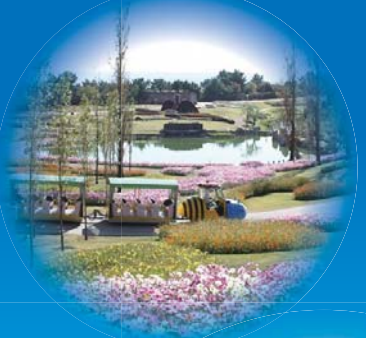


For the 2016 Fiscal Year  
Kinki Regional Development  
Bureau Summary

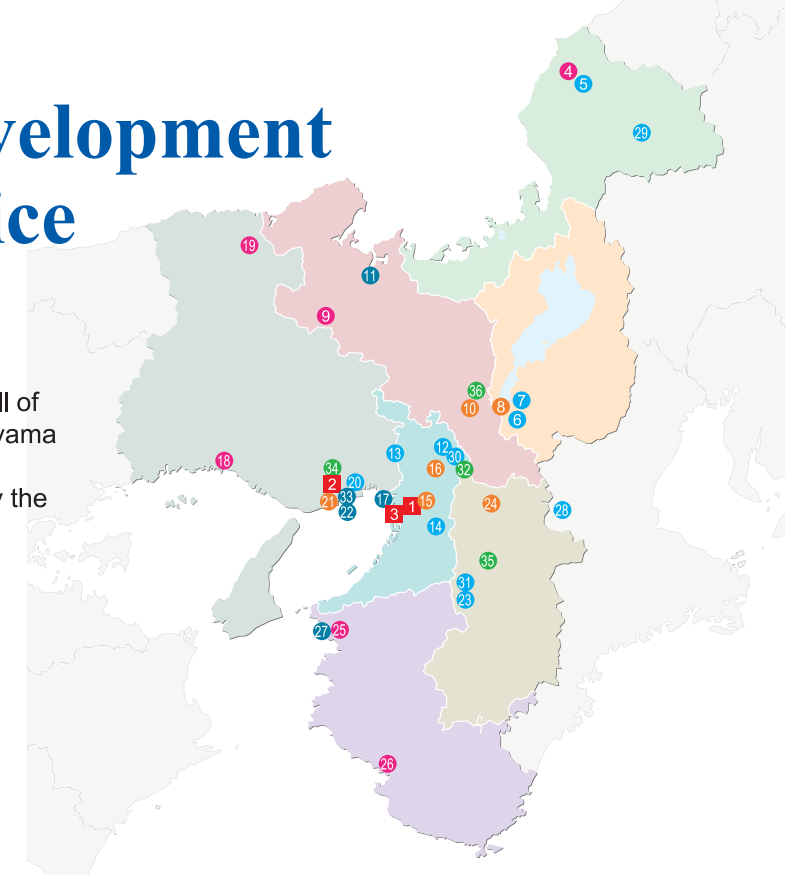


Regional •  
Kinki •  
Energetic  
Towards a  
Bright Future



# Kinki Regional Development Bureau • Main Office Locations

- The Kinki Regional Development Bureau oversees all of Fukui, Shiga, Kyoto, Osaka, Hyogo, Nara and Wakayama prefectures as well as a portion of Mie prefecture.
- Fukui prefecture's ports and airports are overseen by the Hokuriku Regional Development Bureau.
- The Yodogawa River Office also oversees parks.



- Legend
- Main Office
  - River, Road
  - River
  - Road
  - Port, Airport
  - Other

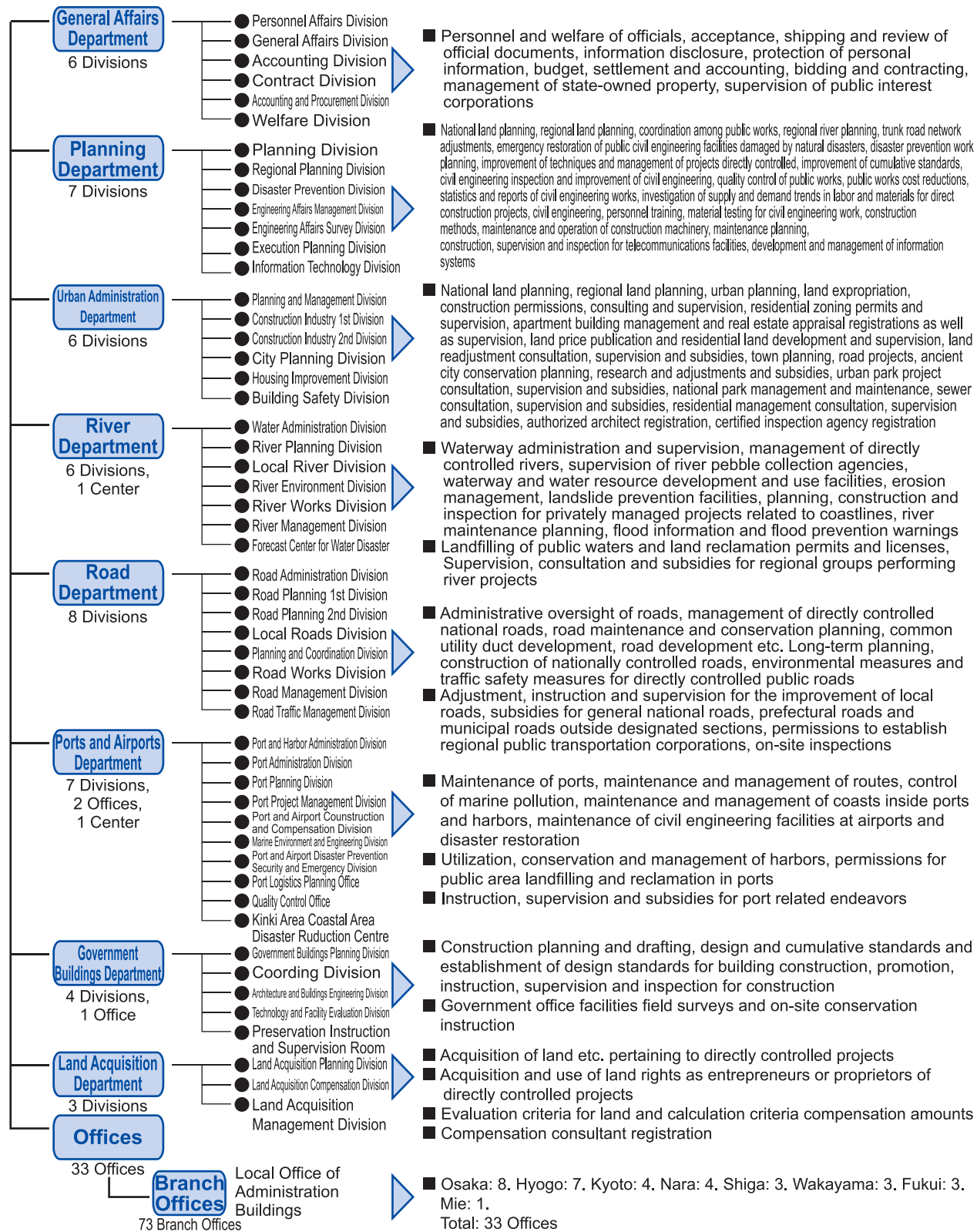
1	Kinki Regional Development Bureau	1-5-44 Otemae, Chuo-ku, Osaka-shi, Osaka 540-8586	Osaka Joint Government Building	06 (6942) 1141	<a href="http://www.kkr.mlit.go.jp/">http://www.kkr.mlit.go.jp/</a>
2	Kinki Regional Development Bureau (Ports and Airports)	29 Kaigandori, Chuo-ku, Kobe-shi, Hyogo 650-0024	Kobe Regional Joint Government Building	078 (391) 7571	<a href="http://www.pa.kkr.mlit.go.jp/">http://www.pa.kkr.mlit.go.jp/</a>
3	Kinki Regional Development Bureau (Conservation Planning and Supervisor's Office)	4-1-6 Nakanoshima, Kita-ku Osaka-shi, Osaka 530-0005		06 (6443) 1791	<a href="http://www.kkr.mlit.go.jp/kantoku/">http://www.kkr.mlit.go.jp/kantoku/</a>
4	Fukui Office of River and National Highway	2-14-7 Hanandominami, Fukui-shi, Fukui 918-8015		0776 (35) 2661	<a href="http://www.kkr.mlit.go.jp/fukui/">http://www.kkr.mlit.go.jp/fukui/</a>
5	Asuwagawa Dam Construction Office	Polaris Building, 1-2111 Seiwa, Fukui-shi, Fukui 918-8239		0776 (27) 0642	<a href="http://www.kkr.mlit.go.jp/asuwa/">http://www.kkr.mlit.go.jp/asuwa/</a>
6	Biwako River Office	4-5-1 Kurozu, Otsu-shi, Shiga 520-2279		077 (546) 0844	<a href="http://www.kkr.mlit.go.jp/biwako/index.php">http://www.kkr.mlit.go.jp/biwako/index.php</a>
7	Daidogawa Dam Construction Office	1-19-32 Ogaya, Otsu-shi, Shiga 520-2144		077 (545) 5675	<a href="http://www.kkr.mlit.go.jp/daido/">http://www.kkr.mlit.go.jp/daido/</a>
8	Shiga National Highway Office	4-5 Tatsugaoka, Otsu-shi, Shiga 520-0803		077 (523) 1741	<a href="http://www.kkr.mlit.go.jp/shiga/">http://www.kkr.mlit.go.jp/shiga/</a>
9	Fukuchiyama Office of River and National Highway	2459-14 Koaza-Imaoka, Aza-hori, Fukuchiyama-shi, Kyoto 620-0875		0773 (22) 5104	<a href="http://www.kkr.mlit.go.jp/fukuchiyama/index.php">http://www.kkr.mlit.go.jp/fukuchiyama/index.php</a>
10	Kyoto National Highway Office	808 Minamifudondo-cho, Shiokoji-sagaru, Nishinotoin-dori, Shimogyo-ku, Kyoto-shi, Kyoto 600-8234		075 (351) 3300	<a href="http://www.kkr.mlit.go.jp/kyoto/index.php">http://www.kkr.mlit.go.jp/kyoto/index.php</a>
11	Maizuru Port Office	910 Aza-Shimofukui, Maizuru-shi, Kyoto 624-0946		0773 (75) 0844	<a href="http://www.pa.kkr.mlit.go.jp/maizuruport/">http://www.pa.kkr.mlit.go.jp/maizuruport/</a>
12	Yodogawa River Office	2-2-10 Shinmachi, Hirakata-shi, Osaka 573-1191		072 (843) 2861	<a href="http://www.kkr.mlit.go.jp/yodogawa/index.php">http://www.kkr.mlit.go.jp/yodogawa/index.php</a>
13	Inagawa River Office	2-2-39 Ueikedada, Ikeda-shi, Osaka 563-0027		072 (751) 1111	<a href="http://www.kkr.mlit.go.jp/inagawa/index.php">http://www.kkr.mlit.go.jp/inagawa/index.php</a>
14	Yamatogawa River Office	3 Chome-8-33 Kawakita, Fujiidera-shi, Osaka 583-0001		072 (971) 1381	<a href="http://www.kkr.mlit.go.jp/yamato/index.php">http://www.kkr.mlit.go.jp/yamato/index.php</a>
15	Osaka National Highway Office	2-12-35 Imafukunishi, Joto-ku, Osaka-shi, Osaka 536-0004		06 (6932) 1421	<a href="http://www.kkr.mlit.go.jp/osaka/index.php">http://www.kkr.mlit.go.jp/osaka/index.php</a>
16	Naniwa National Highway Office	3 Chome-2-3 Minaminakaburi, Hirakata-shi, Osaka 573-0094		072 (833) 0261	<a href="http://www.kkr.mlit.go.jp/naniwa/index.php">http://www.kkr.mlit.go.jp/naniwa/index.php</a>
17	Osaka Harbor and Airport Development Office	ORC Ichibangai, 1-2-1 Benten, Minato-ku, Osaka-shi, Osaka 552-0007		06 (6574) 8561	<a href="http://www.pa.kkr.mlit.go.jp/osakaport/">http://www.pa.kkr.mlit.go.jp/osakaport/</a>
18	Himeji Office of River and National Highway	1-250 Hojo, Himeji-shi, Hyogo 670-0947		079 (282) 8211	<a href="http://www.kkr.mlit.go.jp/himeji/index.php">http://www.kkr.mlit.go.jp/himeji/index.php</a>
19	Toyouka Office of River and National Highway	10-3 Saiwaicho, Toyouka-shi, Hyogo 668-0025		0796 (22) 3126	<a href="http://www.kkr.mlit.go.jp/toyouka/index.php">http://www.kkr.mlit.go.jp/toyouka/index.php</a>
20	Rokko Sabo Office	3-13-15 Sumiyoshi Higashimachi, Higashinada-ku, Kobe-shi, Hyogo 658-0052		078 (851) 0535	<a href="http://www.kkr.mlit.go.jp/rokko/">http://www.kkr.mlit.go.jp/rokko/</a>
21	Hyogo National Highway Office	3-11 Hatobacho, Chuo-ku, Kobe-shi, Hyogo 650-0042		078 (334) 1600	<a href="http://www.kkr.mlit.go.jp/hyogo/">http://www.kkr.mlit.go.jp/hyogo/</a>
22	Kobe Port Office	7-30 Onohamacho, Chuo-ku, Kobe-shi, Hyogo 651-0082		078 (331) 6701	<a href="http://www.pa.kkr.mlit.go.jp/kobeport/">http://www.pa.kkr.mlit.go.jp/kobeport/</a>
23	Kii Sanchi Sabo Office	1681 Sanzaicho, Gojo-shi, Nara 637-0002		0747 (25) 3111	<a href="http://www.kkr.mlit.go.jp/kiisanchi/">http://www.kkr.mlit.go.jp/kiisanchi/</a>
24	Nara National Highway Office	3 Chome-5-11 Omiyacho, Nara-shi, Nara 630-8115		0742 (33) 1391	<a href="http://www.kkr.mlit.go.jp/nara/index.php">http://www.kkr.mlit.go.jp/nara/index.php</a>
25	Wakayama Office of River and National Highway	16 Nishimigiwacho, Wakayama-shi, Wakayama 640-8227		073 (424) 2471	<a href="http://www.kkr.mlit.go.jp/wakayama/">http://www.kkr.mlit.go.jp/wakayama/</a>
26	Kinan Office of River and National Highway	142 Nakamaro, Tanabe-shi, Wakayama 646-0003		0739 (22) 4564	<a href="http://www.kkr.mlit.go.jp/kinan/index.php">http://www.kkr.mlit.go.jp/kinan/index.php</a>
27	Wakayama Port Office	1334 Yakushubata-no-tsubo, Minato, Wakayama-shi, Wakayama 640-8404		073 (422) 8186	<a href="http://www.pa.kkr.mlit.go.jp/wakayamaport/index/index.html">http://www.pa.kkr.mlit.go.jp/wakayamaport/index/index.html</a>
28	Kizugawa-Jouryu River Office	812-1 Kiyamachi, Nabari-shi, Mie 518-0723		0595 (63) 1611	<a href="http://www.kkr.mlit.go.jp/kizujyo/">http://www.kkr.mlit.go.jp/kizujyo/</a>
29	Kuzuryugawa Integrated Dam and Reservoir Group Management Office	29-28 Nakano, Ono-shi, Fukui 912-0021		0779 (66) 5300	<a href="http://www.kkr.mlit.go.jp/kuzuryu/">http://www.kkr.mlit.go.jp/kuzuryu/</a>
30	Yodogawa Integrated Dam and Reservoir Group Management Office	10-1 Yamadaike Kitamachi, Hirakata-shi, Osaka 573-0166		072 (856) 3131	<a href="http://www.kkr.mlit.go.jp/yodoto/">http://www.kkr.mlit.go.jp/yodoto/</a>
31	Kinokawa Integrated Dam and Reservoir Group Management Office	1681 Sanzaicho, Gojo-shi, Nara 637-0002		0747 (25) 3013	<a href="http://www.kkr.mlit.go.jp/kinokawa/index.php">http://www.kkr.mlit.go.jp/kinokawa/index.php</a>
32	Kinki Technical and Engineering Office	11-1 Yamadaike Kitamachi, Hirakata-shi, Osaka 573-0166		072 (856) 1941	<a href="http://www.kkr.mlit.go.jp/kingi/">http://www.kkr.mlit.go.jp/kingi/</a>
33	Kobe Research and Engineering Office for Port and Airport	7-30 Onohamacho, Chuo-ku, Kobe-shi, Hyogo 651-0082		078 (331) 0057	<a href="http://www.pa.kkr.mlit.go.jp/kobegicyo/">http://www.pa.kkr.mlit.go.jp/kobegicyo/</a>
34	Akashi Kaikyo National Government Park Office	29 Kaigandori, Chuo-ku, Kobe-shi, Hyogo 650-0024	Kobe Regional Joint Government Building	078 (392) 2992	<a href="http://www.kkr.mlit.go.jp/akashi/">http://www.kkr.mlit.go.jp/akashi/</a>
35	Asuka Historical National Government Park Office	538 Oaza-Hirata, Asuka-mura, Takaichi-gun, Nara 634-0144		0744 (54) 2662	<a href="http://www.kkr.mlit.go.jp/asuka/">http://www.kkr.mlit.go.jp/asuka/</a>
36	Kyoto Government Buildings Office	Kyoto Second Regional Government Building 34-12 Higashi-Manutamachi, Kawabata-higashi-ku, Manutamachi, Sakyo-ku, Kyoto-shi, Kyoto 606-8395		075 (752) 0505	<a href="http://www.kkr.mlit.go.jp/kyoei/">http://www.kkr.mlit.go.jp/kyoei/</a>

