© *The Pakistan Development Review*
56:1 (Spring 2017) pp. 19–30

Land Use Conflicts in the Developing Countries: Proximate Driving Forces and Preventive Measures

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This research aims to analyse land use conflicts mainly caused by infrastructural development projects in the developing countries. For this purpose, qualitative data is gathered which is frequently published on land use conflicts against the development related infrastructure projects in Brazil, China, India, Indonesia and Pakistan. It identifies and defines land use conflicts, their dynamic features and contestations. The results reveal as to how the conflicts have been germinated by the property and human right violators? Further, it also focuses on the governance roles and responsibilities, the institutional inconsistency towards justice, and the local population's mistrust in the respective case study areas. The analysis concludes with an overview of the root causes and consequences of land use conflicts, by indicating as to how land use decisions for infrastructural settings have changed rural economy, and induced local population to displace and oppose the projects. Finally, the study proposes some preventive measures to manage such conflicts.

JEL Classification: D74, O16, H54
Keywords: Conflict, Proximity Relations, Infrastructure, Developing Countries

1. INTRODUCTION

Land use conflicts are a widespread phenomenon, and can occur at any time or place between different stakeholders, mainly for different land expectations [Torre, *et al.* (2014); Wehrmann (2008)]. During the twentieth century, many changes have occurred in agricultural land across the globe due mainly to constant pressure of population growth and urban sprawl. Together these factors have underlined the demand of more infrastructural development projects, especially in the developing countries [Wang, *et al.* (2015); Singhal (2009); Marshall and Shortle (2005)]. These major changes can appear as strong incompatibilities between the development projects and wills or expectations of the local populations. Thus, initiation of large construction projects can make local inhabitants

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Authors' Note: The authors would like to thank the anonymous reviewers for their valuable comments on an earlier draft of the article. The researchers are also thankful to the Higher Education Commission (Pakistan) and Institute of Geographic Sciences and Natural Resources Research (China) in supporting financially and accessing to secondary data, respectively. Errors in interpretation are those of the authors.

frustrated and angry due to indicators like partial advice, absence of counselling and opposition to their own projects [Magsi and Torre (2014); Awakul and Ogunlana (2002)]. Such frustrations often lead to the resistance against projects, where these types of issues are mostly transformed into conflicts due to lack of participatory approach.

Theoretically, the land use conflicts are the result of lack of social justice and recognised rights [Ostrom (1990)], which may bring about important problems in front of researchers and planners to encourage for consideration of new approaches, and may increase the performance of conflict actors to unite and protest for their rights [Hirschman (1970)]. Specifically, in the rural areas, such conflicts are sparked more when owners are forcibly dispossessed from natural resources, i.e., land, water or forests [Tilt, *et al.* (2009); Ostrom and Nagendra (2006)]. According to the welfare economic aspects of land use conflicts (social welfare theory), "the decisions of superposition of lands must not depend upon from one use to another, but must be limited on its efficient distribution with respect to the economic activities" [Cheshire and Vermeulen (2009)].

Many researchers have tried to explore the land use conflicts and their resolution measures [Liu, *et al.* (2014); Torre, *et al.* (2014); Mann and Jeanneaux (2009); Deininger and Castagnini (2006); Swanström and Weissmann (2005); Campbell, *et al.* (2000); Owen, *et al.* (2000) and Burton (1993)], but there are few references to the use of methodologies providing support for their prevention. Through this research, it is aimed to identify conflicting events in different pieces of land, and to suggest the preventive measures. The most repeated examples are overviewed here with regard to land use conflicts from developing countries (Pakistan, Indonesia, India, China and Brazil) in order to explore land use related conflicts, and highlight (i) the affectees of different types of land use decisions; and (ii) the extent to which these conflicts have an adverse impact on life, livelihood, and land productivity. In order to explore incidence and impact of land use conflict, the following hypothesis is formulated which can be explored qualitatively: the lack of inputs and involvement of the regional population in the construction of a development project leads to disagreements and conflicts.

This article attempts to provide a qualitative estimation that can help to estimate the regional development losses due to land issues. The article is structured as follows. The first section provides the approaches towards data collection for descriptive evidences on the land use issues in the selected developing countries. There is then a discussion on the land governance and land use conflict preventive measures in detail. Final section concludes with a guiding principle for sustainable land use and economic development in the developing countries in the future.

