski, 2012, *Ibid.*

2- CBC Radio, *German Coal Mine Expansion Threatens to Displace Villagers, Even as Country Charts Green Energy Future* (September 23, 2019), <https://www.cbc.ca/radio/thecurrent/the-current-for-september-23-2019-1.5293685/german-coal-mine-expansion-threatens-to-displace-villagers-even-as-country-charts-green-energy-future-1.5291570> (Accessed: June 19, 2022); *Deutsche Welle*, "Unused church torn down in Germany to make way for open-pit coal mine" (January 1, 2018), <https://www.dw.com/en/unused-church-torn-down-in-germany-to-make-way-for-open-pit-coal-mine/a-42089253> (Accessed: June 19, 2022).

3- Jeffrey H. Michel, *Status and Impacts of the German Lignite Industry* (The Swedish NGO Secretariat on Acid Rain, 2008), <https://www.airclim.org/sites/default/files/documents/APC18SE.pdf> (Accessed: June 19, 2022).

4- Stine Krøijer and Mike Kollöffel, "Undermining life: A German coal-mining region [focus]. *Terrain* (2019). doi:10.4000/terrain.18146

5- Loveday Morris, "Germany portrays itself as a climate leader. But it's still razing villages for coal mines." (*The Washington Post*, September 23, 2018), <https://www.washingtonpost.com/world/2021/10/23/germany-coal-climate-cop26/> (Accessed: June 19, 2022).

different injustices and inequalities, who are poor, and whose political rights and powers to defend their lives are restricted. On the other hand, although the rules, standards, and laws implemented in the Global North, such as in Europe, where mining-induced displacements were historically common, relatively reduce the effects of mining-induced displacements, they occur nonetheless.⁵²

As in all other mega projects such as dams and transportation infrastructure, the mining sector also dispossesses local inhabitants of their houses, lands, and thus livelihoods in different ways in the regions where they operate. The process of providing lands that would be used as mining sites, as in many other types of mega projects, results in injustices. Malpractices that push displaced people to poverty, such as giving

insufficient amounts and late payments of compensations to the displaced people; being kept exempt from any compensation programs and mechanisms unless ownership of land is proven officially; lack of compensation or any other similar mechanisms for losses; lack of or poor implementation of relocation programs; and absence of substituting mechanisms/programs for loss of livelihood are common in areas where mining projects are taking place. However, mining projects, which cause both direct and indirect displacements in the regions where they are located have some specific features in comparison to other development projects. These differences stem from distinct characteristics of the mining sector with respect to its planning, construction, and operating/production phases. The distinctive characteristics of mining-induced displacements can be summarized as:

Longitudinally gradual displacements: Unlike other development projects, displacements in the mining sector take place in phases spread over time. The primary reason is that planning and implementation phases of a mining project function quite dynamically, and there are constant changes during planning. This situation is explained by price fluctuations and sudden changes in various markets—especially in mining and real estate markets—; expectations of the company shareholders; project finances; obligations to change planning and activities according to the changes in the binding legislation and standards, and expanding the extent of the project.⁵³ This results in constant changes in displacement and relocation plans and causes them to be implemented in a flexible manner; at the same time, it corresponds to companies and governments' purpose of obtaining the required sizes of lands with the lowest cost. As a result, the announced numbers of land purchases and displacements in the first phase of mining projects are exceeded in the following phases, from exploration, project designing, and construction to operating, thus, culminating in gradual increases in displacements.⁵⁴

Spatially spreading displacements: The general strategy in mining is to expand mine sites gradually. According to Stepwise-Mining-Expansion-and-Land-Take (SMELT), a widespread mining sector strategy, settlements around mining sites are not included in Displacement and Relocation programs. Living standards of local communities who are exposed to air, water, soil, and noise pollution deteriorate; opportunities for them to maintain their livelihoods decrease. With this situation, negatively reflecting land prices, mining companies add such lands to their sites in the later phases with lower costs. It is a frequent situation that a part of a local community exposed to the *brownfield effect*,

meaning ecological destruction and pollution in a region due to development projects, “willingly” sells their lands at low prices and abandons the region.⁵⁵ Apart from this, trying to maintain production due to the exhaustion of the ore in the operated mine brings constant spatial expansion and more people being displaced together.

Resettlement in nearby regions: Different than other development projects, in the mining sector, the “cohabitation” model is frequently employed in relocation plans and programs, and most of the displaced people are resettled in places near mining sites. This strategy aims to prevent any potential conflicts and disputes by enabling the local community who doesn’t want to abandon their living areas to remain in proximity to their place of origin, the general view asserted by the international standards indicates that displacements should be reduced to the minimum and used as a last resort. In cases when displacements become a necessity, local communities should not be broken off from their living areas to the extent possible. Mining companies that implement these standards—though mostly on paper—to prevent potential legal and political disputes and make a positive impression on public opinion, argue that they actualize the suggested principles with the “cohabitation” model. Also, finding new lands and providing opportunities for housing and livelihood within the relocation framework are complicated and challenging processes. Companies’ desire to lower the costs of land obtaining, relocation, and reducing effects is also among the reasons why they apply the “cohabitation” model.⁵⁶

Confusion over allocation of responsibilities: In comparison to other development projects, project owner and executive mining companies usually take over the responsibility of preparing, implementing, and managing displacement and relocation processes in mining projects. They are in charge of planning and creating relocation areas for displaced people; providing their social security; creating livelihood prospects, and securing the suitable living standards. However, companies often fail to meet these responsibilities fully; in some cases, they don’t meet them at all.⁵⁷

Mining operations cause a series of ecological problems, most of which are irreversible in the regions and surrounding areas where they are carried out, such as deforestation; changes in soil usage and quality; disruption of habitat; damage to biological diversity, and air, water, and soil pollution. Although many of these ecological problems are also caused by other development projects, effects and extent of risks differ due to

activities that are specific to mining. Thus, the lives and livelihoods of the inhabitants still living in the region are affected directly. The main ecological problems and destructions induced by mining can be summarized as:

- Underground mining leads to ecological destruction that can cause disruptions in the ecosystem, such as decrease and pollution in underground waters and damage to forests and habitats of living species. On the other hand, open pits, which constitute two-thirds of the mines worldwide, lead to ecological problems such as changes in soil quality and land use, deforestation, and pollution in water availability in wider regions beyond the mining areas. It is estimated that amount of rocks, soil, and other wastes taken out from the excavated areas in open-pit mining is 8 to 10 times higher than in underground mining. In the places where these wastes are dumped, waste rubble mounds that reach the height of a nearly 30-story building are formed. When they are dumped into riverbeds, they create changes in the hydrologic system. Thus, open-pit mines lead to extensive geological and physical transformations which directly affect ecological life.⁵⁸

- Materials such as aluminum, nickel, and copper are released when melting and separating excavated ore at high temperatures in smelters (separating metal substances from ore at high temperatures). Various gasses emitted during these operations cause environmental problems such as *air pollution* and *acid rain*, which directly affect human health. As a result of smelter processes, around 142 million tons of sulfur dioxide per year (13% of the total global oscillation) enter the atmosphere worldwide. Also, a considerable amount of other heavy materials that are harmful to human health such as lead, arsenic, cadmium, and zinc are emitted.