# Kinki Regional Development Bureau Summary

## Office Jurisdiction

Bureaus are located in both Kobe and Osaka cities. Framework includes Administrative, Construction Planning, Rivers, Roads, Ports and Harbors, Maintenance and Land for a total of 8 Departments, 47 divisions, 3 offices and 2 centers (Ports and Harbors are controlled in Kobe). To fulfil the duties of the bureau there are 33 offices with 73 branches. As of July 1<sup>st</sup>, 2015 there are 2,271 employees of the Kinki Regional Development Bureau that carry out the duties of the bureau.

## Kinki Regional Development Bureau Framework



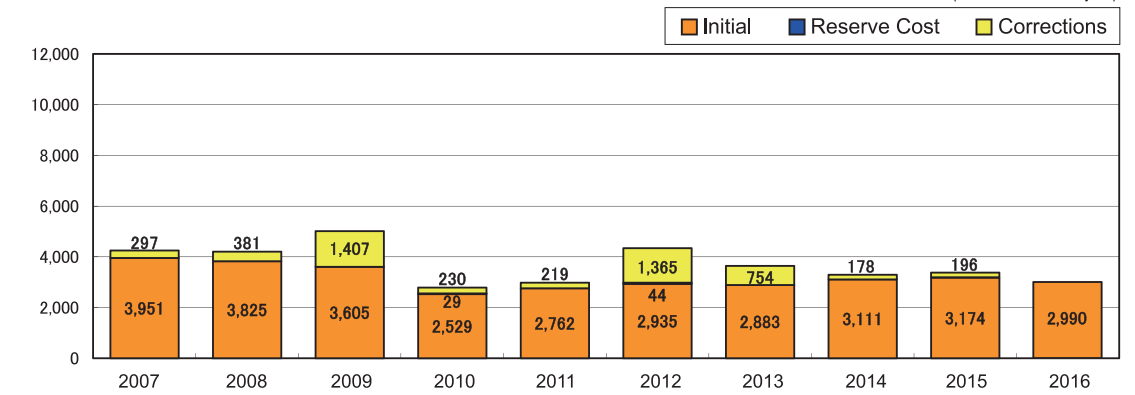
## Kinki Regional Development Bureau History

March 1874	The Home Ministry Osaka Branch of Civil Engineering was established.
May 1875	Home Ministry Osaka Branch of Civil Engineering had its name changed to Home Ministry Civil Engineering Osaka Bureau.
January 1877	The Home Ministry Civil Engineering Osaka Bureau was restructured and renamed to Home Ministry Yodo River Branch of Civil Engineering (Yodo River Management and Construction).
July 1886	Following the orders of the Supervising Officer of Civil Engineering, the bureau was reorganized into the 4 <sup>th</sup> Ward Supervision Office and gained direct control over the Chubu and Kinki areas and began performing and supervising civil engineering works
July 1894	Name changed to Fifth Ward Civil Supervision Office. Jurisdiction changed to Kinki, Tokushima and Kochi areas.
April 1905	Name changed to Civil Engineering Office, Osaka Branch of the Ministry of Home Affairs. Supervision authority was transferred to the Ministry and the civil engineering office absorbed responsibility for civil engineering for directly controlled land.
April 1919	Civil Engineering Office, Kobe Branch of the Ministry of Home Affairs was established. The jurisdiction of the office in Osaka changed.
November 1943	The Harbor Division changed to the Transport Ministry of Communication, 3 <sup>rd</sup> Port Construction Department. The Osaka Civil Engineering office changed into the Kinki Civil Engineering Office of the Ministry of Home Affairs and under order of Transport Ministry of Communication, 3 <sup>rd</sup> Port Construction Department was merged with the Kobe office and the jurisdiction changed to include everything east of Hyogo due to the establishment of the Chubu Shikoku office.
May 1945	Because of government revisions, the Transport Ministry of Communication, 3 <sup>rd</sup> Port Construction Department became the Ministry of Transportation 3 <sup>rd</sup> Port Construction Department.
January 1948	Home Affairs changes into the Prime Minister Office Kinki District Construction Bureau and became an the local office for the Prime Minister's Office
July 1948	According to the founding of the Ministry of Construction, the Prime Minister Office Kinki District Construction Bureau had its name changed to Ministry of Construction Kinki District Construction Bureau
August 1952	Ministry of Transportation 3 <sup>rd</sup> Port Construction Department had its name changed to Ministry of Transportation 3 <sup>rd</sup> Port Construction Bureau.
December 1958	Ministry of Construction Kinki District Construction Bureau moved from 2-6 Tosabori-dori, Nishi-ku, Osaka to its current location at the Osaka Joint Government Building at 1-5-44 Otemae, Chuo-ku, Osaka.
May 1965	Due to a revision in the Ministry of Transportation Installation Law, the Ministry of Transportation 3 <sup>rd</sup> Port Construction Bureau absorbed the duties of airport engineering works. The Airport Engineering Division was established.
January 2001	Due to the reorganization of ministries and agencies, the Ministry of Construction Kinki District Construction Bureau and the Ministry of Transportation 3 <sup>rd</sup> Port Construction Bureau were merged. Furthermore, the Ministry of Land, Infrastructure and Transport Kinki Regional Development Bureau was established.

