

2004 PACIFIC BASIN NUCLEAR CONFERENCE

23 March 2004

# OUR NUCLEAR COMMUNICATIONS



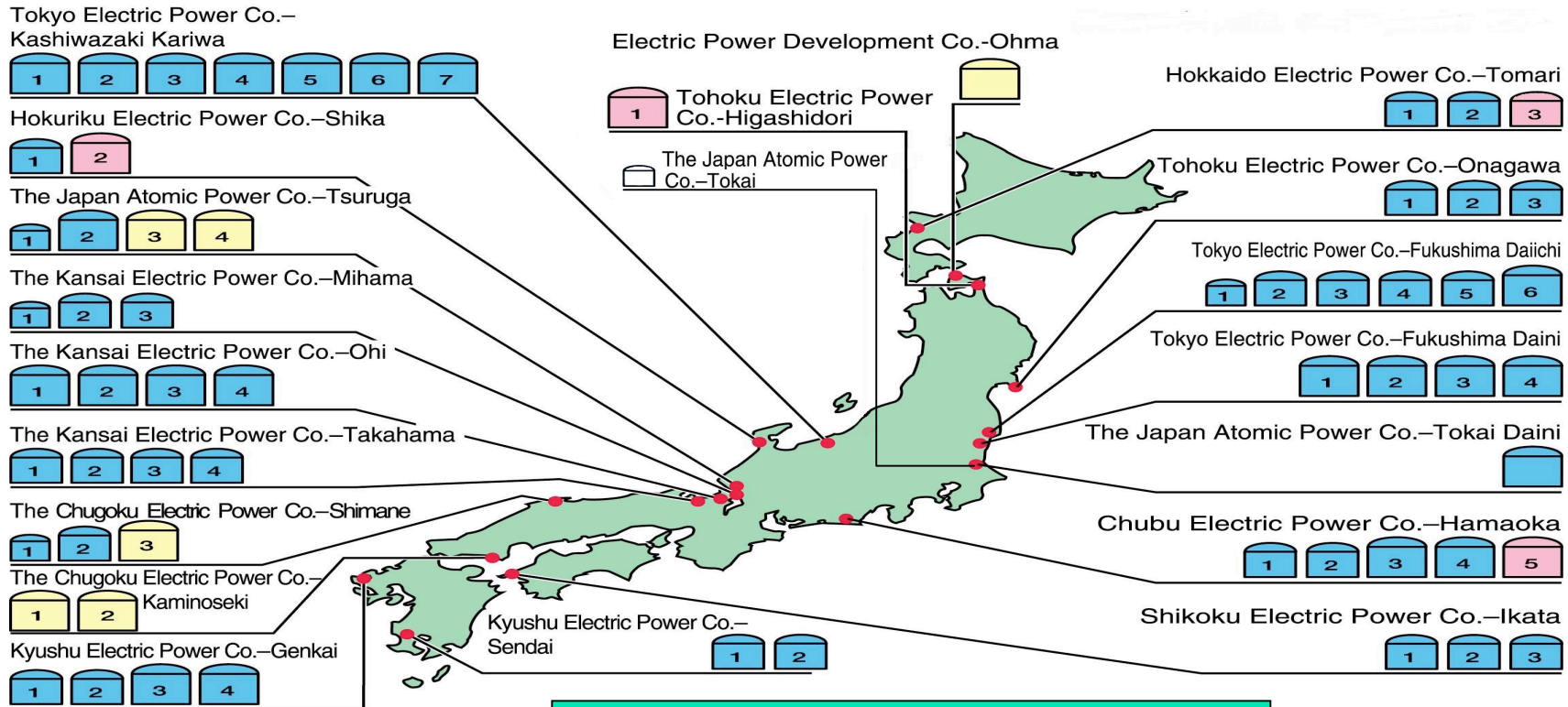
Masaaki Mizuno

Nuclear Service Company, Japan



# Status of Commercial NPPs in Japan

(Commercial plants, as of March 2004)