2. METHODOLOGICAL CONSIDERATIONS

To deal with the issues and to explore the land use conflict figures and evidences, data collection was carried through various secondary sources. In order to extract a true picture of the tension and conflict situations with their causes and consequences, the information was gathered through national and international dailies of the respective countries.[1] In order to understand public voices on pre, during, and post conflict

[1]Following newspapers were selected from the respective countries: from Pakistan *DAWN International* and *The NEWS*; from Indonesia *The Jakarta Post*; from India *Times of India* and *The Indian Express*; from China *The Epoch Times* and *China Digital Times*; and from Brazil *Survival International* and *The Rio Times.*

situations, the news articles were downloaded from the web pages of the selected dailies, in which the news regarding selected case studies were published. Those articles were searched, while using specific keywords (local population, conflict, protest, compensation, rehabilitation, policy, etc.) followed by the names of the projects.

As a matter of fact, information on the conflicts of land use is very sensitive, therefore, during analysis of the daily press, care has been taken to avoid unreliable information, to ensure the originality and reliability of facts [McCarthy, *et al.* (1996)]. Moreover, information was also collected through published material from various public and private, national and international organisations, as well as from websites and internet pages.

3. DESCRIPTIVE EVIDENCES

It is beyond doubt that the growing population demands more housing, public utilities, roads, parks, schools, hospitals, sports arenas, airports, railway stations, prisons, crematoriums, cemeteries, offices, and retail spaces for manufactured products and other infrastructural projects. These are certainly key issues to development projects, but for some reason partly opposed by the local people, and labelled as undesired or semi-desired infrastructure projects [Torre, *et al.* (2015)]. Hence, authors decided to highlight the most recent incidences of the conflicts over land used for infrastructural settings in the developing countries, e.g. Pakistan, Indonesia, India, China and Brazil.

3.1. Infrastructural Settings

Here are the examples of the conflicts linked with infrastructural settings, and their impact on the existence of millions of local inhabitants in the selected developing countries like Pakistan, China, India, Indonesia and Brazil.

In Pakistan,large numbers of displacements have been recognised due to blemished dam projects, like the *Chotiari* water reservoir constructed by the Water and Power Development Authority (WAPDA) with the help of international donor agencies i.e. the World Bank and Saudi fund for development. The main aim of this project was to irrigate around 1.2 million acres in various districts of Sindh province. This has created some unwanted results (see Box 1).

Box 1: Chotiari Water Reservoir in Pakistan

The Chotiari water reservoir lies on the western wings of *Nara* desert in the district of *Sanghar*. The reservoir occupies an area of about 18,000 hectares and has a water storage capacity of 0.75 million acre feet. The project was approved in 1992 (finally 1994) and supposed to be completed by December 1997, with a cost of Rs 1.5 billion (approximately US $ 26.3 million). Due to ineffectual planning and corruption the project was delayed by five years up-to December 2002, with a total cost of Rs 6 billion, which is approximately US $ 105 million. Experts from the Chotiari area opined that its actual output was far below from which it was planned, where its financial, social, and environmental costs were much greater than expected. According to the community representatives and their organisations, a total of 993 families were directly affected by the construction of this reservoir. They had been uprooted from their homes and in most cases were left without any resettlement and/or compensation. Conflicts over the construction of big dams have grown into forceful policy debates in numerous countries around the world, but this case might be considered as one of the planned social and environmental tragedies.

Sources: Authors extraction from *DAWN International* 12-11-2009; *The NEWS* 14-01-2007; UNEP 14 and 1506-2004.

It is observed that mostly in the developing countries, indigenous people have not been consulted or treated as prime stakeholders, while taking some decisions on development projects, which would affect them directly or indirectly [Magsi and Torre (2013); Scudder (2005); UNEP (2004); Awakul and Ogunlana (2002)]. Afterwards, when the people see any initiation of large construction projects, they often become frustrated and angry about partial advice and counsel. This disappointment often leads to the project opposition and violence, but it rarely leads to a change in the public authorities' behaviours. Instead, they carry on thinking of launching new projects, disregarding the oppositions and the damages caused by the previous initiatives. Thus, it becomes vital to examine the position of the factors leading to the conflicts. Especially, those indicators which encountered on the development projects in order to understand as to what interested groups and the project participants could learn from the preceding experiences This would enable the project initiators to identify the reason of lack of success of projects.