## Kinki Regional Development Bureau Budget Change

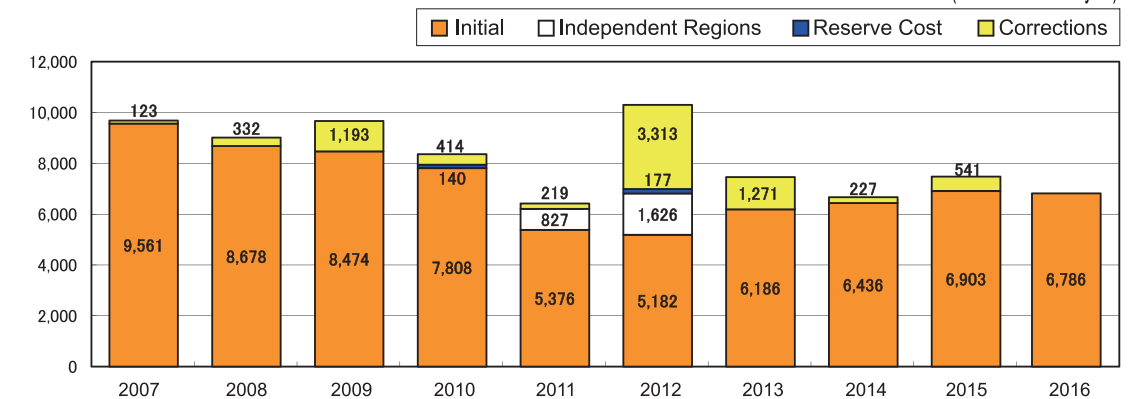
### Kinki Regional Development Bureau Budget Change (Direct Control)

(Unit: 100 million yen)



### Kinki Regional Development Bureau Budget Change (Subsidies and grants)

(Unit: 100 million yen)



### Overview Of Budget Corrections From 2007 Onward (Excluding Direct Control and Treasury Debt Burden Act)

(Unit: 1 million yen)

	FY 2007		FY 2008		FY 2009		FY 2010		FY 2011	
	Initial	Corrections	Initial	Corrections	Initial	Corrections	Initial	Corrections	Initial	Corrections
Flood Control	77,845	14,140	82,722	9,563	75,510	28,003	52,255	5,589	59,376	4,602
Coasts	599	0	552	20	723	1,189	843	120	2,096	50
Road Maintenance	273,484	12,400	252,735	22,035	256,270	35,500	186,107	17,129	180,225	15,236
Harbors	35,341	452	37,937	4,315	18,626	75,718	6,581	210	22,545	250
National Parks etc.	3,391	0	4,238	0	4,170	200	3,159	0	4,839	0
(General Public Total)	390,660	26,992	378,184	35,933	355,299	140,610	248,945	23,048	269,081	20,138
Office Building Maintenance	2,655	2,702	3,209	2,187	3,884	60	3,647	0	6,308	1,751
Airports	1,789	0	1,109	0	1,349	0	303	0	834	0
(Total)	395,104	29,694	382,502	38,120	360,532	140,670	252,895	23,048	276,223	21,889

	FY 2012		FY 2013		FY 2014		FY 2015		FY 2016	
	Initial	Corrections	Initial	Corrections	Initial	Corrections	Initial	Corrections	Initial	Corrections
Flood Control	68,919	41,279	72,241	16,035	76,522	3,922	77,859	12,920	72,022	-
Coasts	2,478	512	2,089	0	2,302	0	1,525	-	2,215	-
Road Maintenance	184,282	82,952	173,705	47,469	189,623	12,583	196,462	6,524	178,086	-
Harbors	23,193	10,282	28,217	11,518	33,607	1,000	34,544	200	33,775	-
National Parks etc.	3,335	56	3,883	150	4,210	0	4,954	0	6,154	-
(General Public Total)	282,206	135,081	280,134	75,172	306,264	17,504	315,344	19,644	292,253	-
Office Building Maintenance	11,272	1,437	8,142	260	4,847	313	2,068	0	6,721	-
Airports	0	0	0	0	0	0	0	0	0	-
(Total)	293,478	136,518	288,276	75,432	311,111	17,817	317,412	19,644	298,974	-

\* Service Handling Fees are excluded from FY 2010 on

# Current Kinki Region Information

**Total Length of Protected River ways**  
 Nationwide Total 88,068.0km  
 Kinki Region Total 10,384.6km (11.8%)

Source: Ministry of Land, Infrastructure and Commerce: Water Management; Homeland Security Bureau Protected River ways Total Length Report (Current As of April 30<sup>th</sup>, 2014)  
**Maintenance Rate of Directly Controlled Embankments**  
 Nationwide Total: 66.2%

$\times \text{ Embankment Maintenance Rate} = \frac{\text{Current Embankment Length}}{\text{Necessary Embankment Length}}$   
**Maintenance Rate of Directly Controlled Embankments**  
 Kinki Region Total: 51.5%

Source: Ministry of Land, Infrastructure and Commerce: Water Management; Homeland Security Bureau: Quality of Directly Controlled River Maintenance Facilities (Current as of 2015)

**Total Length of Specified National Roads**  
 Nationwide Total 23,708.9km  
 Kinki Region Total 2,168.1km (9%)

**Maintenance Rate**  
 Nationwide Total: 68.6%

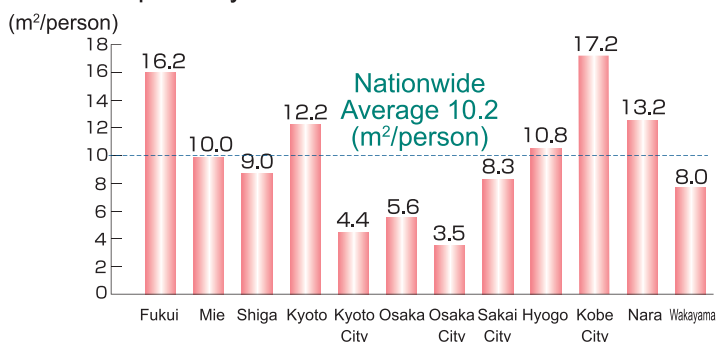
$\times \text{ Maintenance Rate} = \frac{\text{Serviced Total}}{\text{Actual Total}}$   
**Maintenance Rate**  
 Kinki Region Total: 61.4%

Source: 2015 Annual Report on Road Statistics

**Urban Area Total Land Area**  
 Nationwide Total: 1,448,003ha  
 Kinki Region Total: 254,267ha (17.6%)  
 7 Prefectures Total (Excluding Mie Prefecture)

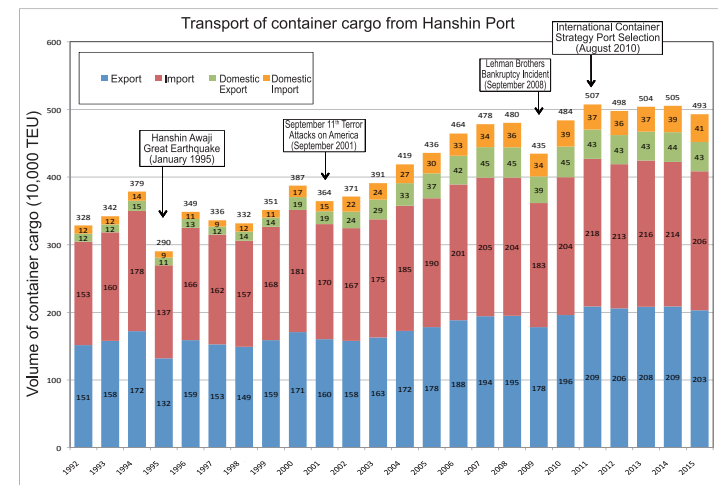
Source: 2014 City Planning Annual Report (Current As of March 31<sup>st</sup> 2014)

**Per Capita City Park Area**

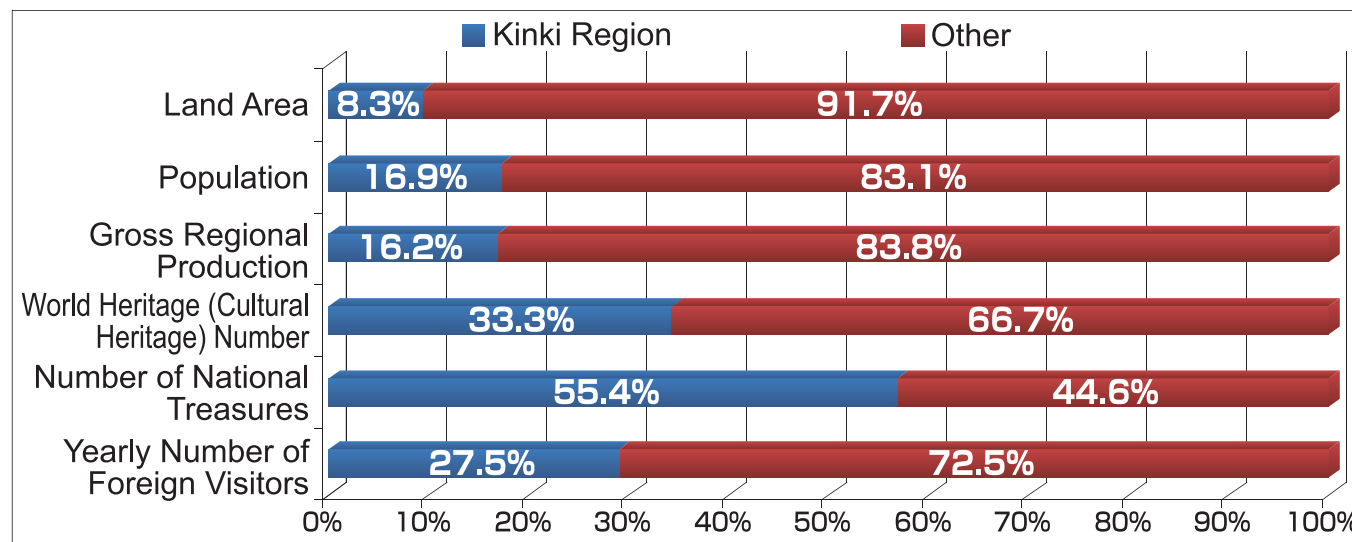


Source: Urban Parks Database; Current As of March 31<sup>st</sup>, 2015  
 ※Does not include government ordinances