**Operational 52**

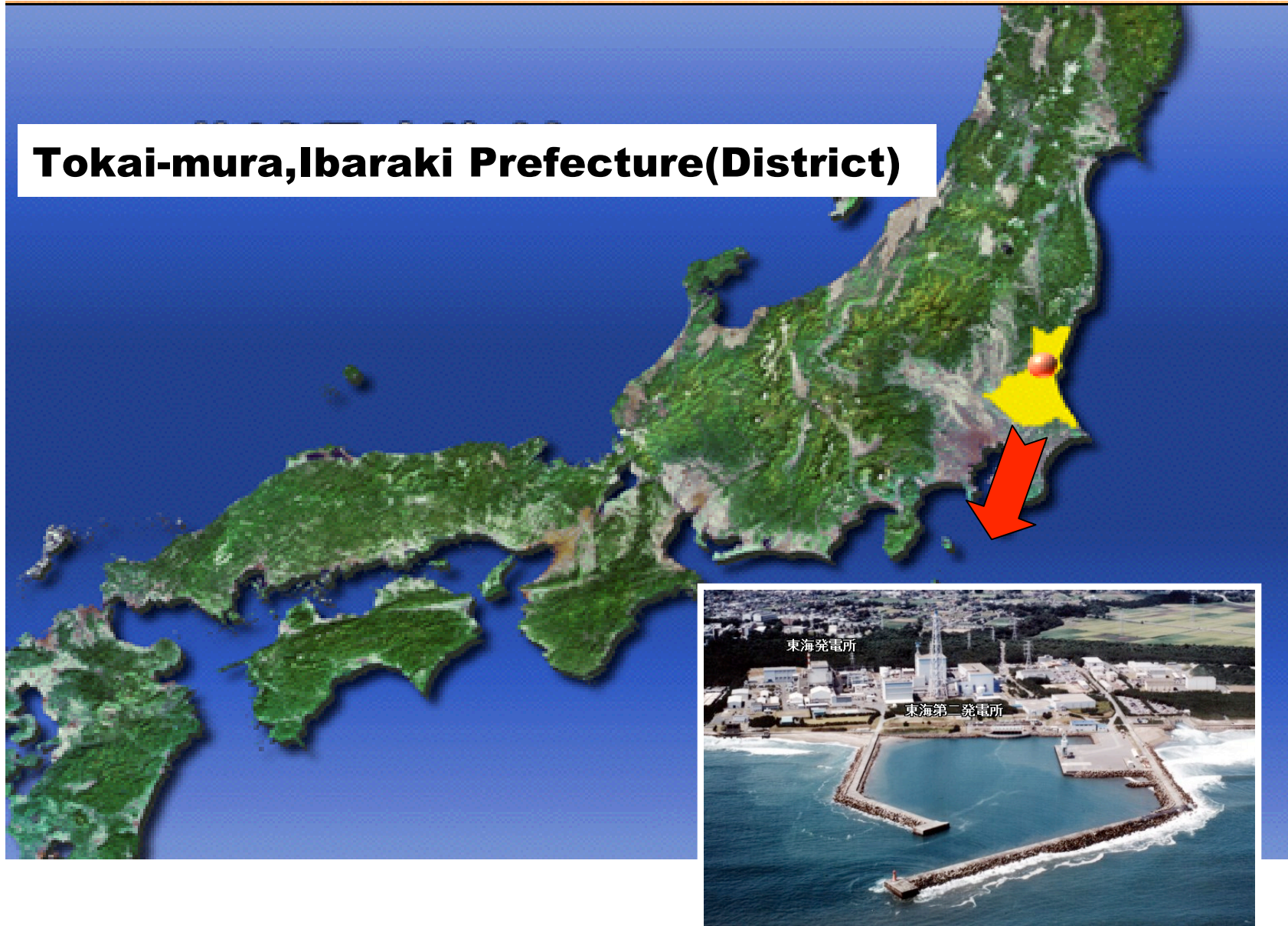
**Under construction 4**

**Being planned 8**

**Being closed 2**

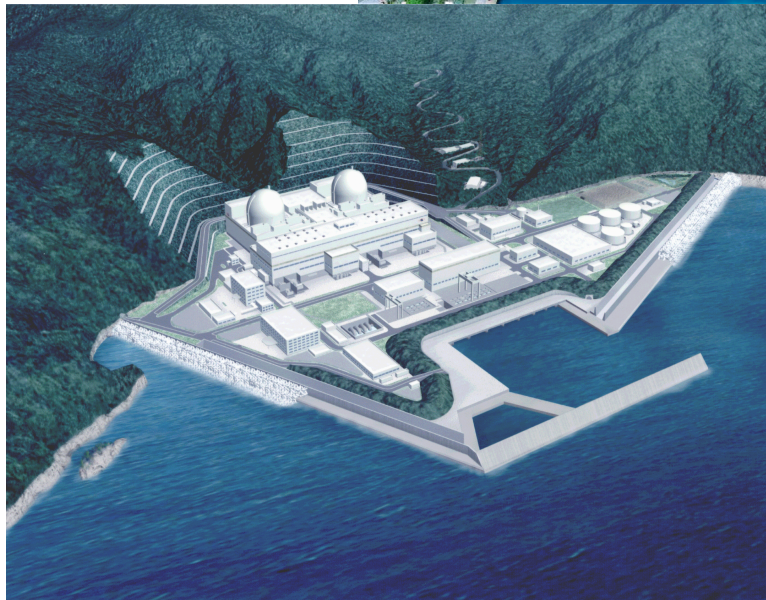
# The Japan Atomic Power Company's Power Station