- Mining directly causes decrease in water availability. Massive amounts of soil and rocks that are piled up block water routes, and it prevents the feeding of underground waters. At the same time, large amounts of overground water resources and rivers are used for mining activities. This leads to a constant decrease in water availability affecting wide areas.

- Mining accidents: Valuable metals and minerals are separated from excavated ores through chemical processing. Remaining wastes involve poisonous materials and heavy metals that threaten living beings' health, and they are stored in tailings

EXAMPLES OF MINING ACCIDENTS AND DISPLACEMENTS

→ In 1998, a truck carrying cyanide in Kumtor Gold Mine in Kyrgyzstan tipped over; around one ton of cyanide got mixed into the river, which was used by 6500 people in Barskoon village near the mine, for drinking water and irrigation. 5000 people got poisoned because of cyanide spill and lives were lost. After the accident, half of the village was evacuated. The villagers, who returned to their village shortly, started having difficulties in selling their agricultural products as people did not want to purchase contaminated products. Although more than 20 years have passed, the villagers have not been compensated for their losses yet.

→ The tailings impoundment of Omai Mine, one of the biggest gold mines in the world, located in Guyana, collapsed in 1995. As a result, the wastewater containing three billion cubic meters of cyanide got mixed with the Omai River, one of the tributaries of the biggest river of Guyana, Essequibo. A 51-kilometer area around the river inhabited by 23,000 peasants, who used the river as a water resource and maintained their livelihoods depending on agriculture and fishery, was declared an "Environmental Disaster Area".

→ The accident in Baia Mare Mine, located in northwestern Romania, which is considered the "Second Chernobyl," happened in 2000. As a result of the tailings impoundment of the mine collapsing, the water waste containing 100,000 cubic meters of cyanide and heavy metals spilled into the Tisza River; from there, it reached the Danube River. While the fish population completely died in certain parts, the drinking water of millions of people got contaminated.

→ Ok Tedi, the biggest copper mine in the world, also producing gold and silver, located in Papua New Guinea, caused one of the world's longest and biggest environmental disasters. Ok Tedi, which started to operate in 1984, resulted in displacements of nearly 4000 poor peasants and individuals from the indigenous community as a result of the expropriation taking place during the expansion of the mining site and the ecological destruction created by the mining activities. The tailings impoundment collapsed the year that the mine opened; between 1984–2013, the mining wastes were regularly dumped into the Ok Tedi/ Fly River system directly. It is estimated that each year, nearly 30 million tons of mining waste containing crushed rocks and heavy metals got mixed with the river waters in the region. Although some precautions were taken later, it is expected that

the effects of the emergent ecological and social destruction will last for decades. In addition to soil, water, and air pollution, with the disruption of the rivers and the surrounding ecosystem, 30,000 people lost their livelihoods and faced severe health problems.

→ Due to the gold mines in the Tarkwa Region of Ghana, around 30,000 people were displaced between 1990 and 1998, and the social, economic, and cultural existence of 14 indigenous communities, mostly poor small farmers, came to an end in the region. Nearly half of the displaced population was excluded from the relocation program; no plan or program for new livelihood resources and social rehabilitation was introduced. The majority of the displaced people, mainly the youth, migrated to the nearby cities. Many of them couldn't find housing because of increases in rents and inadequate housing stock. These people, with low education levels, no skills, and no savings, were thus pushed to unemployment, low living standards, and deep poverty. Most of the forests—Bonsa, Ekumfi, and Neung—and agricultural lands in the Tarkwa Region were and will continue to be destructed by gold mines. Additionally, gold mines create further ecological destruction and threaten the local inhabitants' health and livelihood by exploiting underground waters and causing cyanide spill accidents in the region.

1- Bruce Pannier, *Even Two Decades after Massive Cyanide Spill, Kyrgyz Poisoning Victims Get Scant Compensation*, (RadioFreeEurope RadioLiberty, August 22, 2020), <https://www.rferl.org/a/qishloq-ovozi-kumtor-cyanide-spill-compensation-gold-mining/30797137.html> (Accessed: June 19, 2022).

2- Oxfam America, 2004, *Ibid*.

3- Greenpeace, "The Baia Mare Gold Mine cyanide spill: Causes, impacts and liability," *Greenpeace Information Note* (April 12, 2000), <https://reliefweb.int/report/hungary/baia-mare-gold-mine-cyanide-spill-causes-impacts-and-liability> (Accessed: June 19, 2022).

4- WWF (n.d.), "Belching out copper, gold and waste," *WWF Information Note*, https://www.panda.org/discover/knowledge_hub/where_we_work/new_guinea_forests/problems_forests_new_guinea/mining_new_guinea/ok_tedi_forest_new_guinea/#2 (Accessed: June 19, 2022); WRI (n.d.), *OK TEDI Mine: Unearthly Controversy*, http://pdf.wri.org/wr2002_case_oktedi_papua.pdf (Accessed: June 19, 2022).

5- Thomas Akabzaa and Abdulai Darimani, *Impact of mining sector investment in Ghana: A study of the Tarkwa Mining Region* (SAPRI, January 20, 2001), https://transparencylab.org/Documentation/Additional%20resources/Additional%20documents/Impact%20of%20mining%20investment%20in%20Ghana_2001.pdf (Accessed: June 19, 2022); <https://wri-iri.org/en/story/2008/africa-conflicts-and-mining-induced-displacement> (Accessed: August 2, 2022).

ponds located in mining sites. With floods, leaks, and downfalls hazardous chemicals and heavy metals in tailings ponds, especially at gold, copper, and lead mines, are released, polluting soil, water, and air across a wide landscape and threaten the lives of all species in these areas. Additionally, accidents during transportation of toxic materials used in mines pose high level of risks since large amounts of hazardous materials might spill.