**Transport of cargo from Hanshin Port**



## Data that highlights the Kinki Region within Japan



Land Area: Geographical Survey Institute Prefectural Area Report of 2015  
 Population: Ministry of Internal Affairs 2015 Census  
 Gross Production: Cabinet Prefectural Economic Calculations of 2012  
 World Heritage (Cultural Heritage) Numbers: UNESCO Website  
 Foreign Visitors per year: Tourism Authority 2015 Foreign Visitor Consumption Trends Survey  
 (Each prefecture's visitor number compared to the visitors in the total area of the Kinki Region)

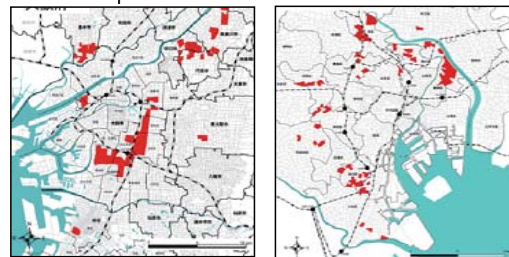
## Foreign Countries and Kinki Region

Country	National GDP (US\$ billion)	Kinki Region (US\$ billion)
U.S.A.	17,348	974
China	10,431	889
Japan	4,606	798
Germany	3,868	879
France	2,829	879
U.K.	2,989	974
Brazil	2,347	889
Russia	1,861	798
India	2,055	879
Canada	1,785	974
Spain	1,381	889
Australia	1,471	798
Mexico	1,295	879
Korea	1,410	879

(Unit: US\$ billion)

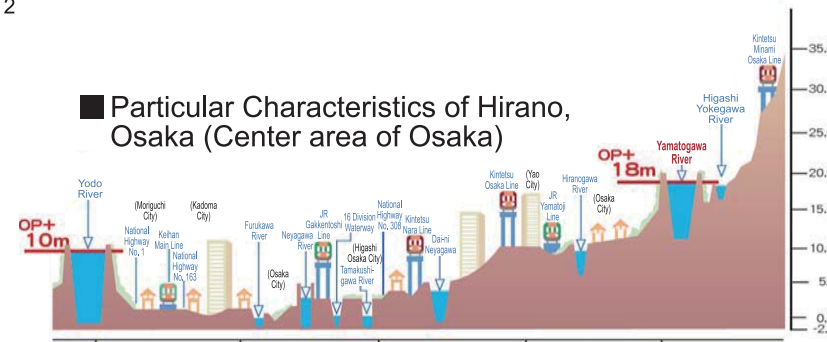
Ministry of Internal Affairs Communications and Statistics Bureau, 2016 World Statistics  
 Country Statistics Current 2014; Kinki Current 2012

**Distribution of Dense Urban Areas Susceptible to Earthquakes and other natural disasters**



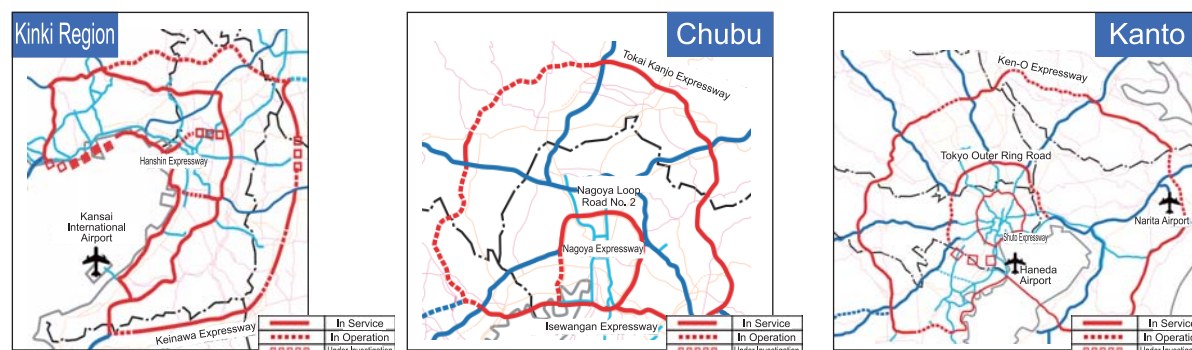
Source: Report on Vulnerable Urban Areas (October 12, 2014)

**Particular Characteristics of Hirano, Osaka (Center area of Osaka)**

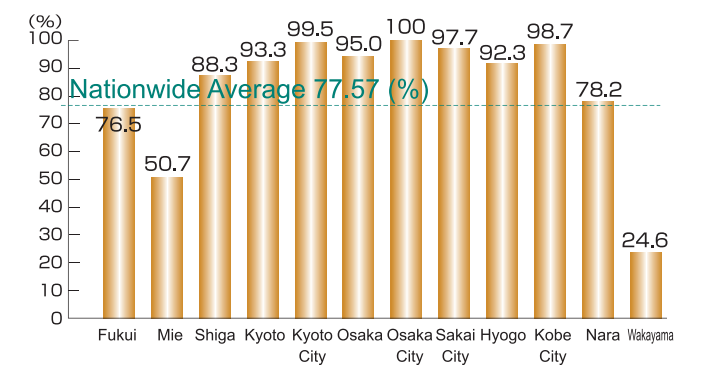


- The Osaka Metropolitan Area is at 0m above sea level and is vulnerable to flood damage
- Yodo River Floods 10m higher than the city level

**Metropolitan Area Loop Line Road Maintenance Status**

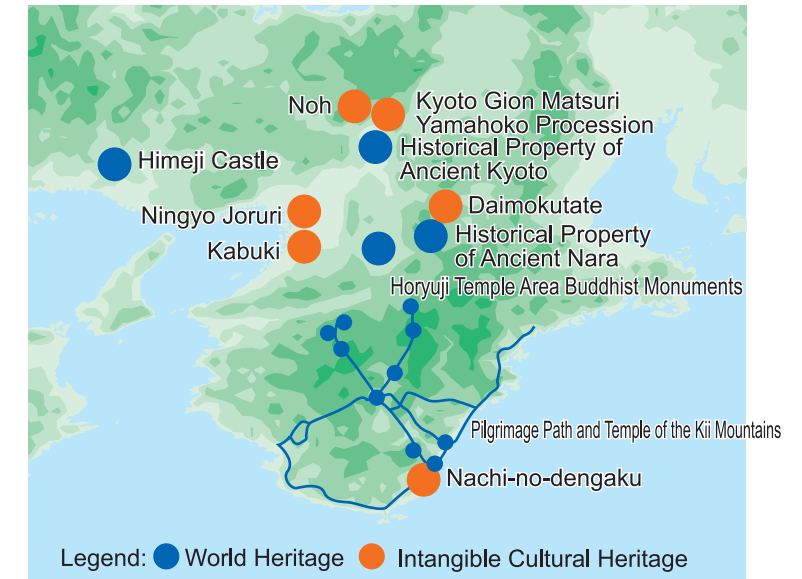


**Penetration Rate of Sewage Processing**

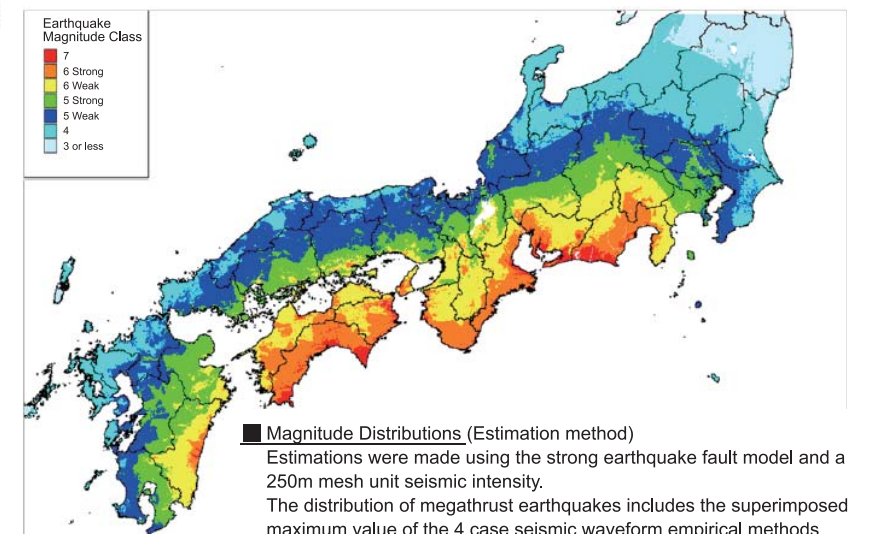


Source: Public Interest Group Japan Sewer Association (Current March 31<sup>st</sup>, 2015)  
 ※ (Nationwide average excludes Fukui)

**World Heritage and Intangible Cultural Heritage Distribution**



**Nankai Trough Megathrust Earthquake Magnitude Distribution**



Source: Cabinet Office  
 Nankai Trough Megathrust Earthquake Model Investigative Commission (Secondary Report)(August 29<sup>th</sup>, 2012)

# Rivers

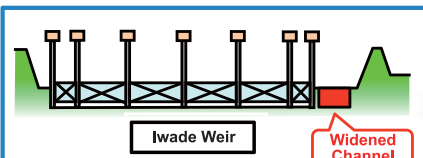
River Projects (10 River Systems: Shingugawa River, Kinokawa River, Yamatogawa River, Yodo River, Kakogawa River, Ibogawa River, Maruyamagawa River, Yuragawa River, Kitagawa River, Kuzuryu-gawa River)  
 Dam Projects (3 locations: Daidogawa Dam, Amagase Dam, Asuwagawa Dam)  
 Landslide Prevention Projects (1 location: Kamenose district)  
 Erosion Control Projects (4 locations: Kidzugawa River System, Rokko Mountain Range, Kuzuryu-gawa River System, Kii Mountain Range)  
 Coastal Area Projects (1 location: Toban Coast)

**Safety of the People, Guarantee of Security**

## Promotion of flood prevention to stimulate regional growth

The betterment of flood prevention safety measures, made possible by better river maintenance, has allowed for the stimulation of regional areas.