**Tokai-mura, Ibaraki Prefecture (District)**



# Tsuruga, Fukui Prefecture(District)

**Unit 1&2  
(Operational)**



**Image of Unit 3&4  
(plan to construct)**

# **The Events influencing the Nuclear Plant**

1999/9/30  
Nuclear Criticality  
Accident at JCO

1995/12/8  
Sodium Leakage at  
the Monju reactor

**1995/1/17**  
**The Great**  
**Hanshin&Awaji**  
**Earthquakes**

# The Great Hanshin & Awaji Earthquakes



**1995/1/17**

**Magnitude : 7.3**

**Casualties : 6433**

**missing : 3**

**injured : 43792**

**Destroyed Buildings: 104,906**



# The Events influencing the Nuclear Plant

1999/9/30  
Nuclear Criticality  
Accident at JCO

**1995/12/8**  
**Sodium**  
**Leakage at the**  
**Monju reactor**

1995/1/17  
The Great  
Hanshin&Awaji  
Earthquakes

# Sodium Leakage at the Monju Reactor

**(INES 1)**

1995/12/8



**Sodium leakage at the secondary loop piping room**

**Leakage of 700kg of sodium (estimation) causing fire**

**Vibration, generated by the flow of sodium, resonated with a thermometer sheath, subsequently damaging it.**

**Operation currently suspended**





# The Events influencing the Nuclear Plant

**1999/9/30**  
**Nuclear Criticality**  
**Accident at JCO**

1995/12/8  
Sodium Leakage at  
the Monju reactor

1995/1/17  
The Great  
Hanshin&Awaji  
Earthquakes

# Nuclear Criticality Accident at JCO

1999/9/30



**(INES 4)** Criticality reached during operation

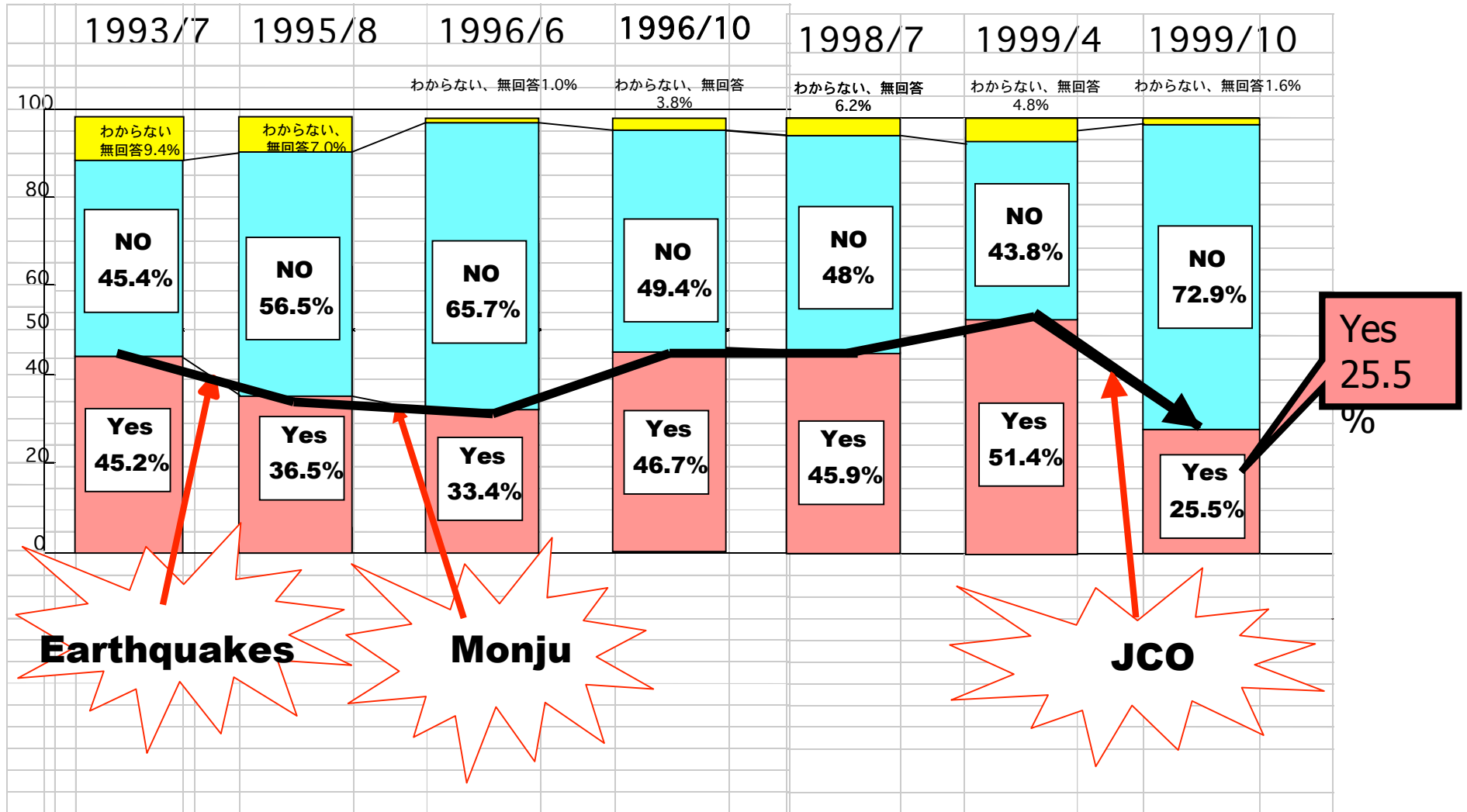
The state of criticality lasting for approx. 20 hours, emitting neutrons, gamma-rays and radioactive materials from the facility. Residents within 350 radius requested to evacuate, whereas residents within 10km radius told to stay indoors.