Social and ecological destruction created by the mining sector causes both direct and indirect displacements of local communities. One of the primary outcomes of the mining sector is called “new poverty,” of which “mining induced landlessness” is an integral part. There are four types of mining-induced mining induced landlessness:⁵⁹

- Individuals and communities become landless as their lands are included in mining sites,
- Fertility decrease in the vacant and surrounding mines.
- Fertility decrease in the use of lands around mines due to ecological destruction,
- Loss of access to common lands by landless peasants and other groups.

Through dispossession induced by mining, the poor, peasants, indigenous communities, women, and other disadvantaged groups lose both their commons and their own houses, and their rights housing and livelihood are violated. Additionally, their familial and community relationships deteriorate while their cultural and social existences, in other words their right to culture, is threatened.⁶⁰ Moreover, as a result of the “cohabitation” model employed in the mining sector, not only the people who continue to live in the region without being displaced but the displaced communities who are relocated to places near the mining sites are exposed to health risks as well as a series of problems (such as deterioration of ecosystem, air pollution, pollution and decrease in water, and noise pollution, and loss of livelihood). Consequently, people relocated around mines are unable to maintain their livelihoods, including agriculture and fishery. Another life safety risk emerges when the roads built for mining activities are collectively used for both mining activities and transportation for the local inhabitants.⁶¹ Furthermore, the mining sector causes households to lose their houses and lands more than once. These “multiple displacements” occur when relocation areas formed after displacements are included in the areas of expanded mining sites.

TABLE 3: EXAMPLES OF MINING-INDUCED DISPLACEMENTS

| PROJECT | Roşia Montană Gold Mine ¹ Romania | Ahafo Gold Mine ² Ghana | Yanacocha Gold Mine ³ Peru | Phulbari Coal Mine ⁴ Bangladesh | Grasberg Copper and Gold Mine ⁵ Indonesia | Toromocho Copper, Silver and Molybdenum Mine ⁶ Peru |
|------------------------------------|--|---|---|--|---|--|
| DATE | 2002-2012 | Started production in 2006 | Active since 1993 | The project, which was proposed in 2005, was stopped in 2020 | Active since 1972 | Active since 2013, expanded in 2020 |
| THE NUMBER OF DISPLACED PEOPLE | 1200 | 5185 | | According to Global Coal Management (GMC), who was running the mine, 49,487; According to the expert committee appointed by the Bangladeshi government, 130,000. | 4000 | 5000 |
| THE NUMBER OF AFFECTED PEOPLE | 3290 | 4390 | 1.3 million | It is expected that the number of displaced people will increase to 220,000 as a result of decreases in water availability due to the mine and expansion of the mine. | The livelihoods of the local inhabitants of the East Kalimantan Region were damaged. | |
| THE PROFILE OF THE AFFECTED PEOPLE | The inhabitants of Roşia Montană village, where 80% of the population is poor, and unemployment is high. | Ten communities mainly constituted by small farmers living off agriculture. | The rural peasant population living in one of the poorest regions of Peru, most of whom live off agriculture and husbandry. | 50,000 indigenous peoples and poor peasants living off subsistence farming from a total of 23 tribes. | Amungme indigenous communities | Small farmers, small shop owners |
| SOCIAL AND ECOLOGICAL PROBLEMS | <ul style="list-style-type: none"> -Not considering the cultural, archeologic, and architectural dimensions, -Insufficient information and lack of transparency, -Insufficiency of plans and works related to recreating livelihoods and preventing impoverishment, -Insufficient and small lands in inhabitation areas that are created in the framework of relocation compared to the original location, -Not compensating the losses that resulted from blocking access to common areas that are open to collective usage, -The risks and health problems caused by soil, air, and water pollution resulting from tailings impoundments filled with cyanide and heavy metals and the transformation of cyanide. | <ul style="list-style-type: none"> -Not giving compensations for lands used for agricultural production, -Death of fish, pollution of drinking water and watering resources due to the mining accident in 2009 when cyanide got mixed with waters, -Human rights violations against people opposed to the mine, such as violence and detentions. | <ul style="list-style-type: none"> -Oppression and violence against the local movement carried out by the local community and NGOs, in the form of violence, detention, and death, -Water pollution and decreases in water availability; soil pollution and changes in soil quality; decreases/ extinction of the plant species which were used by the local community for making traditional medicine, -Peasants having to sell their lands to the mining company due to oppression, -More than 1000 people getting poisoned and losing their health as a result of the 150 kg of mercury spill along a 43-km-long road in 2000, -Loss of livelihood. | <ul style="list-style-type: none"> -Annihilation of nearly 5000 hectares of agricultural land, -Not providing new lands as compensation for the taken lands, -General decrease in water availability, exhaustion of underground waters and water resources due to the mine in the region where nearly half of the population has no access to enough water, -Soil, air, and water pollution over time and expected health problems as a result of this, -The produced 572 million tons of coal will evolve into 1.14 million tons of carbon dioxide, and coal gas that is equivalent to 14.2 million tons of carbon dioxide, -Sundarbans Protection Forest (which is the biggest mangrove forest, the habitation of 58 rare plants and endangered species, ranked on the UNESCO World Heritage List) and the wetland ecosystem being at risk of accidents that can happen during the transportation of the coal and fuels that can spill from vats, -Oppression and violence against the local community's movement opposing the mine (During the demonstration in 2006, which 70,000 people attended, three people died, and more than 200 people were injured because of fire opened by paramilitary groups). | <ul style="list-style-type: none"> -Not paying any compensations to the displaced people, -Destruction of Kopi and Ajkwa rivers in addition to the destruction of a 30,000 hectare rain forest. | <ul style="list-style-type: none"> -Morococha town was evacuated; most of the 500 people moved to New Morococha, 12 kms away. There are several complaints such as the new settlement area is open to the risks of earthquakes and floods; there are insufficient economic prospects and 52% of unemployment; areas suited for economic activity are far away, and the houses are not in line health and living standards, -40 families who refused to sell their houses and lands to the mining company Chinalco and still maintain their lives in the town encounter problems such as unemployment, lack of essential services, adverse and unhealthy living conditions, and air, water, and soil pollution. |

