

Online Lectures

A Ministry of Land, Infrastructure, Transport and Tourism (MLIT) website called “The Relocation of the Diet and Other Organizations” offers online lectures by experts from various fields such as academia and the business community. The following lectures have been added since November 2008. Contents of the lectures are provided in Japanese only.

URL ● <http://www.mlit.go.jp/kokudokeikaku/iten/onlinelecture/index.html>

No.132



● Lecturer:
Mieko Nishimizu,
Partner of Think Tank SophiaBank/
Former Vice-president of World Bank

Title:
Aiming for Trust-based Governance

No.135



● Lecturer:
Alex Karr,
Asian Culture Researcher,
Chairman of Iori Co.

Title:
Thorough Cleanup of National Land –
Local Cities Should Make Use of
Traditional Aesthetic Landscapes and
Tokyo Should Revitalize by Relax-
ation of Regulations

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● Lecturer:
Nobue Kunizaki,
President of the Crisis Management
Education Laboratory

Title:
Start the Flexible Relocation of Capital
Functions by Enhancing Security

No.136



● Lecturer:
Yuki Yasuda,
Professor of Sociology, Kansai University

Title:
Burning Bridges : Significance and
Challenges of the Relocation of Capital
Functions in Terms of Network
Analysis

No.134



● Lecturer:
Kimiyasu Shimazu,
Vice-chairman of Shimadzu Limited

Title:
Creating Regional Attractions Based
on History – Satsuma Renaissance
Activities and Regional Vitalization
Efforts

No.137



● Lecturer:
Hiroko Shou,
Head Director of Okinawa Cultural Society,
Former Vice-governor of Okinawa Pref.,
Honorable Professor at University
of the Ryukyus

Title:
The Decentralization and Relocation
of Capital Functions from the View-
point of Local Residents

We are planning to add the lectures by Hiroshi Fujiyama (Leader of the Shimane Prefecture Mountainous Region Research Center’s Regional Research Group) and Kenshi Hirogane (Manga Artist, Guest Professor of Yamaguchi University) at a later date.

Preparing for an Epicentral Earthquake in the Capital



Itsuki Nakabayashi, Professor, Tokyo Metropolitan University, Urban Environment Department

The importance of preparing for catastrophes by building a disaster-resistant city in the next 100 years

10 years have already passed since the 21st century started. During this period, destructive earthquakes have occurred almost every year and disasters caused by typhoons and floods have become increasingly frequent and more wide-spread (Table1).

Japan is entering a period of population decline for the first time in its history. Many recent natural disasters hit mountainous regions with declining populations and aging residents, resulting in severe damages and grave problems in terms of reconstruction (Fig.1).

There is concern that the 21st century will be the age of “earth convulsion” when many earthquakes will occur all over Japan, and also the age of “radical climate change” with more serious weather disasters caused by the progress of global warming. In the face of such an increase in risk, strengthening of disaster measures is our country’s urgent issue.

Half of the population of Japan lives in the three largest metropolitan areas, which are responsible for the majority of the economic activities of the country. Each of the three areas is located at the mouth of a large river, and many urban districts have been developed on alluvial plains and on low-elevation reclaimed land. The high flood risks of the areas are clearly shown in hazard maps.

In addition, a stochastic earthquake forecast map, which is a hazard map based on long-term evaluation of the possibility of mega-earthquakes (both major active fault type and ocean trench type), shows that the three metropolitan areas, as well as the Tokaido Shinkansen and Tomei-Meishin Expressway connecting them, are all located in areas with a high possibility of earthquakes of more than SHINDO-6-minus (Fig. 2).

The threat does not stop there. Consider the following scenario: “A great earthquake hit Metropolitan Area X one day in July and caused severe damage.