**Fatalities: 2 (employees)**

**People exposed to radiation: 667**



# Public Perception about our Construction Plan



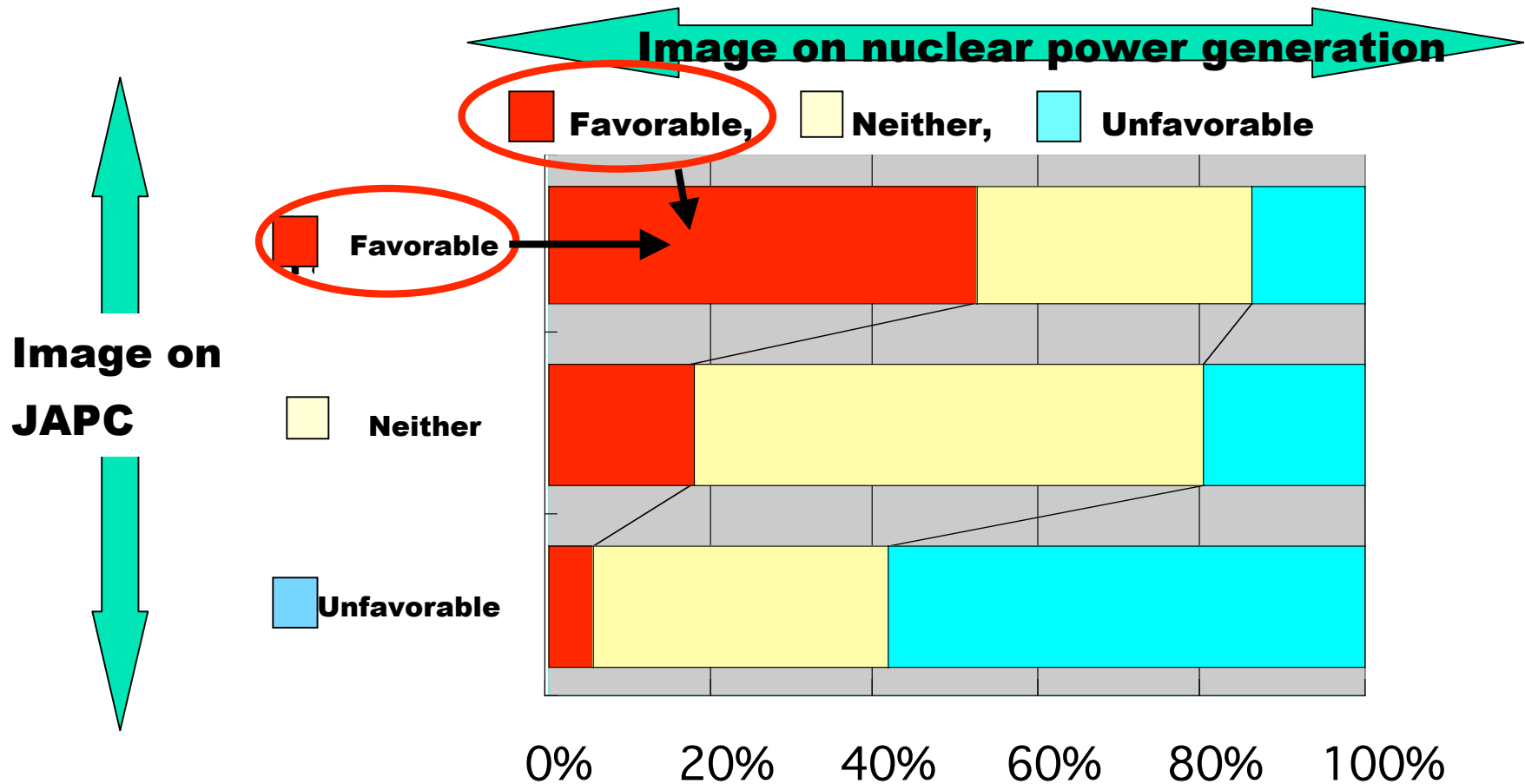
# **The Governor's Conditions for our Construction Plan**