1- Lucian Vesalon and Creţan Remus, "Development-induced displacement in Romania: The case of Roşia Montană Mining Project," *Journal of Urban & Regional Analysis* 4, no. 1 (2012): 63-75.
 2- Stephen Aboagye-Amponsah, *Mining and Resettlement of Communities in Ghana: Exposing the Harm Caused by Forced Displacement and Relocation* (Mining Watch Canada, October 2004). https://transparencylab.org/Documentation/Advocacy,%20Monitoring,%20Sustainable%20-%20Responsible%20Initiatives/MiningWatch%20Canada/Mining%20and%20Resettlement%20of%20communities%20in%20Ghana_2014.pdf (Accessed: June 19, 2022); Earthworks (n.d.), *Ahafo*, https://earthworks.org/stories/wassa_ghana/ (Accessed: June 19, 2022).
 3- Earthworks (n.d.), *Yanacocha*, <https://earthworks.org/stories/yanacocha/> (Accessed: June 19, 2022); EJAAtlas, *Yanacocha Mine, Peru* (April 10, 2019), <https://ejatlas.org/conflict/yanacocha-mine-peru> (Accessed: June 19, 2022); Meghan Walsh, "The price of gold: Winners and losers in Latin America's mining industry," *Mongabay* (March 5, 2014), <https://news.mongabay.com/2014/03/the-price-of-gold-winners-and-losers-in-latin-americas-mining-industry/> (Accessed: June 19, 2022); Deena Kemp, et al.,

Listening to the City of Cajamarca, Research Paper (CSR.M. Sustainable Minerals Institute, University of Queensland, 2013), https://www.csr.m.uq.edu.au/media/docs/483/CSR.M_Listening-Study_Final-Report.pdf (Accessed: August 12, 2022).
 4- International Accountability Project (n.d.), *The Phulbari Coal Project: A Threat to People, Land, and Human Rights in Bangladesh*, https://www.culturalsurvival.org/sites/default/files/Phulbari_Coal_Project_Fact_Sheet_LowRes.pdf (Accessed: June 19, 2022); EJAAtlas, *Phulbari Coal Mine Project, Bangladesh* (January 24, 2017), <https://ejatlas.org/conflict/protest-against-open-pit-coal-mine-project-in-phulbari-region> (Accessed: June 19, 2022).
 5- Bogumil Terminski, 2012, *Ibid*.
 6- Gonzalo Torrico, "The Chinese mining giant and the ghost town," *China Dialogue* (January 2, 2019), <https://chinadialogue.net/en/energy/11000-the-chinese-mining-giant-and-the-ghost-town/> (Accessed: June 19, 2022); Lin Zhu, *Toromocho Copper Mine Project*, (The People's Map of Global China, March 31, 2021), <https://thepeoplesmap.net/project/toromocho-copper-mine-project/> (Accessed: June 19, 2022).

na_2014.pdf (Accessed: June 19, 2022); Earthworks (n.d.), *Ahafo*, https://earthworks.org/stories/wassa_ghana/ (Accessed: June 19, 2022).
 3- Earthworks (n.d.), *Yanacocha*, <https://earthworks.org/stories/yanacocha/> (Accessed: June 19, 2022); EJAAtlas, *Yanacocha Mine, Peru* (April 10, 2019), <https://ejatlas.org/conflict/yanacocha-mine-peru> (Accessed: June 19, 2022); Meghan Walsh, "The price of gold: Winners and losers in Latin America's mining industry," *Mongabay* (March 5, 2014), <https://news.mongabay.com/2014/03/the-price-of-gold-winners-and-losers-in-latin-americas-mining-industry/> (Accessed: June 19, 2022); Deena Kemp, et al.,

Listening to the City of Cajamarca, Research Paper (CSR.M. Sustainable Minerals Institute, University of Queensland, 2013), https://www.csr.m.uq.edu.au/media/docs/483/CSR.M_Listening-Study_Final-Report.pdf (Accessed: August 12, 2022).
 4- International Accountability Project (n.d.), *The Phulbari Coal Project: A Threat to People, Land, and Human Rights in Bangladesh*, https://www.culturalsurvival.org/sites/default/files/Phulbari_Coal_Project_Fact_Sheet_LowRes.pdf (Accessed: June 19, 2022); EJAAtlas, *Phulbari Coal Mine Project, Bangladesh* (January 24, 2017), <https://ejatlas.org/conflict/protest-against-open-pit-coal-mine-project-in-phulbari-region> (Accessed: June 19, 2022).
 5- Bogumil Terminski, 2012, *Ibid*.
 6- Gonzalo Torrico, "The Chinese mining giant and the ghost town," *China Dialogue* (January 2, 2019), <https://chinadialogue.net/en/energy/11000-the-chinese-mining-giant-and-the-ghost-town/> (Accessed: June 19, 2022); Lin Zhu, *Toromocho Copper Mine Project*, (The People's Map of Global China, March 31, 2021), <https://thepeoplesmap.net/project/toromocho-copper-mine-project/> (Accessed: June 19, 2022).

EXAMPLE OF MULTIPLE DISPLACEMENTS: LA GRANJA COAL MINE

The La Granja Coal Mine project in Peru started in 1994 with the mine exploration activities of Canada-based Cambior company. The plan of expropriation and relocation was prepared following the evaluation phase. Cambior started to buy lands in the region in this period. However, this process progressed precisely in a way that it can be called displacement: The local community's biggest complaint was the oppression tactics of Cambior, who, together with the Peruvian government, pressured the locals to abandon their lands in exchange for a standard determined below the market price. In order to put pressure on the locals, schools and health clinics were shut down so that the local communities were devoid of education and health services. In this process, nearly half of the local inhabitants left and settled in the coastline Lambayeque Region. However, they also faced various difficulties in their new settlement areas, such as maintaining their livelihoods and dealing with traumas.¹ In 2000, the permits for mine searching were transferred to the South Africa-based Billiton Base company, which would merge with transnational BHP later. After the feasibility and search evaluations,

BHP-Billiton cooperation decided to withdraw from the project. With the project put aside, the expropriated lands were transferred to the Peruvian government. Based on the decision not to open the mine, the Peruvian government implemented the program of selling the lands back to their previous owners. In 2005, this time, Rio Tinto company, which undertakes numerous mining operations worldwide, got permission to operate in the region. Unlike its predecessor, the company used the method of renting the lands instead of buying. A package that includes hiring, support for building new houses in a different region, and compensations for changing location was prepared for 21 households for the purpose of building facilities and infrastructure for exploration searching activities. As a result, some of the local families have been displaced three times since the beginning of the whole process.²

1- Sharon Flynn and Liz Vergara, "Land access and resettlement planning at La Granja," in *CSRM Occasional papers: Mining-induced Displacement and Resettlement Series*, ed. Deena Kemp and John Owen (University of Queensland, 2016), <https://www.csrn.uq.edu.au/media/docs/1220/flynn-and-vergarala-granjamidrocasional-paperno1-1.pdf> (Accessed: February 27, 2022).
2- John R. Owen and Deena Kemp, 2015, *Ibid.*