Table 1: Outline of Destructive earthquakes after Southern Hyogo Earthquake 1995 (prepared by the author)

Date of occurrence	Earthquake name	Mj*1	SHINDO*2 (max)	Casualties (incl. related deaths)
1995.1.17	Southern Hyogo Earthquake 1995 (Great Hanshin-Awaji Earthquake Disaster)	7.3	7	Dead/Missing(6,437)
2000.10.6	Western Tottori Earthquake	7.3	6-plus	Dead(0),Injured(182)
2001.3.24	Geiyo Earthquake	6.7	6-minus	Dead(2),Injured(288)
2003.7.26	Northern Miyagi Earthquake	6.4	6-minus	Dead(0),Injured(677)
2003.9.26	Tokachi-oki Earthquake	8.0	6-plus	Dead/Missing(2),Injured(849)
2004.10.23	Niigata Chuetsu Earthquake	6.8	7	Dead(68),Injured(4,805)
2005.3.25	Fukuoka Seiho-oki Earthquake	7.0	6-minus	Dead(1),Injured(1,087)
2007.3.25	Noto Hanto Earthquake	6.9	6-plus	Dead(1),Injured(356)
2007.7.16	Niigata Chuetsu-oki Earthquake	6.8	6-plus	Dead(15),Injured(2,345)
2008.6.14	Iwate Miyagi Nairiku Earthquake	7.2	6-plus	Dead/Missing(23),Injured(449)
2008.7.24	Northern Iwate Earthquake	6.8	6-plus	Dead(0),Injured(100)

*1 Mj: Japan Meteorological Agency's Magnitude of earthquakes
*2 SHINDO: Seismic intensity scale of Japan Meteorological Agency

Fig.1. Stochastic earthquake forecast map and epicenter locations of destructive earthquakes larger than Southern Hyogo Earthquake 1995

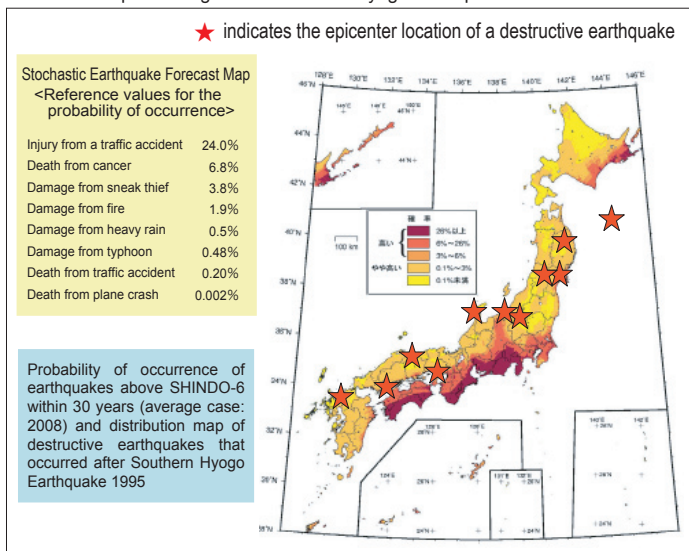
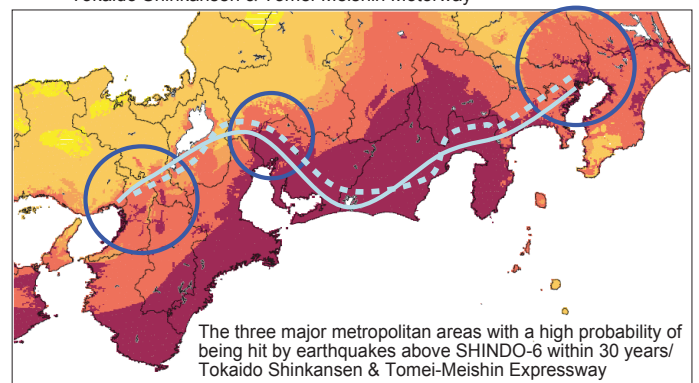


Fig.2. Stochastic Earthquake Forecast Map with three metropolitan areas plus Tokaido Shinkansen & Tomei-Meishin Motorway



Stochastic Earthquake Forecast Map created by the Ministry of Education, Culture, Sports, Science and Technology (Epicenters were added by the author)

Stochastic Earthquake Forecast Map created by the Ministry of Education, Culture, Sports, Science and Technology (With additions by the author)

Then tropical low pressure generated along the equator kept growing. One week after the earthquake, a super typhoon landed via Bay Y. In Metropolitan Area X, already suffering from earthquake damages, particularly in the low-elevation spots, liquefaction started to cause various problems including a malfunction of the sewage system, sinking river banks and the crippling of high-tide gates. The typhoon hitting that exact spot resulted in unexpected huge flood disasters because of high tides, inland water flooding and overflow and broken banks. Subway systems that had been less damaged in the earthquake were also submerged in water.” The possibility of experiencing such complex disasters cannot be ignored. In the 21st century, the entire nation must tackle the problems of both climate and earthquake disasters. If disaster countermeasures for metropolitan areas are not taken promptly and effectively, the country might face a fateful crisis.