Land use conflicts are common in Indonesia as well. During 2002, the Indonesian government issued an official regulation, allowing the state to take over land to be used for construction of public facilities, even if no agreement had been reached with the farmers residing on their lands. This rule had raised public concerns and protests throughout Indonesia. Many of farm-lands were lost due to infrastructure projects (see Box 2), which were fertile agricultural lands, as well as being of tremendous value for marine biodiversity and ecology [LRAN (2007)]. Such land loss has a long term implications for the economic, social and food security of local communities, who once and for all get deprived of, what is often, their only source of livelihood.

Box 2: Land Use Conflicts over Airport Construction in Indonesia

The *Lombok* International Airport is built over farm lands of local indigenous people, which is located in *Tanak Awu* village. This mega project turned a cause of conflict between the government and local farmers, due to dissatisfying policy adopted by the government towards proper compensation and rehabilitation. "It is not in the place that the local government of west *Nusa Tenggara*, and the linked parties who have interest to build the airport on the fertile land, which is the only resource for peasant in central Lombok to make living"; expressed by Henry Saragih to *The Jakarta Post* (September 09, 2006). Henry Saragih is the secretary general of the Indonesian federation of peasant unions (FSPI), had expressed above outrage at the airport construction site plan in Lombok, after unprovoked attack by the police on peasant's crowd—included women and children—gathered to record their concerns against violation of their rights.

Source: Authors' extraction from *Land Research Action Network* 03-05-2007; *The Jakarta Post* 09-19-2006.

On the other side, in order to achieve rapid economic growth, India has also been investing in industrial projects, such as dams, roads, mines, power plants, where some of the projects, particularly dams have generated serious controversies (see Box 3), as they have tended to be the major sources of displacement-related conflicts [UNEP (2004)]. Therefore, about 21000 families were disturbed and ousted when the *Pong* dam was constructed nearly 25 years ago, and still have not received the benefits of any proper rehabilitation measures. Moreover, the development has affected about 21.3 million persons, including; displaced by the dams (16.4 million), mines (2.55 million), industrial development (1.25 million), wildlife sanctuaries, and national parks (0.6 million) [Lama (2008)].

Box 3: Development Induces Displacement in India

India's current social and economic trembling issue is *Yamuna* expressway, which is a 165.5 km long road project in Utter Pradesh (UP). Actually, this is the dream project of the UP's government. This project aimed to connect New Delhi to Agra alongside of the Yamuna river, but being a more populous state it has not only caused disturbances among local population, but has also negatively affected the country's economy. Around 12000-14000 farmers have protested and likely blocked Delhi road against the forceful acquisition, and unjustified compensation of their land for the project. This also seemed more intense and complex land use conflict of the year 2014, up-to now almost a dozen of causalities have been taken place. Number of causalities could increase if the resolution measures have not been taken into account.

Source: Authors' extraction from *Times of India* 22-11-2014*; Mahaprashasta* 2012.

In China, due to the rapid industrialisation and population growth, the land base for agricultural growth has been shrinking [Wang, *et al.* (2015)]. In fact, China is well known for its efficient infrastructural and urbanisation projects, but violent conflicts have also been reported (see Box 4), which might be due to compensation disagreements [Rooij (2007)]. According to Robertson (2010), "the expropriation of land in China is a polemic social issue, where so many houses have been demolished forcibly by using modern tactics like switching off the power or water to whole blocks of houses, and sending thugs to harass and intimidate residents".

Box 4: Land Use Conflicts in China

In China official statistics show that more than 50,000 cases of land use dispute took place in 224 cities, and counties across the country from 2003 to March 2008. In 2010 more than 30,000 villagers in the eastern China blocked a highway and clashed with police while protesting against the land compensation deals. Protestors accused local officials of arranging a deal in which villagers were paid far less than the market value for their land. The protesters were gathered against government land seizure in *Zhenjiang* for infrastructural development projects. Moreover, the expropriation of land in China has become one of the most polemical social issues. Therefore, "The government should solve previous problems before making more laws", said *Li Huifang*, a petitioner from *Shanghai*. "How many people were imprisoned and tortured trying to protect their houses and lands? They should be redressed", he added while expressing his grievances to *The Epoch Times* (October 28, 2010).