On the other hand, the mining sector's contribution to the local economy is very limited. Most of the jobs in mining, which is a technology-intensive sector, require high qualifications, which means local communities who do not have the necessary qualifications and education are able to find jobs in mines. However, developing local economies by creating employment is among the first assurances given in the start-up phase of mining projects. While much fewer guaranteed jobs are offered, the fact that people who work in these jobs come from outside shows that such a purpose is not fulfilled. On the other hand, the average operation period of an open-pit mine is between 10 to 40 years. This also indicates that the provided jobs, income, and social benefits, are not long-lasting.⁶² For example, for the Panguna copper mine located in Bougainville Island, Papua New Guinea, where around 80,000 people from indigenous communities live, 10,000 workers were brought from outside.⁶³ In the Grasberg mine in Indonesia,

while 17,300 workers were employed, only 100 people from the local community were working in the mine.⁶⁴

It is possible to observe the abovementioned socially and economically devastating effects of mining-induced displacements on local communities in many projects around the world. Some of these examples are listed on page 102-103.

Transportation project-induced displacements

Transportation infrastructure, including roads and airports that are built and used complementary to development projects like dams and mines, is a major contributor to displacements and livelihood loss of local communities. In many cases across the world, transportation projects themselves appear as mega development projects causing massive displacements. Thousands of people lose their houses and lands each year because of land expropriations for highway and railway construction and expansion projects taking place in different parts of the world. Additionally, land need for the new settlements emerging around and along the transportation infrastructure routes cause new displacements. Furthermore, ecological destruction caused by transportation projects such as habitat fragmentation, and pollution, threaten not only humans but the habitats and lives of all species.

Airports occupy an important place among mega transportation projects which result in vast numbers of displacement cases and environmental injustices. As of 2019, the aviation sector has been responsible for 2.9% of the global carbon dioxide emissions, and 12% of emissions caused by the whole transportation sector.⁶⁵ Findings of one study show that when other factors such as the contrail cirrus that they leave behind and nitrogen/nitrogen oxides are considered, the aviation sector constitutes around 3.5% of the total human contribution to climate change.⁶⁶ The aviation sector is expected to grow 4 to 5% a year on average at the global level. This suggests that to meet the increased numbers of flights and passengers, new airports will be constructed or the existing ones will be expanded. Since the end of 2019, there have been approximately 1000 airport projects in varying sizes introduced globally.⁶⁷ Airport constructions lead to various ecological hazards and damages including landslides; destruction of hydrologic systems; air, water, and noise pollution; deforestation; loss of wetland areas, and leakage of aviation fuel. All these ecological effects disrupt and destroy species' habitats.

Moreover, airport constructions that are ever-expanding in size and scale dispossess farmers of their houses, lands, and commons. Also, an increasing number of projects involve construction of *Aerotropolises* (airport-cities) next to airports. In short, as the airport projects increase in size and numbers, a growing amount of agricultural lands, forests, and wetland areas are being lost something which directly threatens the livelihood of local communities.

It is roughly estimated that 90% of the world population has travelled by air. Yet, the aviation sector's social, economic, and ecological costs are put on the shoulders of the poor majority that points to a major environmental injustice situation. Meanwhile, the struggle of Stay Grounded, a transnational movement network constituted by 180 local movements and organizations continues its mobilization against environmental injustices caused by the aviation sector.⁶⁸ The Nantes (France) airport project and Aranmula Greenfield Airport project (India)—which would annihilate agricultural lands—and the airport projects in Bangladesh and New Mexico (USA)—which would destroy wetland areas—were canceled as a result of the success of this struggle.⁶⁹

AEROTROPOLISES¹

Aerotropolis have been an increasingly prevalent mega project across the world. Aerotropolis refers to settlement areas formed around airports, which are founded as tourism and commerce centers in connection to activities at airports. Size and scale of aerotropolises, which are built either as an extension around an airport or together with a new airport, vary depending on spatial and sectoral characteristics. Aerotropolises generally consist of facilities that provide various services including shopping malls, hotels, and entertainment centers mainly targeting the air travel passengers. Some aerotropolises also contain working and residential areas such as offices, housing, and green spaces. When combined with the airport projects, aerotropolises requires vast amounts

of land that lead to large amounts of land seizure and displacements. Thus, the scale of displacements and ecological destructions grows apace. Kuala Lumpur Aerotropolis located in the center of Sei Mangkei Economy Region connecting Belawan and Kuala Tanjung ports in Indonesia, and new settlement areas around Istanbul Airport integrating with another mega transportation project, the 3rd Bosphorus Bridge that destroyed the forests and settlement areas in the north of Istanbul, exemplify aerotropolis projects whose numbers are increasing rapidly worldwide.

1- Rose Bridger, "What is an Aerotropolis, and why must these developments be stopped?" (Article for launch of Global Anti-Aerotropolis Movement (GAAM), 2015), https://issuu.com/rosebridger/docs/gaam-what_s_an_aerotropolis_rb_v6 (Accessed: June 19, 2022); Tone Smith, ed., 2020, Ibid.

TABLE 4: EXAMPLES OF MEGA TRANSPORTATION PROJECTS¹

| PROJECT | DATE | DISPLACEMENTS |
|---|---|---|
| Cambodia Railways Rehabilitation Project² | 2006 | More than 4000 families lost their lands and houses that were on the railway route. |
| North Railway Line-South Railway Line Connection Project (Philippines)³ | In the making | About 35,000 families informally living along the route of the railway lines were forced to leave their houses. |
| Akhaura-Laksam Double Railway Line Project (Bangladesh)⁴ | 2015-2019 | About 10,000 families were physically and economically displaced within the scope of the project of expansion of the existing railway line and the addition of the second line. |
| South Yunnan Road Construction Project (China)⁵ | 1998-2003 | Due to the 147-kilometer-long highway built within the scope of the project, 2000 people were displaced, and 19,000 people lost their agricultural lands. |
| Navi Mumbai Airport (India)⁶ | In the making | Displacement of about 3500 families living in ten villages is planned. As a result of the construction of the airport, connection roads, and other infrastructure, the annihilation of the forest, mangrove, and wetland areas in the region, thus, disruption of the ecosystem is in question. With the change in soil usage, this destruction will cause a broader population in the region who are living off agriculture and forestry to lose their livelihood resources. |
| Nijgadh Airport (Nepal)⁷ | In the project phase | Due to the airport and the planned aerotropolis around it, 2.4 million trees will be cut down, which will result in immense deforestation and loss of biological diversity. As a result of this project, 7500 poor farmers will be displaced. Meanwhile, 600,000 people living off forestry will lose their livelihood resources. 1.2 million local inhabitants face the risk of losing their freshwater resources due to the disruption/annihilation of aquifers and water resources in Parsa National Park. |
| Ogun Airport (Nigeria)⁸ | In the making | 5000 small farmers in 20 villages were forcefully evacuated from their houses and lands. The local population, whose products by the tons are wiped out and whose hectares of agricultural lands are taken away, lose their livelihood resources, and their livelihoods are at risk due to the airport, which will be used for transporting agricultural products to foreign markets. |
| New Phnom Penh Airport and Aerotropolis (Cambodia)⁹ | In the making (expected to be in service in 2025) | The project, located in Kandal State, will spread to a 2600 hectare wide area. The lands of more than 2000 farmer families, most of whom produce rice, are taken away. Meanwhile, the lake used as a commons in the region is at risk. The farmers who lose their houses, lands, and livelihoods continue their protest against the low and unpaid monetary compensations. |