### Countermeasures for Narrow Areas of Iwade (Kinokawa River System, Kinokawa)

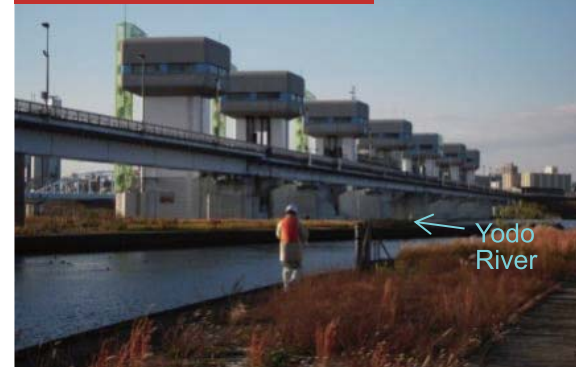


[Maintenance Result]  
 By excavating a new channel next to Iwade Weir, Iwade City, Kinokawa City and others will be less susceptible to flood water damage.

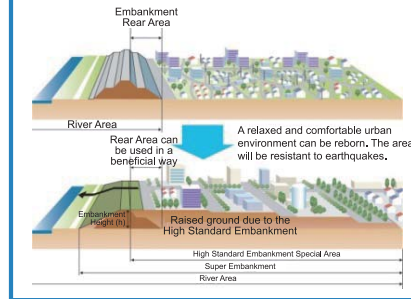
### Nankai Trough Megathrust Earthquake Prevention Measure Promotion

Measures to prevent and lessen damage from earthquake and tsunami by strengthening sluiceways, embankments and waterways.

#### Osaka City (Yodo River Levy Earthquake Measures)



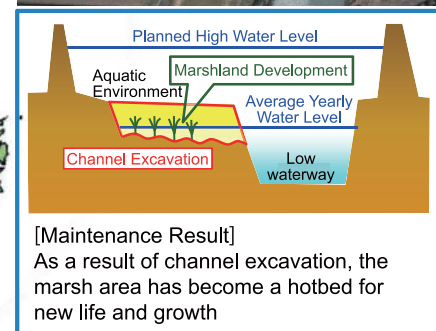
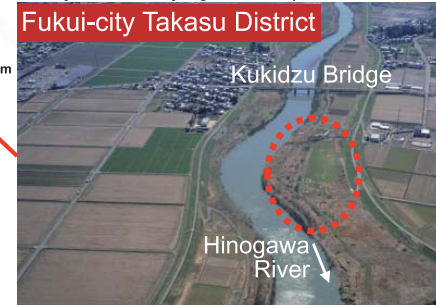
[Maintenance Result]  
 Yodo River High Standard Embankment allows for the creation of a new town.



### Mizbering Project

The people and industry, as well as the government, that have interest in the waterside, will join together as one to restore the lost bustle of the Japanese waterside and make a new, active area with endless possibilities.

### Hinogawa River Flood Prevention, Marshland Business Creation (Kuzuryu-gawa River System Kuzuryu-gawa River)



[Maintenance Result]  
 As a result of channel excavation, the marsh area has become a hotbed for new life and growth

### Osaka-city Torishima District



### Cheers to Waterside! Project



## Water Pollution and Landslide Disaster Countermeasures

Based on frequent flood disasters and sediment related disasters in recent years, emergency flood control measures have been implemented to prevent and mitigate damage in advance.

### Yuragawa River Specific Floor Flooding Prevention Emergency Project

#### Yuragawa River Emergency Flood Control Measures

#### Fukuchiyama-city Shimohigashi District



Breakwaters Maintenance Status

### Kii Mountain Range Specific Emergency Erosion Project

#### Tanabe-city Mitsukoshi District (Large Scale Slope Collapse Points)



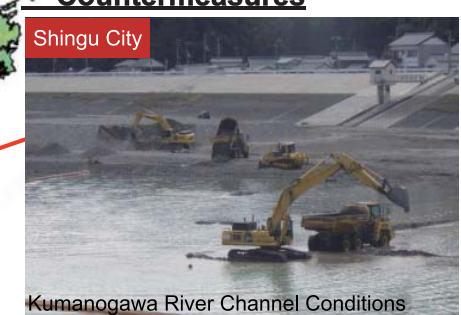
Antierosion Works

## Industry aimed at protecting the livelihood of watershed residents from flood damage

### Amagase Dam Restart Project



### Kumanogawa River Severe Disaster Specific Emergency Countermeasures



Kumanogawa River Channel Conditions

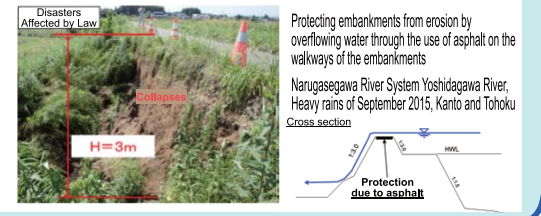
## Measures taken to rebuild a "Water Damage Prevention Conscious Society"

Based on heavy rains in the Kanto and Tohoku areas, a new "Water Damage Prevention Conscious Society Vision" will be promoted within the next 5 years for directly controlled river systems and their corresponding residential areas.

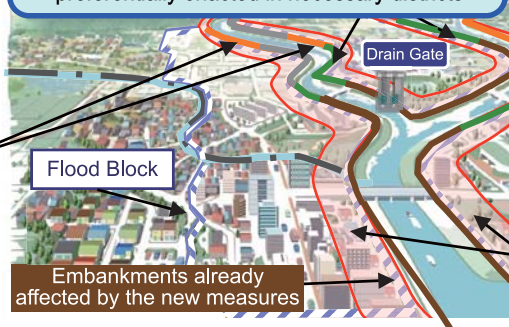
- <Non-Structural Measures>
  - To make it easier for residents to recognize risk, evaluate and self-evacuate, we will switch to a more effective "Resident Perspective Countermeasure" and base our estimates on flood levels until 2016.
- <Structural Measures>
  - Adding to the "Safe Floodwater Discharge Measure," a countermeasure aimed at reducing the damage of floods, "Crisis Management Measure" for roughly 150km area will be enacted.

- <Crisis Management Measure>
  - New embankments aimed at lengthening the time between overtopping and breach will be promoted and embankments with tenacious structures will be maintained.

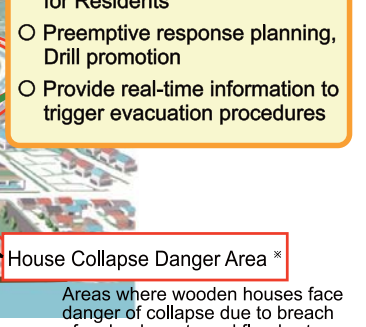
### <Embankment Construction for Reduction of Damages (Countermeasure Example)>



- <Safe Floodwater Discharge Measures>
  - Measures to raise the height of embankments, prevent infiltration etc., will be preferentially enacted in necessary districts



- <Resident Perspective Countermeasure>
  - Proliferation of Risk information for Residents
  - Preemptive response planning, Drill promotion
  - Provide real-time information to trigger evacuation procedures



Kuzuryu-gawa River, Kitagawa Natural Disaster Reduction Association

# Roads

## Ensure safety and security

### Promotion of countermeasures against Nankai Trough Earthquake, etc

Disaster prevention measures and earthquake disaster countermeasures continue to be implemented to reduce damage at the time of disaster occurrence and to support smooth and prompt emergency activities.

■ **Disaster prevention measures**  
Measures to enhance safety are implemented at the places where there is a risk of landslides and falling rocks caused by heavy rain and typhoons.

Before taking measures: After taking measures:   
Measures to stabilize the slopes

Example of damage slope face:

■ **Earthquake disaster countermeasures**  
Based on the experiences of the disaster, earthquake-resistant reinforcement for road bridges that are built on old standards is implemented.

Before taking measures: After taking measures:   
Implementation of equipment for pier reinforcement and preventing falling bridge

Implementation of equipment for preventing falling bridge:

- [Major projects]
- National Route No. 8, Minami Echizen-cho Otani district disaster prevention measures (sight frontage, Otani, Minami Echizen-cho, Fukui Prefecture)
  - National Route No. 2, Tamate elevated bridge earthquake resistance measure (sight frontage, Chuji to Tamate, Himeji city Hyogo prefecture)

## Promotion of undergrounding

From the viewpoints of improving disaster prevention of roads, ensuring a safe and comfortable passage space, forming a good landscape, and promoting tourism, etc., undergrounding is promoted. Based on the amendments to the Road Law etc., undergrounding is promoted regarding roads that are important for disaster prevention such as emergency transportation roads. Thus road blockage caused by collapse of utility poles etc. will be prevented

### Osaka National Route No. 1 Electric Wire Utility Tunnel (Miyakojima Electric Wire Utility Tunnel)

Plan view: Project section: extension 3.3 km

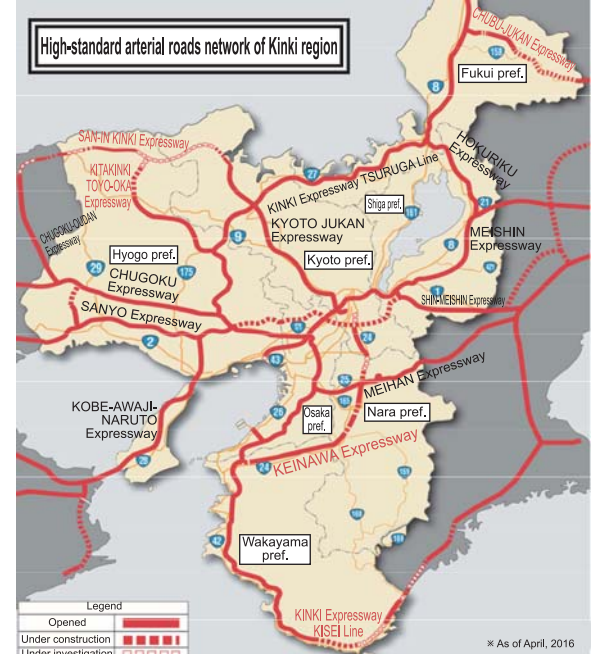
Before implementation: After implementation:

Improvement of disaster prevention function by undergrounding (Kita-ku, Osaka-shi (National Route No. 1))

## Promotion of wide area network development

In order to construct a wide area network resistant to disasters, with regard to the section where there is a risk of influencing the wide area traffic due to the shredding of the current road caused by earthquakes, tsunami and heavy rain disasters in the future, the development of high-standard arterial roads, etc., which connect major cities shall be promoted.

- [Major projects]
- Chubu Jukan Expressway :Eiheiji Temple Ohno Road
  - North Kinki Toyooka Expressway :Yoka Hidaka Highway, etc.



## Strategic maintenance and updates for infrastructure aging measures, etc.

Inspection of road facilities (bridges, tunnels, pavements, slope surfaces, earthwork constructions, road accessories, etc.) to grasp safety continues steadily. Measures against aging by maintenance cycles such as inspections, diagnoses etc. are also promoted.

- The ratio of the number of bridges over 50 years after construction that are managed by the Kinki Regional Development Bureau is 32% as of 2015, but it will increase to 66% after 20 years.
- Based on the long life of road bridge repair plan, repairs are implemented systematically.
- By proactively repairing before reaching large-scale repair, long-life plan for bridge is applied.