Source: Authors extraction from *The Epoch Times* 28-10-2010; *CDT* 26-07-2009.

A significant body of research has shown that there are no geographical limitations to the conflict; it can occur in any part of the world. Semi-developed or emerging countries like Brazil are also disturbed due to land use conflicts [Vainer (2007)], for example a conflict has started in early 2010, when mining companies started working on the northern states of the country (see Box 5). According to Sharma (2002):

In these regions the concentration of land ownership is high, and some "troublemakers"—community or union—dispute their rights to maintain thousands of hectares of land uncultivated, or stripped of all forest for mining and cattle pasture (beef for export), while millions of Brazilians are willing to work on land, who remain landless and survive in near virtual starvation in the rural poverty or urban slums.

Box 5:Land Use Conflicts Created by Miners in Brazil

In 2010, *Yanomami* and *Yekuana* Indians of *Roraima* state of northern Brazil held a protest to denounce the invasion of Yanomami land by international mining companies and national cattle ranchers. They have demanded from the authorities to remove them immediately, and also demonstrated that more than 1000 gold-miners are working on their land and polluting the river and forest with mercury, where cattle ranchers are invading and deforesting the eastern fringes of their land. These Yanomami indigenous people are living in the Amazon rainforest, where the forest is their only source of livelihood survival.

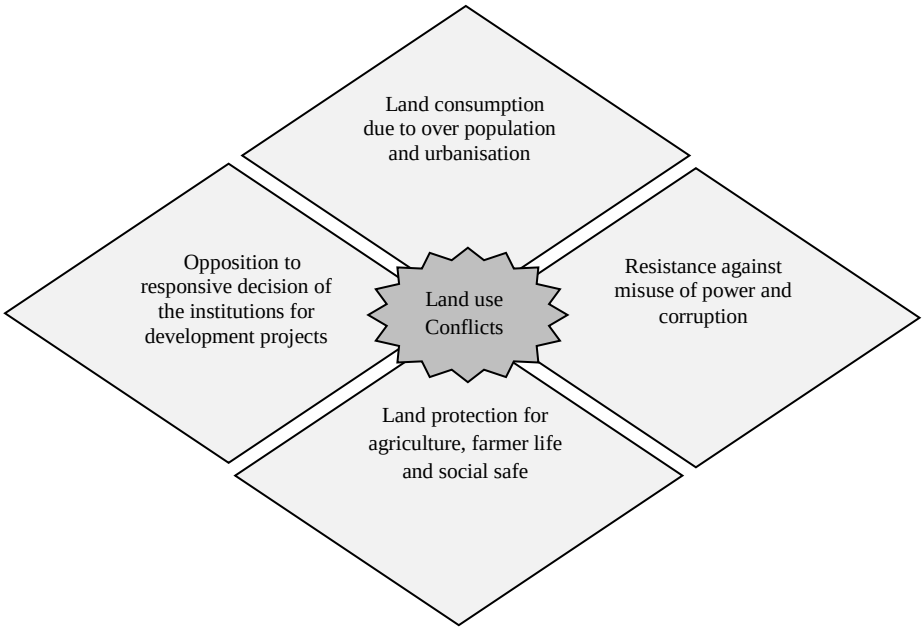
Source: Authors' extraction from *The Rio Times; Survival International* 09-04-2010.

Such conflicts seem to be the result of both need and greed, which not only degrade the natural resources, but also put the lives of indigenous people at risk. According to Ostrom (2007) "local people are dispossessed either due to failure to recognise their rights to land or due to invalidation of those rights by the state". In such economies careful management of natural resources and environmental landscapes are important for development, especially for socio-economic betterment in rural zones [Tscarntke, *et al.* (2005)], otherwise it will work beyond social welfare theory [Cheshire and Vermeulen (2009)]. Most of the resulting conflicts are driven by the underlying frustration of basic human needs and values that cannot be compromised [Abdalla and Timothy (1996)].

3.2. Land Use Conflict Features

A study of the regional press, corresponding to the case studies that are given in the preceding subsection (see Boxes 1–5) summarizes the main peculiarities which define and describe the driving forces of land use conflicts (see Figure 1).