| PROJECT | DATE | DISPLACEMENTS |
|---|---------------------------|--|
| Karad Airport Expansion Project (India)¹⁰ | In the making | Due to the expansion project of the Karad Airport, which opened in 1955 in Maharashtra State, starting in 2011, while some of the 25,000 poor farmers living in the region were physically displaced, they are also losing their livelihoods as a result of ecological problems such as the annihilation of agricultural lands; annihilation of biological diversity; pollution, and decreases in water availability. |
| Isiolo Airport (Kenya)¹¹ | Started operating in 2017 | For the construction of the 260 hectare airport, more than 200 farmer families were dispossessed of their houses and lands without the implementation of any relocation programs or compensations. The hotels, entertainment centers, and golf fields around the airport are located on the lands of several farmers, and the locals keep losing their houses, lands, and livelihoods. |
| Yogyakarta International Airport and Aerotropolis (Indonesia)¹² | Opened to flights in 2019 | Due to the airport located 45 kilometers from Yogyakarta city on Java Island in Indonesia, more than 11,000 poor farmers were evacuated from the lands where they lived. The locals, who have taken legal actions and organized protests since 2011 against the ecological damages and the situation of being vulnerable to natural disasters such as tsunamis, have met with several human rights violations. In connection with the airport, the construction of an aerotropolis containing industry and tourism areas is on the agenda. |

1- Dina Ionesco, et al., 2017, *Ibid.*

2- Dina Ionesco, et al., *The Atlas of Environmental Migration* (Routledge, Earthscan and IOM, 2017).

3- *Ibid.*; Railway Technology, *North-South Railway Project, Philippines* (June 26, 2020), <https://www.railway-technology.com/projects/north-south-railway-project/#:~:text=The%20North%20South%20Railway%20Project,the%20capital%20of%20Albay%20province> (Accessed: June 19, 2022).

4- Dina Ionesco, et al., 2017, *Ibid.*

5- *Ibid.*

6- Global Anti-Aerotropolis Movement, *Navi Mumbai Airport – Displacement and Destruction* (2018), <https://antiaero.org/2018/01/24/navi-mumbai-airport-displacement-and-destruction/> (Accessed: June 19, 2022).

7- EJAAtlas, *Nijgadh Airport and Airport City, Nepal* (February 18, 2019), <https://ejatlas.org/conflict/nijgadh-airport-and-aerotropolis> (Accessed: June 19, 2022); Mira Kapfinger, *Airport Conflicts – Struggles for Environmental Justice* (June 1, 2020), <https://stay-grounded.org/airport-conflicts-struggles-for-environmental-justice-webinar-summary/> (Accessed: June 19, 2022).

8- EJAAtlas, *Land Grabbing in Igbini Oja and Cargo Airport Construction Propos-*

al, Nigeria (April 10, 2019), <https://ejatlas.org/conflict/ogun-cargo-airport> (Accessed: June 19, 2022); Global Anti-Aerotropolis Movement, *Farmers Resist Land-grabbing for Cargo Airport in Ogun State, Nigeria* (March 8, 2018), <https://antiaero.org/tag/igbin-oja/> (Accessed: June 19, 2022).

9- EJAAtlas, *New Phnom Penh Airport and Airport City, Kandal province, Cambodia* (January 24, 2021), <https://ejatlas.org/conflict/new-phnom-penh-airport> (Accessed: June 19, 2022); EJAAtlas, *Karad Airport Expansion, Maharashtra, India* (November 1, 2019), <https://ejatlas.org/conflict/karad-airport-expansion-maharashtra-india#> (Accessed: June 19, 2022).

10- Prerna Chaurashe, "Maharashtra farmers refuse to allow expansion of Karad Airport, call it 'non-viable'" (*Land Conflict Watch*), (September 18, 2016), <https://www.landconflictwatch.org/conflicts/karad-airport-expansion-land-acquisition> (Accessed: June 19, 2022).

11- EJAAtlas, *Isiolo Airport, Kenya* (January 8, 2019), <https://ejatlas.org/conflict/isiolo-airport> (Accessed: June 6, 2022).

12- EJAAtlas, *New Yogyakarta International Airport (NYIA), Java, Indonesia* (August 26, 2018), <https://ejatlas.org/conflict/international-airport-on-the-kulon-progo-coast-indonesia> (Accessed: June 19, 2022).