The earthquake environment of the Tokyo area is distinctive among the three major metropolitan areas. Multiple earthquakes right beneath the capital are predicted to occur sometime in the 21st century. According to predictions, there is a 70 percent probability that the first one will hit within 30 years. Starting from the Ansei-tokai-nankai Earthquake in 1854, followed by the Ansei Edo Earthquake in 1855, the Meiji Tokyo Earthquake in 1894 and the Great Kanto Earthquake in 1923, the capital area has been hit by quakes at approximate intervals of several decades. A giant trench quake, like the next Great Kanto Earthquake, is predicted to occur in the 22nd century. When it comes to preparing for an epicentral earthquake in the capital, we must put top priority on the first quake with its 70% probability of occurrence within the next 30 years. However, in the long run, we must build a system to create quake and flood disaster-resistant cities in the next 100 years in view of the next epicentral earthquake and a subsequent giant trench earthquake.

Two Ways to Reduce Risk and Damage

The capital, Tokyo, is a global metropolis that has a direct effect not only on Japan but also on Asia and the rest of the world. Besides its political functions as the capital of Japan, it has economic functions that play very important roles in the world. In a limited sense, capital functions are the central functions of politics and administration that protect and maintain the nation. At the same time, however, Tokyo’s functions have greater significance as the core economic functions that support the world economy.

It is possible to distribute the core functions of politics and administration for risk dispersion by promoting decentralization and the implementation of a new regional system. However, the centralized economic core functions of Tokyo will require further evolution, especially in an age of population decline. Establishing disaster countermeasures for Tokyo is an urgent task. There is no time to waste if Tokyo wants to keep its position as a representative of Asia and continue to play a major role in the world economy together with Shanghai, Hong Kong and Singapore.

Japanese economic activities are led by the three major metropolitan areas, which include Osaka and Nagoya as well as the capital, Tokyo. All three metropolises are located in zones where the probability of disasters such as earthquakes, storms and floods is high. When a disaster occurs, areas with higher vulnerability sustain larger amounts of damage. That probability is called “risk.” There are two ways to reduce risk and damage.

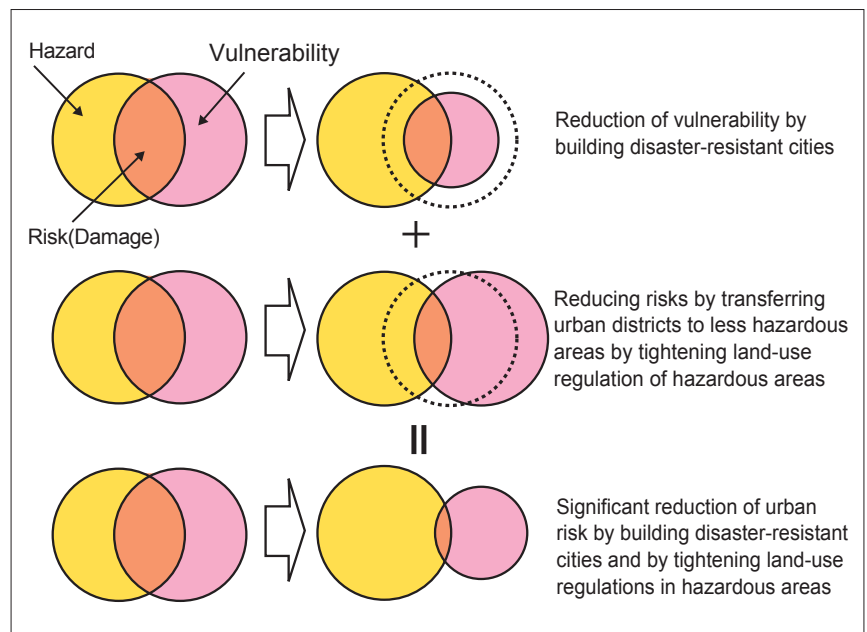
One is to build disaster-resistant cities by correcting and reducing their underlying vulnerability to disasters. Preparation and efficient promotion of disaster-coping activities as well as recovery and reconstruction measures in advance can also reduce a city’s vulnerability to disaster. The other approach involves relocating cities to less hazardous areas. The most effective method to reduce the risk of disaster comes out of a combination of the two: building disaster-resistant cities by reinforcing and updating existing infrastructure and transferring urban

districts to less hazardous areas by tightening land-use regulations in the high-risk areas.