Fig. 1. Land Use Conflict Driving Forces



Source: Authors' extraction from the *Daily Regional Press* (DRP) in developing countries.

The land use conflicts are disagreements resulting from the policy responsiveness of institutional behaviours, i.e. government and judiciary, for their decision towards the development projects. Thus, the decision for an infrastructural project, which would have a direct impact on the land owner's survival, would create tensions, and ultimately lead to a conflict of land use. Such conflicts emerge from situations in which the localities attempt to ignore or challenge those decisions as an overstrained power. It further reveals that in the developing world, such projects are initiated on the basis of increasing public needs (social safe), which are directly proportionate with the increase in population. Some decisions related to the projects are also made in a non-democratic way[2] and that is why there is opposition to the nature of such flawed projects.

For example, in the case of Chotiari water reservoir construction in Pakistan, the evicted families were referred to the courts for justice. At first, the courts proceeded with the land use and compensation related cases, but after inauguration of the reservoir in 2003, almost all cases were discarded without any decision, because of the involvement of high profile officials and bureaucrats [Nauman (2003)]. On the other hand, in the case of Lombok International Airport in Indonesia, despite regular agitations, government never invited land owners for a dialogue [LRAN (2007)]. Likewise, Ahmed Yani, one of the land owners led others affected to agitate, in order to raise their voices for compensation. He was accused and declared as a lunatic, and there is still no information about him, as he disappeared after the event. The incident of Mr Yani's disappearance has not only discouraged the local settlers to demand their compensation, but also suppressed their voices [Mataram (2008)]. Contrary to developed countries, there are few ways to express public opposition, and local population cannot use the voice channel [Hirschman (1970)] in order to express their will and their disagreement with the projects proposed by the authorities.

4. APPROACHES TOWARDS THE LAND USE CONFLICT PREVENTION: A DISCUSSION

This section provides insights on the misuse of political strategy and institutional inconsistency (lack of organised proximity between infrastructures promoters and local population). Readers are also informed as to how land use conflict preventive measures can be taken, in order to avoid violent oppositions and social incoherence, and to maintain the possibility of local development in emerging regions and countries.

4.1. Prevention Strategy and Dimension

In order to define or identify the successful resolution of conflicts and implementation of preventive measures, it is important to be aware of their causative factors [Burton (1993)]. Fundamentally, conflict prevention is defined as a range of actions or a set of instruments undertaken by an organisation to deal with a potential tension, before it turns into a conflict or violence [Bercivitch and Jackson (2009);

[2]Some projects seem to have roots in corruption and greed, which are doomed to benefit to a few stakeholders rather than to whole society or economy [Lama (2008); Nauman (2003); Sharma (2002)].

Clément (1997)]. Land use conflict prevention may be defined as the short term responses, and long term engagement towards the outbreak or recurrence of any conflict at any piece of land due to its economic, social, cultural or religious uses [Daniel (2010)]. To intervene for support, there is a need to promote culture of justice and good governance towards human and property rights with their ownership protections [Rooij (2007)], and to uphold the rule of law and respect pride of the inhabitants [Schlager and Ostrom (1992)]. According to Wehrmann (2008), "the prevention from land use conflicts can be achieved only by a combination of correcting institutional weaknesses and introducing good governance".

One of the solutions to avoid such conflicts at an early stage, is to keep local populations informed [Ackermann (2003)], or give awareness about the projects, as well as to increase the level of local democracy through participatory approaches. In this study, this approach, in particular is interpreted in terms of promotion of organised proximity links between the infrastructure developers and their local supports on the one hand, and the local population on the other [Torre and Rallet (2005); Magsi and Torre (2014)]. The concept of preventive diplomacy [Swanström and Weissmann (2005)] can be extracted from the intensity of the conflicts prevailing in the said regions, and further, these strategies can be referred to for application in the region. For better illustrations regarding the conflict prevention measures [OECD (2008)], it is important to have a look on some basic questions like, what are new factors/stakeholders contributing in prolonging conflict dynamics, and what are the interests, goals, positions, capacities and relationships of the stakeholders? Therefore, the decisions towards development projects must be made in the light of the causes and consequences of the prevailing land use conflicts, which will help in the best stage selection for prevention and management. For example, to make sure that the decision has not been taken in the interest of one group/stakeholder, which is going to affect directly or indirectly the other actors, but the criteria of "win-win" theory must be followed.