- 1- Leslie Sklair, "Capitalism and Development in Global Perspective," in *Capitalism and Development*, ed. Leslie Sklair (New York: Routledge, 1994), pp. 165-187.
- 2- Anthony Oliver-Smith, "Displacement, Resistance and the Critique of Development: From the Grassroots to the Global," in *Development-Induced Displacement: Problems, Policies and People*, ed. Chris de Wet (New York: Berghahn Books, 2006), pp. 141-179.
- 3- Paul K. Gellert and Barbara D. Lynch, "Mega-projects as displacements," *International Social Science Journal* 55, no. 1 (2004): 15-+. doi: 10.1111/1468-2451.5501002
- 4- Michael Cernea and J. K. Maldonado, "Challenging the Prevailing Paradigm of Displacement and Resettlement: Its evolution, and constructive ways of improving it," in *Challenging The Prevailing Paradigm of Displacement and Resettlement*, ed. Michael Cernea and Julie K. Maldonado (New York: Routledge, 2018), pp. 1-41).
- 5- W.C. Robinson, *Risks and Rights: The Causes, Consequences, and Challenges of Development-induced Displacement* (The Brookings Institution-SAIS Project on Internal Displacement, 2003), <https://www.brookings.edu/wp-content/uploads/2016/06/didreport.pdf> (Accessed: June 19, 2022).
- 6- Thayer Scudder, "What It Means to be Dammed: The Anthropology of Large-Scale Development Projects in the Tropics and Subtropics," *Engineering & Science* 44, no. 4 (1981): 9-15; Thayer Scudder and Elizabeth Colson, "From Welfare to Development: A Conceptual Framework for the Analysis of Dislocated People," in *Involuntary Migration and Resettlement: The Problems and Responses of Dislocated People*, ed. Art Hansen and Anthony Oliver-Smith (New York, Boulder: Routledge, Westview Press, 1982), pp. 267-287.
- 7- The concept of "Impoverishment Risks and Reconstruction" is referred as IRR in the rest of this text.
- 8- Michael Cernea, "Risks, Safeguards, and Reconstruction: A model for population displacement and resettlement," in *Risk and Reconstruction: Experiences of Resettlers and Refugees*, ed. Michael Cernea and Christopher McDowell (The World Bank 2000), pp. 11-55, also available at: https://www.un.org/esa/sustdev/ssissues/energy/op/hydro_cernea_population_resettlement_backgroundpaper.pdf (Accessed: August 12, 2022).
- 9- Michael Cernea, "IRR: An Operational Risks Reduction Model for Population Resettlement," *Hydro Nepal: Journal of Water, Energy and Environment* 1, no. 1 (2000): 35-39; Michael Cernea, 2000, *Ibid.*
- 10- Michael Cernea and J. K. Maldonado, 2018, *Ibid.*
- 11- Michael Cernea, 2000, *Ibid.*
- 12- Walter Fernandes, "From marginalization to sharing the project benefits," in *Risk and Reconstruction: Experiences of Resettlers and Refugees* (2000), pp. 205-226; Chris De Wet, "Economic development and population displacement: Can everybody win?" *Economic and Political Weekly* 36 no. 50 (2001): 4637-4646.
- 13- Although in the most renowned representative of the reformist-managerial Cernea's approach IRR model constitutes a basis for the World Bank's standards, policies and implementation, the World Bank is criticized with not implementing this model in a comprehensive and proper manner. For further details see: Cernea and Maldonado, 2018, *Ibid.*
- 14- The local movements which resist the devastating impacts of development projects started to rise in 1990s with the transnational solidarity movement networks. Transnational advocacy networks (TANs) that focus on environment and indigenous communities have facilitated local groups mobilized against development projects to carry their mobilizations to national, regional, and transnational scales. With the help of TANs, these movements frame the emergent problems including displacements in terms of democratization, human rights, gender equality, right of indigenous communities, and environment, and they demand their right to participate in all the stages of the decision-making processes regarding development projects. For further details see: Sanjeev Khagram, *Dams and Development: Transnational Struggles for Water and Power* (Cornell: Cornell University Press, 2004); Anthony Oliver-Smith, 2006, *Ibid.*
- 15- Ranjit Dwivedi, "Models and Methods in Development-Induced Displacement," *Development and Change* 33, no. 4 (2002): 709-732. doi:10.1111/1467-7660.00276; Michelle Hay, et al., *Dam-Induced Displacement and Resettlement: A Literature Review*, FutureDAMS Working Paper 004 (Manchester: The University of Manchester (2019); Brooke Wilmsen, et al., "Challenging the Risks-based Model of Involuntary Resettlement Using Evidence from the Bui Dam, Ghana," *International Journal of Water Resources Development*. doi:10.1080/07900627.2018.1471390; Chris de Wet, 2001, *Ibid.*
- 16- Sharon Edington, "The Inadequacy of the Risk Mitigation Model for the Restoration of Livelihoods of Displaced People (Case Study: The Cambodian Railway Rehabilitation Project)," *Journal of Arts and Humanities (JAH)* 3 no. 8 (2014): 114-126.
- 17- Yan Tan, "Development-induced Displacement and Resettlement: An Overview of Issues and Interventions," in *Routledge Handbook of Migration and Development* (2020), pp. 373-381.
- 18- Michael Cernea, M. M. (2000),. *Ibid.*
- 19- John R. Owen and Deena Kemp, "Mining-induced Displacement and Resettlement: A Critical Appraisal," *Journal of Cleaner Production* 87 (2015): 478-488. doi: <https://doi.org/10.1016/j.jclepro.2014.09.087>
- 20- Sharon Edington, 2014, *Ibid.*
- 21- Ranjit Dwivedi, 2002, *Ibid.*
- 22- Pia Van Ackern, "When Mining Moves People: Development-Induced Displacement and Resettlement in La Guajira, Colombia," in *The State of Environmental Migration 2015: A Review of 2014*, ed.