Through these approaches, we can take advantage of the functional capacity that the existing city has accumulated. (Fig 3) During the population increases of the 20th century, discussion of the relocation of capital functions started in response to the over-concentration of Tokyo. Since then, the nature of the issue has changed to aiming to secure capital functions in times of earthquakes and other disasters; however, relocating capital functions to less hazardous areas requires a huge amount of money and is not a desirable approach in the 21st century, with its population decline and aging. No matter what part of Japan capital functions are relocated to, there is no guarantee that an earthquake will not hit the area the next day(See Fig. 1). In my opinion, the funds that would be necessary for the relocation should be appropriated to improve civil affairs such as welfare.

In order for Tokyo to fulfill its role as the capital, it must start a 100-year-long scheme to become a compact city that responds to this time of population decline. Realizing the idea requires the immediate enhancement of disaster-preventive measures for existing facilities, as well as the rearrangement of urban districts based on a land-use plan which focuses more on urban hazards. Both Tokyo’s “preliminary reconstruction measures” and “post-disaster reconstruction measures” are significant issues in preparing for a predicted epicentral earthquake in the capital.

Fig.3. The concepts of vulnerability reduction and damage reduction based on isolation from hazards (Prepared by the author).



The Relocation of Capital Functions in Kazakhstan

Overview of the Country

The Republic of Kazakhstan is a young country that became independent in 1991 after the collapse of the Soviet Union. Its area is approximately 2,720,000 km², which makes it the 9th largest country in the world, about seven times larger than Japan. It is a multiethnic nation that has a population of 15,570,000 consisting mainly of Kazak (approx. 60%) and Russian (approx. 25%) people (as of 2008).

Summary of the Relocation of Capital Functions

In 1997, soon after independence, the capital of Kazakhstan was relocated from Almaty, which is in the southern part of the country near the Chinese and Kirghiz border, to Astana (formerly Akmola) in the north. For some time after the relocation, old facilities were used as governmental offices. In the next year, the capital's basic design was decided through an international competition and capital development started based on that design. In 2004, with the completion of major facilities, including the presidential office, the central government offices, the parliament building and the Supreme Court, the construction of the capital area was almost finished.

There were four factors behind the relocation of capital functions.

- (1) The need to strengthen the country from a geopolitical point of view. (Astana had the advantage of accessibility in all four directions since it was located in the middle of Eurasia.)
- (2) The need to place the capital in the center of the country, well away from the borders, for security reasons.
- (3) The expectation that the relocation of the capital would have a positive impact on the country's economy.
- (4) The desire to contribute to the formation of Kazakhstan as a multiethnic nation by relocating the capital to a place in which a variety of ethnic groups lived.

In addition, the following factors have been pointed out: (1) the prevention of separatist movements in the northern regions of Kazakhstan, where a large number of Russians reside, and (2) the risk of major earthquakes due to the Almaty active fault, as well as the risk of other disasters such as mudslides, avalanches and the high cost of countermeasures.

When selecting candidate cities, major cities in the country were evaluated based on thirty-two criteria that the capital should satisfy. Among the criteria, factors such as climate, landscape, risk of earthquakes, environment, transportation and communication infrastructure, the number of usable facilities and the availability of human resources were considered to be important social and economic indicators.



Parliament House
Upper House (left)
Lower House (right)

The Republic of Kazakhstan



Source: Website of the Embassy of the Republic of Kazakhstan in Japan (with some addition and alteration)

Overall, Astana was selected as the new capital because it had a large population (approx. 200,000), was located almost in the center of the country and was an important point for transportation.