**Case of bridges**

Before taking measures: After taking measures:   
Inspection situation: Corrosion of girder bridge rebar: Cross section repair work:

**Case of tunnels**

After taking measures: After taking measures:   
Inspection situation: Cross section restoration / peeling prevention: Peeling prevention:

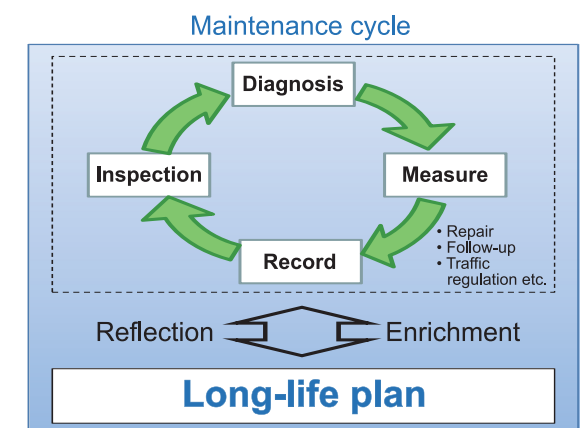
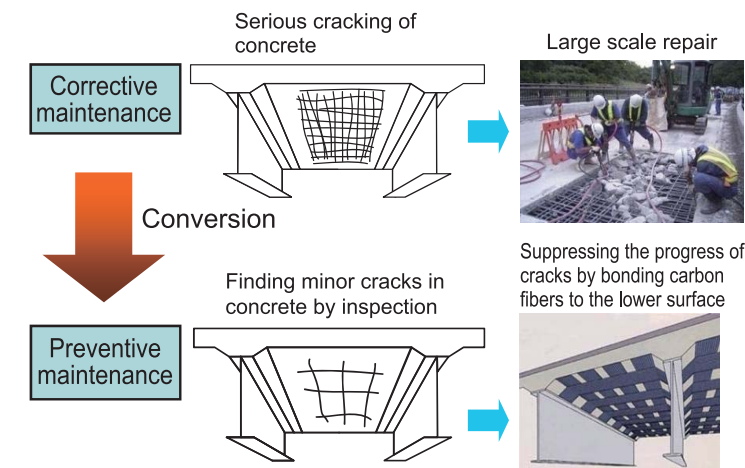
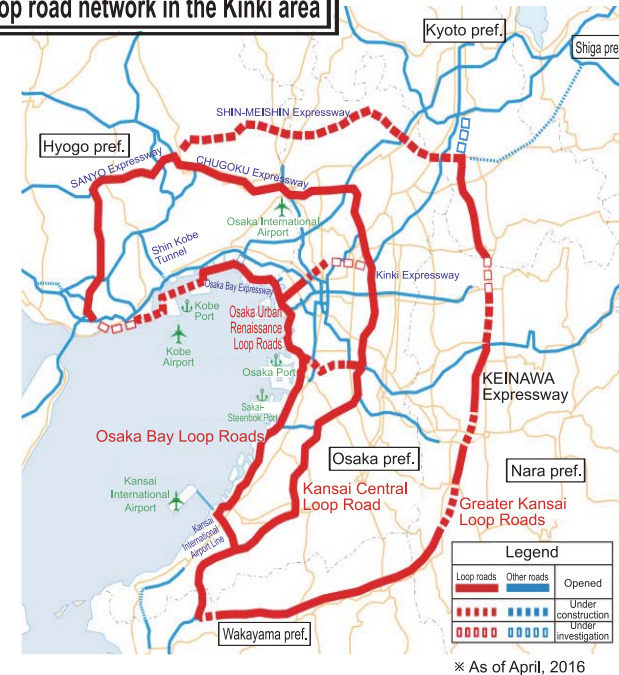
- [Major projects]
- National Route No. 9 New Hazegawa Bridge Inspection (sight frontage, Haze to Hori, Fukuchiyama-city, Kyoto prefecture)
  - National Route No. 2 Yodogawa Ohashi repair (sight frontage, Fukushima-ku to Nishiyodogawa-ku, Osaka-city, Osaka prefecture)
  - National Route 161 Nagara Tunnel Repair (sight frontage, Onjojicho to Fujiokumachi, Otsu City Shiga Prefecture)

## Economic revitalization

### Promoting maintenance of the Kinki area ring road

To realize prompt and smooth logistics, strengthen international competitiveness, and alleviate traffic jams, etc., the development of ring roads will be promoted.

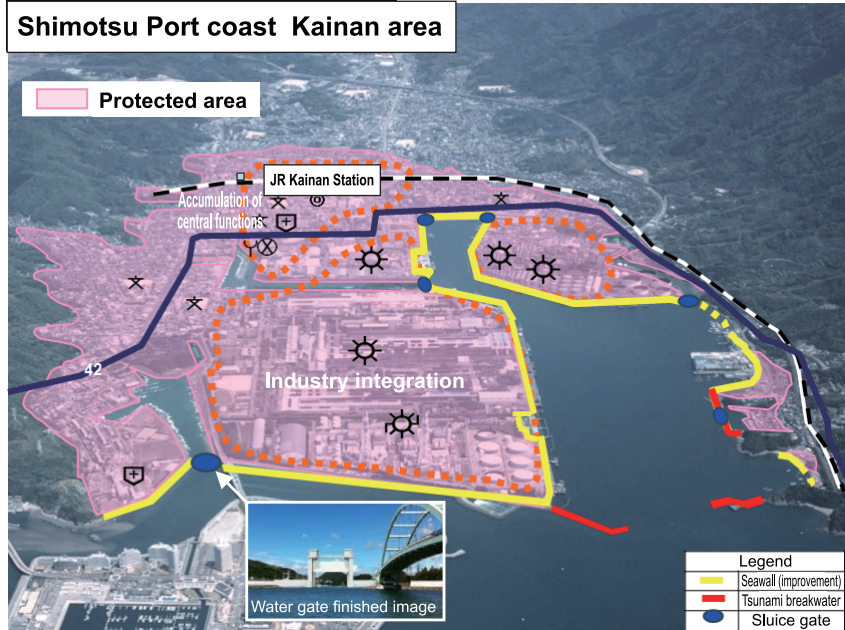
### Loop road network in the Kinki area



# Ports, Harbors and Airports

## Disaster prevention and reduction measures

Promotion of the Nankai Trough earthquake countermeasures, etc. Tsunami countermeasure at the Shimotsu Port coast (Kainan area) in Wakayama prefecture

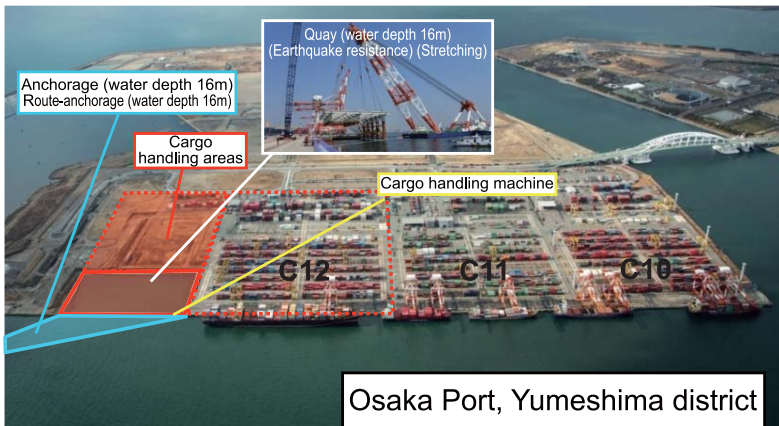


In the tsunami inundation prediction area in Kainan City, Wakayama Prefecture, administrative and disaster prevention center functions and manufacturers of high value added products are gathered. For this reason, we are promoting maintenance of coastal conservation facilities for the protection of these facilities as well as human life and property against large-scale earthquakes such as the Nankai Trough earthquake.

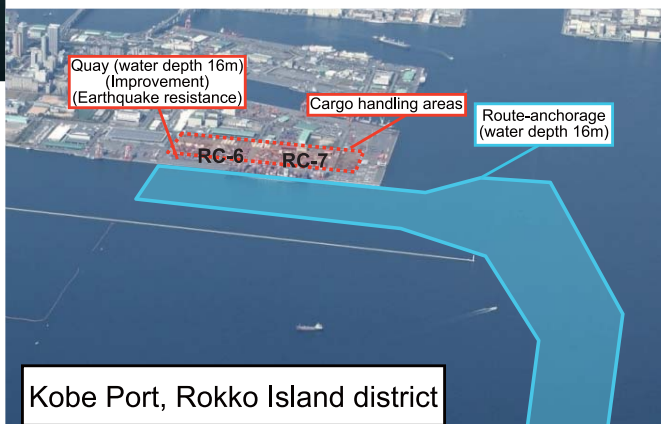
[Expected maintenance effect]  
 All facilities such as government organizations and manufacturing companies are protected.  
 (Protected area : about 406 ha)

## Revitalization of economy / region

### Function enhancement of international container strategy port "Hanshin Port"



During changes in the situation surrounding shipping and port, including further enlargement of container ships and reorganization of major routes by cooperation among shipping companies, it is aimed that maintaining and expanding the major route to call at our country by deepening and accelerating port policies of international container strategy with non-structural and structural measures in order to strengthen the industrial competitiveness of Japan and to maintain and create national employment and income.



### Support menu for competitiveness improvement project of international strategic port

Wide area cargo pick up promotion project	Targeting cargo transported to North America, Europe, etc. from ports other than international strategic ports, projects aimed at switching the use of major route departing from and arriving at the international strategic port.
Project to attract new major routes	Project to realize new port calls etc. of the major routes to international strategic ports
Traffic congestion measures business	Project to mitigate traffic congestion in front of terminal gates at international strategic ports

# Maintenance

In FY 2008 government maintenance related project, in order to promote disaster prevention and reduction measures of government facilities, the disaster prevention function of government office facilities that serve as a disaster prevention base was strengthened, and the long-life project, which prevents aging of existing government and agency facilities, were promoted.

## Securing public safety and security

Strengthening the disaster prevention function of government offices and facilities that will serve as a disaster prevention base



Promotion of tsunami countermeasures at government facilities (Kushimoto Coast Guard Office)

## Measures against aging of government facilities

Major refurbishment contents of long-life project	
Protection of the building	(Example) Exterior wall, rooftop waterproof, fittings
Preventing degradation of disaster prevention equipment	(Example) Fire extinguishing equipment, fire alarm equipment
Preventing degradation of building lifeline	(Example) Water supply and drainage facility, electric substation facilities

Maintain functions of a large number of government agency facilities efficiently and efficiently and reduce the total cost

# Parks

## Realization of Abundant Living

### Maintenance promotion of national park

In Kinki area, three national parks are managed.

- To respond to the growing demand for wide area recreation in the Kinki area
  - To protect and grow the rich natural environment
  - To be a place to interact with nature and people
  - Save and utilize historical and cultural heritage
- We strive to manage properly while promoting maintenance so that many people can use it while sharing the role for each park.