**1. Ensure safety**

**2. Assist development in the local community**

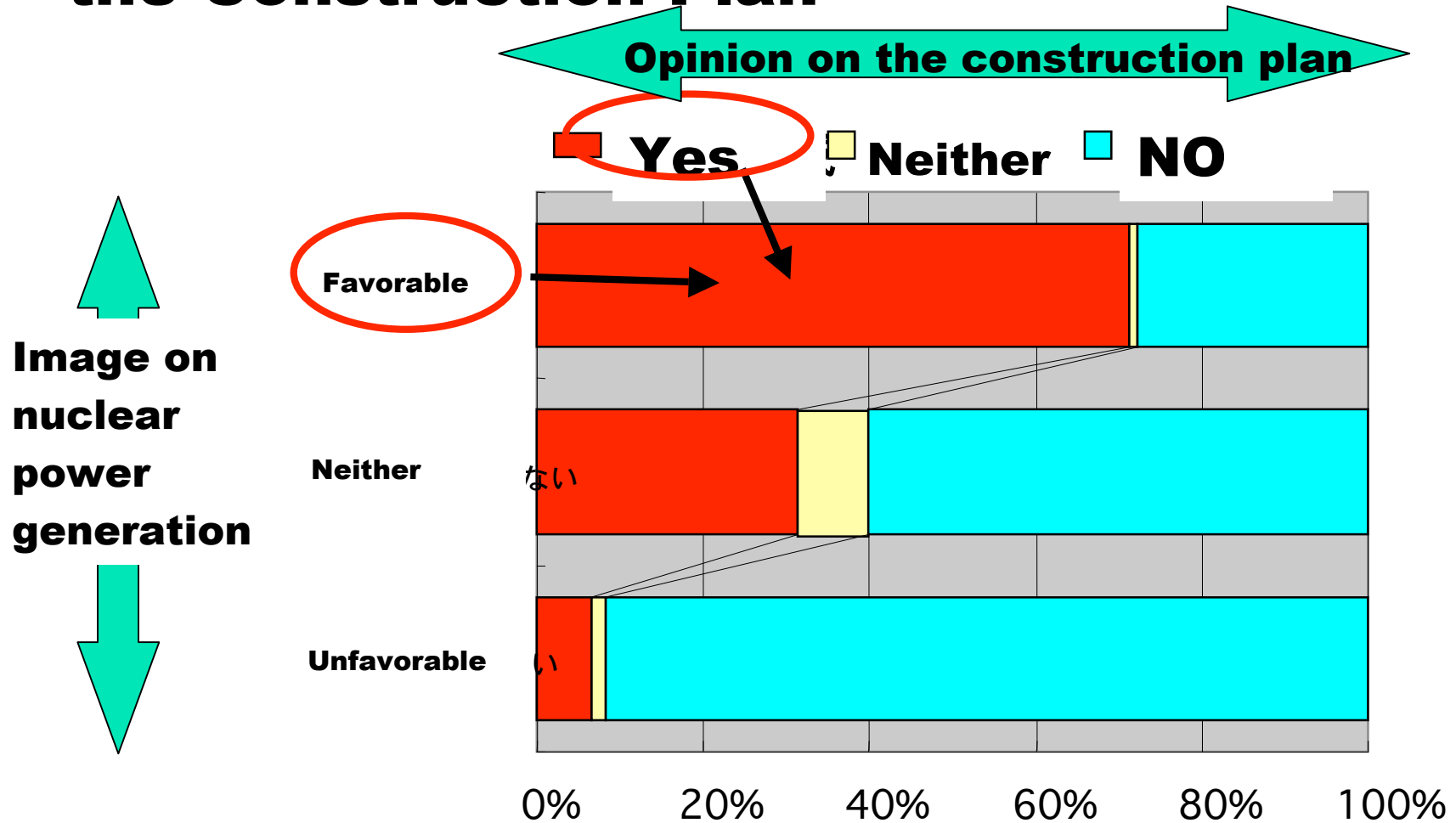
**3. Win the understanding of local residents**

# Correlation