The Process of the Relocation of Capital Functions

- (1) Up to 1994 - Candidate cities were selected based on the thirty-two criteria that the new capital was required to satisfy.
- (2) 1994 - A resolution concerning the relocation was passed through the upper house.
- (3) 1995 - A presidential order for the relocation was issued.
- (4) 1998 - The name of the new capital was changed from Akmola to Astana.
- (5) 1998 to 2001 - An international competition was held for the basic design of the new capital, and the master plan was formulated.
- (6) 2004 - The relocation of the central government offices was completed.

Planning and Streamlining of the New Capital

The relocation of capital functions to Astana was executed in the following three phases.

- Phase 1 (1996 - 1997)
Relocating legislative and judicial offices as well as the offices that assumed the core functions of administrative systems such as economy, industry and defense.
- Phase 2 (1998 - 2004)
Relocating other organizations of the central government.
- Phase 3 (after 2000)
Developing the whole capital area, including the surrounding regions, as the center of industry and culture.

In the first phase, the relocation was done by repairing the old facilities that were built during the time when the country was a part of the Soviet Union. The presidential office, the upper and lower houses, and as well as the government ministries moved into these buildings. The capital area was almost completed in the third phase. Currently, Kazakhstan is actively working to streamline major facilities including stadiums in time for the country's 20th anniversary in 2011. Not all government employees who worked in Almaty have been transferred to Astana. Only about 3,600 (approx. 20% of the total), mainly top officials, were relocated and the shortage was filled with the newly employed in Astana.

The Relocation of Capital Functions in Kazakhstan

The area of Astana is 710 km² (Tokyo metropolitan area is 622 km²) and the government and diplomatic offices, together with the new city center, occupy 9.5 km² (Tokyo's Chiyoda Ward occupies 11.6 km²). The planned population was 495,000 as of 2010. However, due to population inflow from the surrounding areas and other reasons, the population of the capital had already surpassed the planned number in 2002. As of 2008, the population had reached 602,000. As the research done in 2005 estimated the population would reach 1.2 million in 2030, the master plan is currently being modified. The accumulated cost for the relocation of capital functions between 2001 and 2007 is 6.5 billion U.S. dollars. Of this, 4.2 billion dollars are for the facilities that have been already completed and the rest is for the ones under construction.

The Transformation of the New Capital, Astana, and the Old Capital, Almaty

Astana has been positioned as a special city that has authority equal to that of a state. Based on a law regarding capital positioning that stipulated the responsibilities of the capital, the city plays a central role in overall administrative operations including infrastructure development, industrial development, urban planning, education and culture. On the other hand, Almaty is also positioned as a special city. To improve the infrastructure of the city as a financial center in Central Asia, both hardware and software approaches have been promoted, such as establishing ARA RFCA (the Agency of the Republic of Kazakhstan on Regulations of Activities of the Regional Financial Center of Almaty City) and constructing an office zone for financial institutions.

Evaluation of the Relocation of Capital Functions

The relocation of capital functions, promoted at the initiative of President Nazarbayev, has been positively evaluated as a whole by Kazakh citizens, business enterprises and government staff.

This is because the streamlining of Astana has progressed satisfactorily and the national economy has grown rapidly after a long period of stagnation. In Almaty, there were many negative attitudes toward the relocation; however, due to the increase in a once-decreasing population and the revitalization of the economy, few complaints are heard at present.

The Characteristics of the Relocation of Capital Functions in Kazakhstan

(1) Reorganizing the Land Use through Relocation

The outflow of Russians after the establishment of Kazakhstan caused economic stagnation in the northern region of the country. Since the relocation of capital functions, however, Astana, as a pole in the northern region with legislative, judicial and administrative functions, has been playing a significant role in the country's reorganization together with Almaty, which serves mainly economic functions.