### Akashi Kaikyo National Government Park



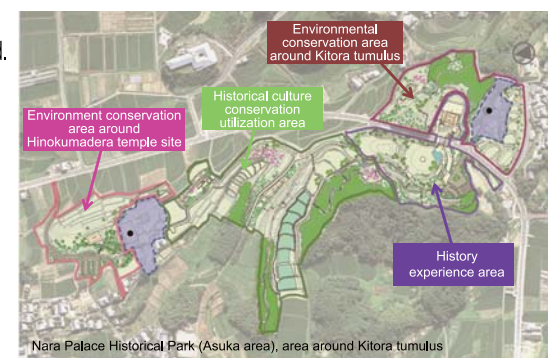
### Nara Palace Site Historical Park



## Regarding the maintenance of the Nara Palace Historical Park (Asuka area)

For the Kitora tumulus area, the surrounding environment of the special historical site Kitora tumulus and the historical monument Hinokumadera temple site is maintained and places for experiential learning are provided.

Experience History Learning Center (Image)



# Safety and Security

## Technical Emergency Control FORCE

### TEC-FORCE (Technical Emergency Control Force)



It is a group of experts established in the Ministry of Land, Infrastructure, Transport and Tourism, and each Regional Development Bureau, etc. in order to perform smooth and prompt implementation of technical support for disaster emergency measures such as a prompt grasp of the damage situation carried out by afflicted local government, prevention of occurrence and spread of damage, and early restoration of afflicted areas when a large-scale natural disaster occurs or there is a risk of an occurrence.

#### Disaster situation investigation



#### Information and communication support



#### Emergency measures

Disassembly / assembly type backhoe



Drainage work by Development Bureau pump car Investigation of the disaster situation (September, 2015 Kanto Tohoku torrential rain: Joso City)



Emergency construction assisted by lighting car Investigation of road damage area (April, 2016 Kumamoto Earthquake)

#### Major activities

- ❖ March, 2011 Great East Japan Earthquake 2,882 people (18,115 person-day in total) from all over the country
- ❖ August, 2014 Landslide occurred in Hiroshima prefecture 439 people from all over the country (2,431 person-day in total)
- ❖ August, 2014 Torrential rain disaster occurred in Fukuchiyama city, etc. in Kyoto Prefecture 158 people from all over the country (378 person-day in total)
- ❖ September, 2015 Torrential rain in Kanto and Tohoku 826 people from all over the country (2,587 person-day in total)

#### Activity content

Dispatch of Information Contact Personnel (Liaison), etc. to Emergency Disaster Response Task Force (TEC-FORCE) and afflicted local government.

#### Recent Activity

- TEC-FORCE activities in the Kinki Regional Development Bureau in the 2016 Kumamoto earthquakes
- Approximately four hours after the 2016 Kumamoto earthquakes (occurrence 21:26 → departure 01:30) Dispatched TEC-FORCE 1st team
  - Dispatched from the Kinki Regional Development Bureau (April 15 - May 13: 30 days, 16 groups of 129 people, 797 person-day in total (preliminary figures))
  - Dispatched seven lighting cars, two satellite communication cars, two disaster headquarters cars, and one disassemble type backhoe capable of unmanned construction



Local Government Support Activities (Technical support by TEC-FORCE, Miyazu City, Kyoto Prefecture)

## Support for afflicted municipalities

### Signed "support at the time of disaster" between Regional Development Bureau and municipalities

An agreement is concluded for quick and smooth dispatch of TEC-FORCE, liaison, and machinery for disaster countermeasures in order to prevent damage expansion and secondary disasters, when a disaster occurred in the area of a local government (municipality) or there is a risk of a disaster.

#### Agreement at the time of disaster with various organizations • Construction business continuity plan (construction business BCP)

### Concluded a disaster agreement between the Regional Development Bureau and various organizations

In response to the occurrence or fear of disasters such as Earthquakes, tsunamis, wind and flood damage, an agreement is concluded in order to prepare system in advance, prompt and smooth emergency response immediately after the disaster, and implementation of emergency no-bid contract construction, etc. against occurrence or risk of etc.

### Promotion of construction business continuity plan (construction BCP) at the time of disaster

For large-scale natural disasters, secondary disaster prevention, emergency response, early restoration and reconstruction of infrastructure are the most important tasks. For this reason, construction companies, etc. need to take measures to mitigate their damage and to strengthen disaster response capabilities for quick returning to normal operations, and Kinki Regional Development Bureau, with expectation that such efforts will be promoted, implements a construction business continuity certification system in the event of a disaster

#### What is Business Continuity Plan (BCP)?

When a company suffers damage due to a disaster or accident, it is expected to minimize the damage or avoid interruption of the important operations as well as to resume in the shortest possible period. This plan to pursue business continuity is called as "Business Continuity Plan (BCP)."

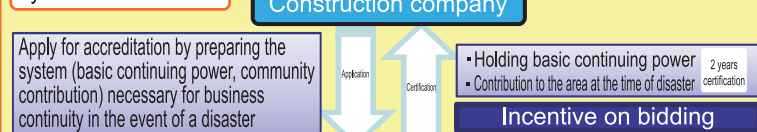
#### Current Certified Companies

This system is established from FY 2012 and certified 600 companies with business continuity capability at the time of disaster. (As of March 20, 2016)

#### Effects of construction business continuity certification system

- Promotion of construction business continuity plan → Improvement of regional disaster prevention ability
- Disaster-resistant construction industry in the Kinki district → Improvement of corporate capabilities
- System for quick restoration and reconstruction at the time of disaster → Contribution to the community and society

#### System of certification



At the disaster of Kinki Regional Development Bureau Construction business continuity certification system

## Crisis management and response for large-scale natural disasters such as the huge earthquake and tsunami of the Nankai Trough

### Nankai Trough earthquake countermeasure plan

The Ministry of Land, Infrastructure Transport and Tourism has formulated the "Nankai Trough Earthquake Countermeasures Plan" and "Kinki District Regional Countermeasures Plan" on April 1, 2014 as a response to the occurrence of the Nankai Trough earthquake, and the ministry compiled measures to tackle with full efforts.

### Various training in cooperation with other organizations

In cooperation with administrative organizations as well as disaster prevention organizations such as local governments and public institutions, in order to protect citizens' safety and security from large-scale natural disasters and crisis management events, various kinds of training are implemented.

#### Use daily training results



Implemented training of securing traffic routes for emergency vehicles jointly with police, etc.

Training of removing unattended cars

Emergency drainage training by pumping cars by TEC-FORCE members



Pump car drainage training

#### For actual disaster response



Disaster of typhoon No 18 in 2013

Grasped the disaster situation and provided support for emergency restoration works

- Monitoring of disaster sites using satellite communication
- Dispatch of lighting car to the emergency restoration site

Kanto Tohoku torrential rain in 2015

Large-scale drainage work in Jyoso City, Ibaraki prefecture

Drainage of flooded area by pump car



## Enhancing observation of localized torrential rain, • Accelerating information transmission

Currently, water disasters due to localized torrential rain are increasing, as a countermeasure, high-performance compact radar, capable of high precision and high frequency observation, is developed, which shorten the time for observation data distribution to strengthen the crisis management responsiveness.

Prediction of localized Torrential rain and consideration of early detection method will be conducted from the observation data.

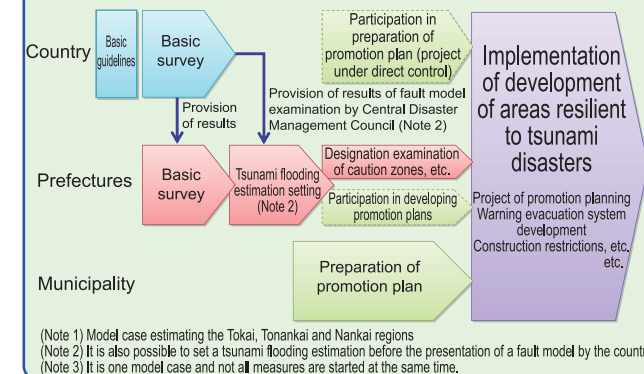
### Promotion of development of areas resilient to tsunami disasters

Local governments are supported in order to prevent and reduce future tsunami disasters by implementing a "multiple protection" system that includes structural and non-structural measures for "Development of Areas Resilient to Tsunami Disasters."

### Basic idea for the largest class tsunami

- It is important to take countermeasures based on the concept of "disaster reduction" focusing on minimizing damages.
- Thus, the damage caused by the tsunami shall be reduced as much as possible through structural measures such as coastal conservation facilities.
- For tsunamis exceeding the above, non-structural measures that focus on evacuation, such as the development of hazard maps, shall be emphasized

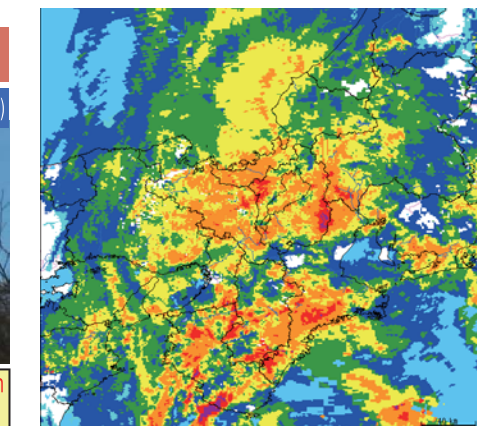
#### How to proceed development of areas resilient to tsunami disasters



#### High-performance compact radar rain gauge (Rokko)

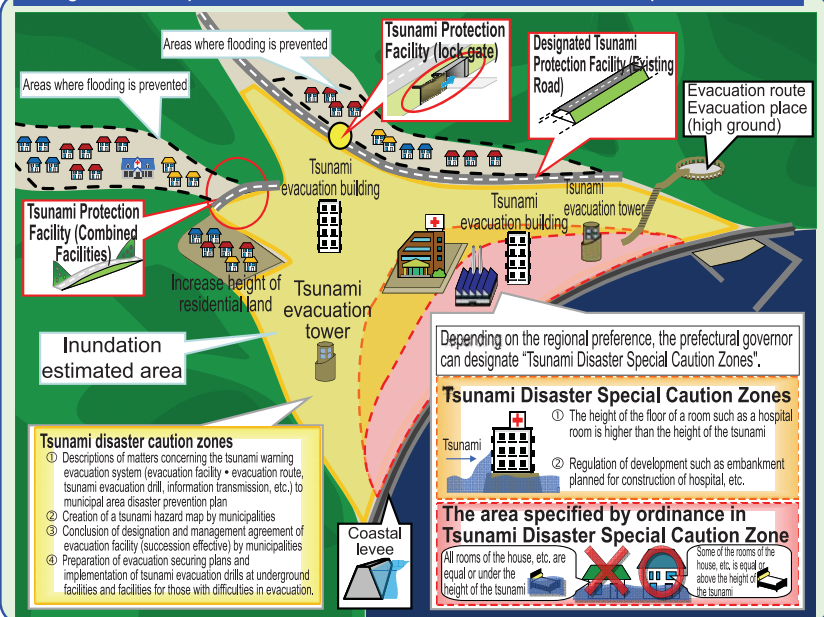


High-performance compact radar location [Rokko • Taguchi • Washomiyama • Katsuragi]