between a Positive image on JAPC and Acceptance of Nuclear Power Generation



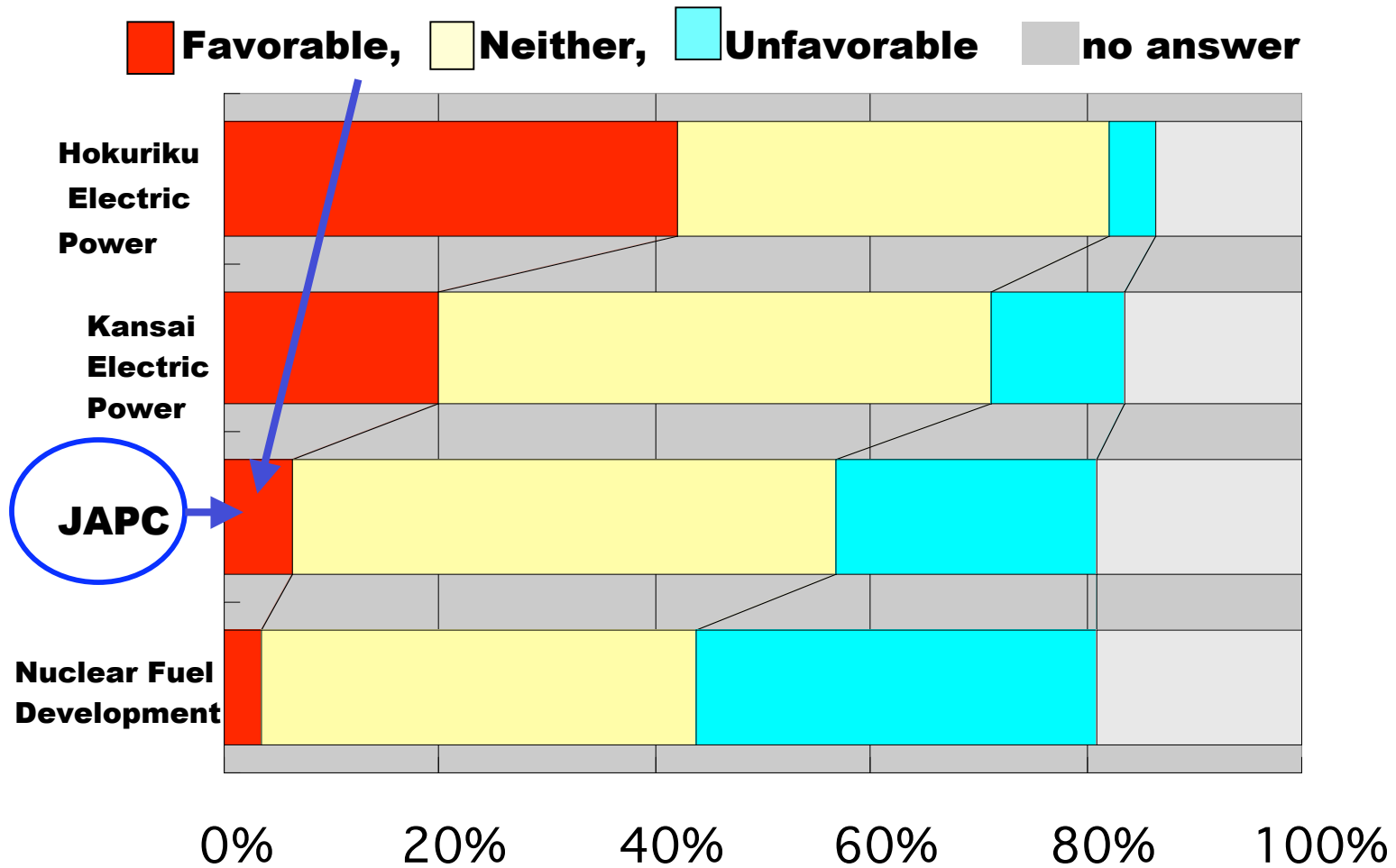
Resident opinion survey covering 2000 people, 1996