4.2. Promotion of Development Assumptions

An institutional framework is needed to optimise allocation of land resource and policy innovation, in order to build a sustainable socio-economic development, aiming at land use conflict prevention. Although, land use conflict nature varies across countries, some assumptions are proposed here for prevention of such issues, which are based upon public voices published in the regional press on currently prevailing land use conflicts in the developing countries (quoted in Boxes 1–5) coupled with the author's own experiences in the land use conflict research on various countries [Sheikh, *et al.* (2015); Liu (2014); Torre, *et al.* (2014); Magsi and Torre (2013)]. Fundamentally, the tensions and conflicts can largely be prevented through the promotion of governance structures, social relationships among conflict actors and by ensuring security to local inhabitants. It should always be the responsibility of political, administrative, and economic actors to manage state's affairs, where actors can easily exercise their rights, and can mediate their tensions before transforming into conflicts. For example, development of civil society, access and participation of local inhabitants during feasibility of the projects, demobilisation of agented people and development of ordinances for land and other natural resource planning and protection. Contrarily, if states keep benefitting the ruling class alone, it will surely lead to conflict and violent situations [Eitzen and Ninn (1990)].

Dynamics of spatial conflicts are based on reticular mobilisation of local population and stakeholders through information networks, exchange and sharing of resources that deploy controversial territorial governance, and lead to violent oppositions. As consequences, the protests and oppositions are directly related to the initiation of new public infrastructure projects on farmland as well as due to their unlawful strategic planning [Wang, *et al.* (2015)]. Moreover, before planning or initiating a development project a redress system related to land-acquisition, compensation and resettlement should be clearly established, which should ensure that the affected population may regain their former living standards and prestige [Schlager and Ostrom (1992)].

Therefore, the situation in developing countries (especially from ones the case studies are taken) is much more complex with respect to conflicts and oppositions. Because the networks and stakes are more intricate, legal protections are consistently lower, the aims and goals of the project are rarely explained to local stakeholders clearly, and the level of information of the local population about their rights is quite inconsistent. In the rural settings, land use problems are mostly created by influential landlords or politicians, because the owners of the land are unable to understand their rights, and at times, even they do not know about the economic value of their land. Thus, the process and structure in which use and control of the land is managed forcibly, and decisions are implemented without democratic process, can be termed as land governance failure [Palmer, *et al.* (2009); Borras-Jr and Franco (2010)]. As generally understood today, the range of actors in the land use policy decisions are seen in complexities due to lack of good governance.

5. CONCLUSION

The aim of this article is to contribute to the research on land use conflicts in the selected developing countries, which occupy an important place in social science literature and the daily press. These conflicts are of different types due to the involvement of various stakeholders, with their peculiar needs and their spatial and temporal scale. It can be defined that the land use conflicts are the result of the competition towards actual to future use of the land, which might have a higher probability of confrontation related to the level of information, and involvement of local population.

In this article, the main features of the existing land use conflicts in the developing countries selected, are explored, and then these are distinguished on the basis of competition between actors for the same piece of land. Authors' general thesis banks upon a pivotal factor—the lack of involvement of local inhabitants for a development project—leads to tensions and (violent) conflicts in the region. Sometimes, governments or political leaders impose their decisions forcibly due to their provocative and manipulative behaviours, or the involvement of the powerful personalities ignores local inhabitant's rights in a suppressed society. As a result, in most cases, people in developing countries are cornered to adopt violent pathways rather than to follow a legal route.. Furthermore, the rise of population also increases the demand of infrastructural projects, thus, land use conflicts may enhance as the pressure increases on the land, if preventive measures are not taken with respect to conflict sensitivity.

Therefore, research intervenes in the field work to prevent conflicts by creating change in people's attitudes, thought processes and relationships. It also focuses more on the supporting processes rather than concrete quantifiable outcomes. Because any

decision made with the conflict sensitivity will lead to a deeper understanding of the conflict dynamics, which will further potentially contribute in its actual prevention. These steps are crucial in order to ensure that the economic development of emerging regions or countries is not made at the expense of the wills and rights of the local populations.

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