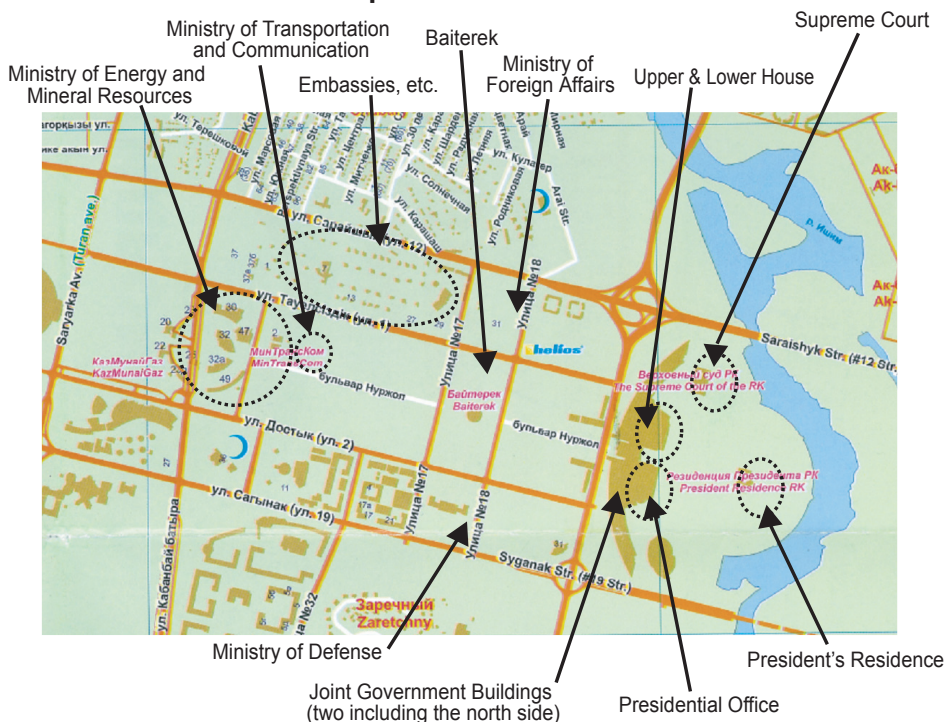
(2) Streamlining of the Capital in Terms of Security and Disaster Prevention

The new capital was selected with due consideration to the old capital Almaty's disaster risks, such as earthquakes and landslides, as well as its position in relation to neighboring countries. It is rare among capital relocation examples for disaster risks to be addressed as reasons for the relocation. Also, Astana takes countermeasures, including building dams and banks, against the threat of snowmelt-related floods in spring.

(3) Utilizing the City-State System

With the relocation, Astana and Almaty were designated as special cities that are considered equal to states. They are differentiated from other cities in terms of their local systems and have an advantage in urban development projects. In particular, the fact that Almaty, valued as the former capital, was made into the country's financial center appears to be a kind of compensatory measure in the face of the relocation of the capital.

Overview of the Astana Capital Area



Presidential Office

Source: Map obtained in Astana (addition made by the author)

The MLIT receives visitors from Gyeonggi Province in Korea

The Ministry of Land, Infrastructure, Transportation and Tourism received eight visitors from the government of Gyeonggi Province, the Gyeonggi Federation of Economic Organizations, and the Gyeonggi Research Institute, which is a think-tank jointly funded and established by Gyeonggi Province, local counties, cities and businesses.

After a briefing by the Capital Functions Relocation Planning Division on the Tokyo concentration issue, the background of the relocation of capital functions, and primary measures related to streamlining the capital, MLIT staff and the visitors exchanged opinions.

In Korea, the construction of a special administrative district is currently underway. The project, started in 2007, is to relocate some government offices to Sejong, a special autonomous city located about 120 km south-southeast of the capital, Seoul. The participants from the MLIT listened carefully to the visitors' explanation of the project purpose, the construction prospects and the thoughts

of the people in Gyeonggi Province about the establishment of Sejong special administrative district. The Korean also explained that, even after a change of Korean administration and during a time of worldwide recession, the project has continued with the aim of rectifying capital sphere concentration.

Note: Gyeonggi Province surrounds Seoul and forms the capital sphere together with Incheon.



Students Learn about “The Relocation of the Diet and Other Organizations”



Two junior high school students from Fujimigaoka Educational Institution in Tokyo visited the MLIT for an experiential learning program. After learning about the general duties of the Ministry and visiting related facilities, they received a brief explanation of the relocation of capital functions. The students studied the subject with a serious attitude, and at the same time had fun experiencing a virtual city via with computer images and challenging themselves by taking some quizzes.

■ Visit MLIT's Website for Various Information ■

The website of Ministry of Land, Infrastructure, Transportation and Tourism provides a wide variety of information about the Relocation of the Diet and Other Organizations. If you have any inquiries about the articles on New Era or other items, please contact us.

MLIT's Website: <http://www.mlit.go.jp/kokudokeikaku/iten/index.html>

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