- Francois Gemenne, et al. (International Organization for Migration (IOM) and SciencesPo, 2016), pp. 145-168.
- 23- IFC, *Handbook for Preparing a Resettlement Action Plan*. (International Finance Corporation, 2002), <https://www.ifc.org/wps/wcm/connect/ee19f150-f505-41db-891f-6ef5557195b6/ResettlementHandbook.PDF?MOD=AJPERES&CACHEID=ROOTWORKSPACE-ee19f150-f505-41db-891f-6ef5557195b6-jkD0CRL> (Accessed: June 19, 2022).
- 24- Chris de Wet, 2001, *Ibid.*
- 25- Chris de Wet, 2001, *Ibid.*; Frank Vanclay, "Project-induced Displacement and Resettlement: From impoverishment risks to an opportunity for development?," *Impact Assessment and Project Appraisal* 35, no. 1 (2017): 3-21. doi:10.1080/14615517.2017.1278671
- 26- Chris de Wet, 2001, *Ibid.*
- 27- *Ibid.*
- 28- Paul K. Gellert and Barbara Lynch, 2003, *Ibid.*
- 29- IFC, 2002, *Ibid.*
- 30- Anthony Oliver-Smith, 2006, *Ibid.*
- 31- W.C. Robinson, 2003, *Ibid.*
- 32- Chris de Wet, 2001, *Ibid.*
- 33- *Ibid.*
- 34- Susanne Katus, et al., "When Local Power Meets Hydropower: Reconceptualizing Resettlement Along the Nam Gnouang River in Laos," *Geoforum* 72: 6-15. <https://doi.org/10.1016/j.geoforum.2016.03.007>
- 35- Hydroelectrical powerplant dams, which are higher than 15 meters, or between 5-15 meters but hold 3 million cubic meters or more water are described as "large dams". For more information see: Commission Internationale des Grands Barrages (n.d.), *Definition of a Large Dam*, https://www.icold-cigb.org/GB/dams/definition_of_a_large_dam.asp (Accessed: June 20, 2022).
- 36- Sanjeev Khagram, 2004, *Ibid.*
- 37- Mark Mulligan, et al., "GOODD, a Global Dataset of More Than 38,000 Georeferenced Dams," *Sci Data* 7 no. 31. <https://doi.org/10.1038/s41597-020-0362-5>
- 38- IDMC, *Dam Displacement, Case Study Series* (April 11, 2017a), <https://www.internal-displacement.org/sites/default/files/publications/documents/20170411-idmc-intro-dam-case-study.pdf> (Accessed: June 19, 2022).
- 39- WCD, November 16, 2000, *Ibid.*
- 40- It is determined that the number of displaced and relocated people in the dam projects financed by the World Bank is 47% higher than the estimated number. For more information see: WCD, November 16, 2000, *Ibid.*
- 41- IDMC, April 11, 2017a, *Ibid.*
- 42- Bryan Tilt, et al., "Social impacts of large dam projects: A comparison of international case studies and implications for best practice," *Journal of Environmental Management* 90 (2008): 249-257. <https://doi.org/10.1016/j.jenvman.2008.07.030>
- 43- Brian D. Richter, et al., "Lost in Development's Shadow: The Downstream Human Consequences of Dams," *Water Alternatives* 3, no. 2 (2010): 14-42.
- 44- IEA (2021). *Hydropower Special Market Report: Analysis and Forecast to 2030* (2021), https://iea.blob.core.windows.net/assets/4d2d4365-08c6-4171-9e-a2-8549fabd1c8d/HydropowerSpecialMarketReport_corr.pdf (Accessed: June 16, 2022); Brian D. Richter, et al., 2010, *Ibid.*; IRENA, *Renewable Energy Highlights* (August 8, 2021), <https://irena.org/publications/2021/Aug/-/media/584D515B62FC-4D81992CD56B6242262D.ashx> (Accessed: June 19, 2022).
- 45- Atif Ansar, et al., "Should We Build More Large Dams? The Actual Costs of Hydropower Megaproject Development," *Energy Policy* 69 (2014): 43-56; Commission Internationale des Grands Barrages. (n.d.), *Role of Dams*, https://www.icold-cigb.org/GB/dams/role_of_dams.asp (Accessed: June 20, 2022).
- 46- Sonya Angelica Diehn, "Five ways mega-dams harm the environment," (*Deutsche Welle*, June 25, 2020), <https://www.dw.com/en/five-ways-mega-dams-harm-the-environment/a-53916579> (Accessed: June 19, 2022).
- 47- *Ibid.*
- 48- Bridget R. Deemer, et al., "Greenhouse gas emissions from reservoir water surfaces: A new global synthesis," *BioScience* 66, no. 11 (2016): 949-964. <https://doi.org/10.1093/biosci/biw117>
- 49- Chris de Wet, 2001, *Ibid.*
- 50- WCD, November 16, 2000, *Ibid.*; IDMC, April 11, 2017a, *Ibid.*
- 51- Theodore E. Downing, *Avoiding New Poverty: Mining-induced Displacement and Resettlement* (International Institute for Environment and Development, 2002), <https://pubs.iied.org/sites/default/files/pdfs/migrate/G00549.pdf> (Accessed: February 27, 2022).
- 52- John R. Owen and D. Kemp, 2015, *Ibid.*; Theodore E. Downing, 2002, *Ibid.*
- 53- Dirk Van Zyl, "Towards improved environmental indicators for mining using life-cycle thinking," in *Life cycle Assessment of Metals: Issues and Research Directions*, ed. Alain Dubreuil (Society of Environmental Toxicology & Chemists ((SETAC), 2005), pp. 117-122. Also quoted in John R. Owen, and D. Kemp, 2015, *Ibid.*; Theodore E. Downing, 2002, *Ibid.*
- 54- John R. Owen, and D. Kemp, 2015, *Ibid.*; Theodore E. Downing, 2002, *Ibid.*
- 55- Theodore E. Downing, *Does the Kosovo Power Project's Proposed Forced Displacement of Kosovars Comply with International Involuntary Resettlement Standards?* (The Kosovo Civil Society Consortium for Sustainable Development, 2014), <http://allthingsaz.com/wp-content/uploads/2014/04/Final-Draft-Downing-Involuntary-Resettlement-at-KPP-Report-2-14-14.pdf> (Accessed: February 27, 2022); Theodore E. Downing, 2002, *Ibid.*
- 56- John R. Owen, and D. Kemp, 2015, *Ibid.*
- 57- John R. Owen, and D. Kemp, 2015, *Ibid.*
- 58- Oxfam America, *Dirty Metals: Mining, Communities and the Environment* (Earthworks and Oxfam

- America, 2004), https://earthworks.org/assets/uploads/archive/files/publications/NDG_DirtyMetalsReport_HR.pdf (Accessed: August 12, 2022).
- 59- Theodore E. Downing, 2002, Ibid.
- 60- Bogumil Terminski, *Mining-Induced Displacement and Resettlement: Social Problem and Human Rights Issue - A Global Perspective* (2012), <http://nbn-resolving.de/urn:nbn:de:0168-ssoar-327774>. <http://dx.doi.org/10.2139/ssrn.2028490> (Accessed: June 19, 2022).
- 61- John R. Owen, and D. Kemp, 2015, Ibid.
- 62- Bogumil Terminski, 2012, Ibid.
- 63- Oxfam, 2004, Ibid.
- 64- Theodore E. Downing, 2002, Ibid.
- 65- Jacob Teter, *Tracking Aviation 2020* (International Energy Agency (IEA), June 2020), <https://www.iea.org/reports/tracking-aviation-2020> (Accessed: June 19, 2022).
- 66- David S. Lee and Piers Forster, “Guest Post: Calculating the true climate impact of aviation emissions,” *CarbonBrief* (September 21, 2020), <https://www.carbonbrief.org/guest-post-calculating-the-true-climate-impact-of-aviation-emissions> (Accessed: June 19, 2022).
- 67- Tone Smith, ed., *Degrowth of aviation: Reducing air travel in a just way* (Stay Grounded/Kollektiv Periskop, 2020), https://stay-grounded.org/wp-content/uploads/2020/02/Degrowth-Of-Aviation_2019.pdf (Accessed: June 19, 2022).
- 68- Stay Grounded. (n.d.), “Stay grounded members,” <https://stay-grounded.org/members/> (Accessed: June 20, 2022).
- 69- Ibid.