# Correlation between a Positive image on JAPC and Opinions on the Construction Plan

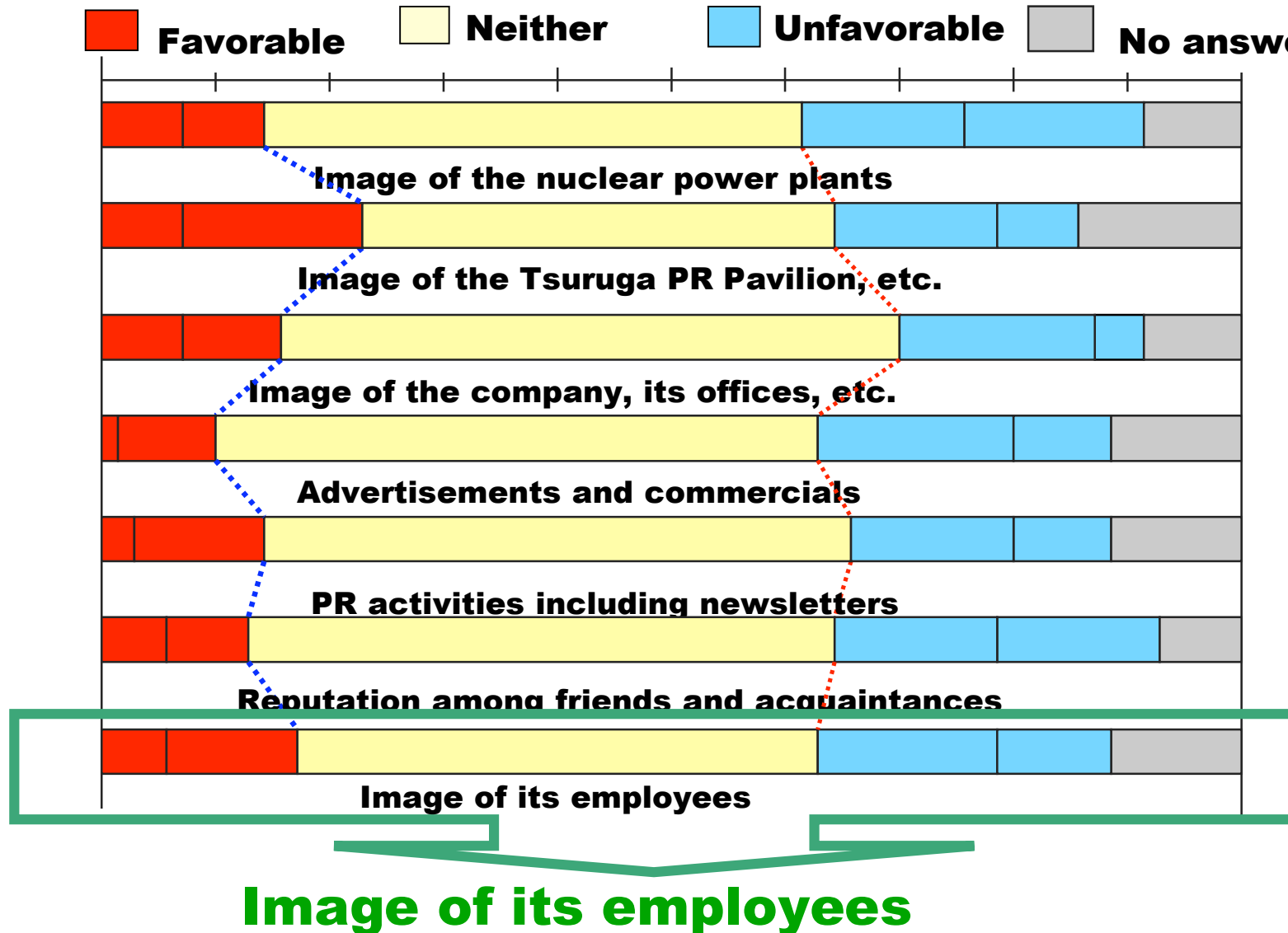


Resident opinion survey covering 2000 people, 1996

# Positive Impression of Electric Power Companies



# Factors forming a Positive Image on JAPC





# **Our Nuclear Communications**

**A) Initiators : All employees**