"Rainfall situation of Typhoon No. 18 analyzed by the C band radar of the Ministry of Land, Infrastructure, Transport and Tourism 3:00, September 16, 2013"

#### Image of development of areas resilient to tsunami disasters to protect the life



# Grants

Revitalizing the economy and region; ensuring safety and security

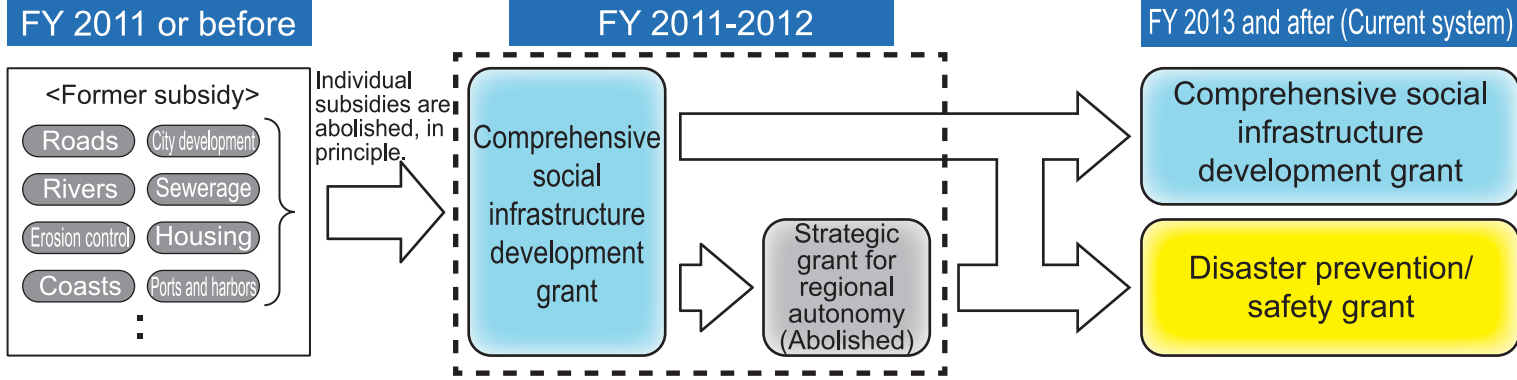
## Comprehensive social infrastructure development grant and Disaster prevention/safety grant

### Comprehensive social infrastructure development grant

Established in FY2010 as a comprehensive grant by incorporating subsidies given to local governments under the jurisdiction of the Ministry of Land, Infrastructure and Transport so that local governments can use it more flexibly and freely

### Disaster prevention/safety grant

Established by FY 2012 supplementary budget to intensively support the measures against aging of facilities for protecting lives and livelihoods of local residents, the measures for preventing/reducing disaster, and the measures for comprehensively ensuring living space in the region



### Features of both grants (Differences from individual subsidy)

- Administrative procedures which were individually performed per project were unified and standardized.
- Local governments can use national funds within the range of projects positioned as city development plans
- Project of further enhancing the effect of social infrastructure development which serves as the core of city development plan can be performed by making use of the local government's ingenuity.

### Introduction of major grant projects (related to urban/housing matters)

#### Intensive support for comprehensive prevention/reduction of disaster, the measures against aging of infrastructure, etc. in the region

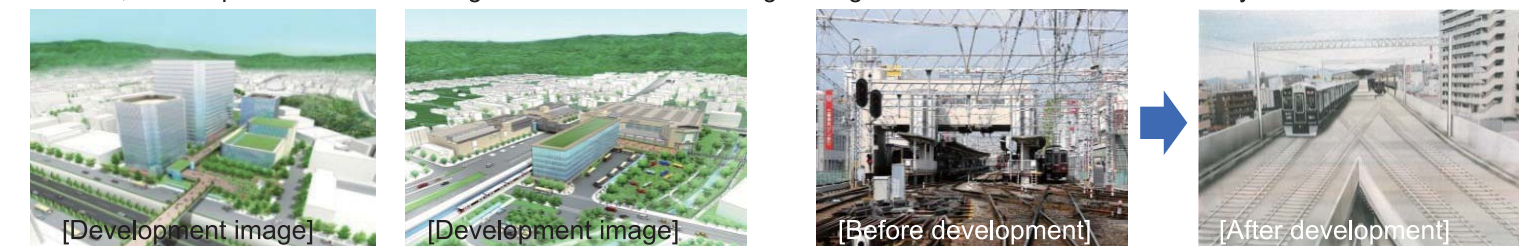
From the viewpoint of promoting the safety/security of citizens through the measures to strengthen the national land, etc., intensive support will be given to the comprehensive disaster prevention/reduction against wind, flood and landslide, large-scale earthquakes/tsunamis which frequently occur, the comprehensive development plan to urgently respond to aging of infrastructure based on infrastructural life prolongation plan.



Development of the tsunami evacuation facility (Mihama town, Wakayama prefecture) | Aseismic repair of housing (Osaka Prefectural housing) | Development of emergency evacuation route (Takaishi City)

#### Formation of vigorous regions, development of living environment where residents can manage affluent life, and comprehensive social infrastructure development for enhancing competitiveness

From the viewpoint of promoting the revitalization of the economy and region, intensive support will be given to the comprehensive development for which various private and public sectors are involved by utilizing PPP and PFI, etc., or private investment is encouraged, such as development of growth foundation strengthening urban and regional competitiveness, promotion of "compact + network," development of affluent living environments and strengthening of efforts for tourism and industry.

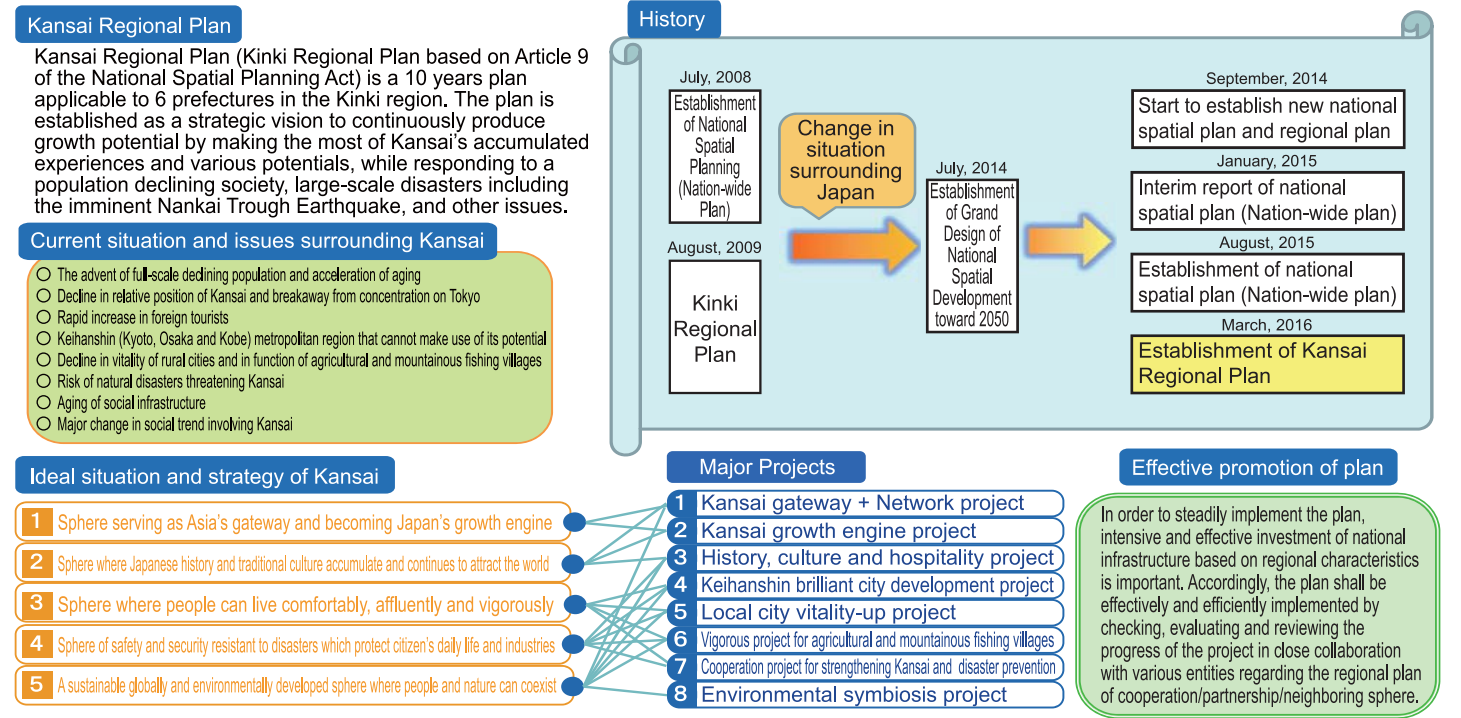


Concentration of city functions such as medical institutions and community facilities | Continuous overhead crossing railway project (Osaka City)

# Plans

Exchange base with other Asian countries based on history and innovation in order to realize a comfortable and affluent life

## Kansai Regional Plan



## New approaches

### "i-Construction"

Productivity of each worker at construction site shall be improved, the business environment of the company shall be improved and the wage level of people working at construction site shall be increased and safety shall be ensured.

#### Current situation of productivity at construction site

- Lowered productivity with surplus labor force as background
- Productivity is not improved at construction sites of earthworks etc.
- There are still many labor accidents at construction site.
- Labor shortage is expected due to aging of population.

#### Approaches

- Full usage of ICT technologies
  - Three-dimensional measurement using UAV
  - Design/construction plan based on three-dimensional data
  - Construction using ICT construction machine
  - Energy saving of inspection
- Standardization
  - Improvement in cast-in-place efficiency
  - Improvement in efficiency owing to factory manufacturing
  - Improvement in on-site work efficiency
  - Advancement in pre-casting
- Equalization of construction period
  - Flexible application of starting period of construction
  - Spread and expansion to local governments

(Kinki Regional Development Bureau's PLUS1)

- Facilitation of construction work owing to communication between orderer and order receiver

#### What to Focus On

- Improve business environment of company by increasing productivity of each worker.
- Make construction site more attractive by increasing the wage level of people working at construction site.
- Aim at Zero fatal accident at construction site.
- Aim at "salary, vacation, hope," instead of "tight, dangerous, dirty"

#### Strengthening of system of Kinki Regional Development Bureau

Strengthening of system to promote i-Construction

- i-Construction Promotion Headquarters [Chairman-, Director- and Chief-level meeting]
- i-Construction Promotion Secretariat [Official-level meeting of Secretary-General and Head of Planning Dept.] (Established on February 15, 2016)
- Kinki region i-Construction Promotion Liaison and Adjustment meeting (Established on March 22, 2016)

On-site tour was held for corporate managers. (On March 25, 2016)