**(B) Receivers : Residents of Fukui District**

**(C) Activities:**

① **Direct dialogues**

② **Meetings**

③ **Local influencers**

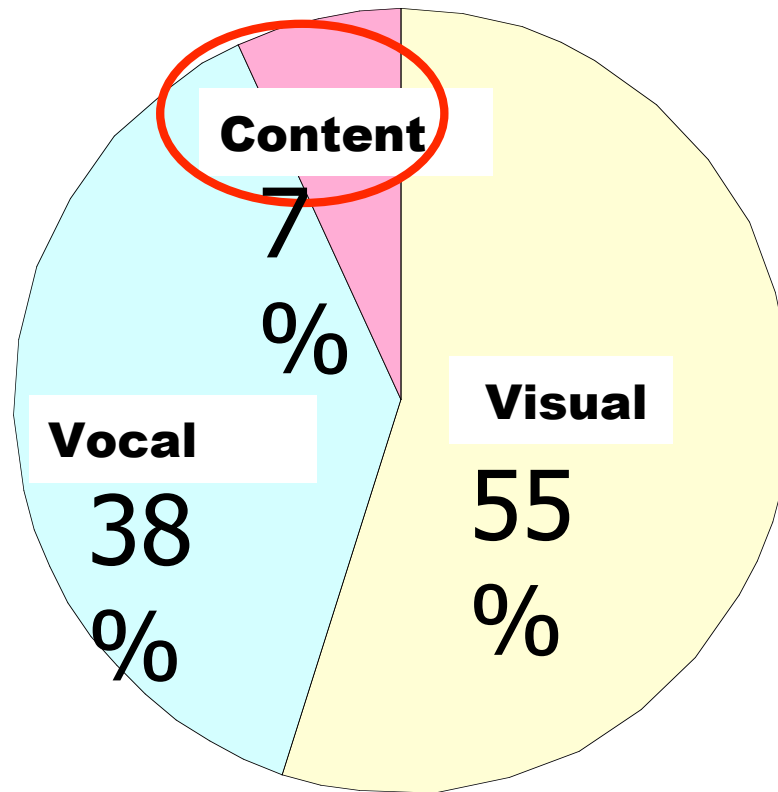
④ **Disclosure to the mass media**

⑤ **Advertisements, commercials**

⑥ **Sponsoring**

# Theory of Dr. Albert Mehrabian

**"Major factors in forming an impression of speech"**



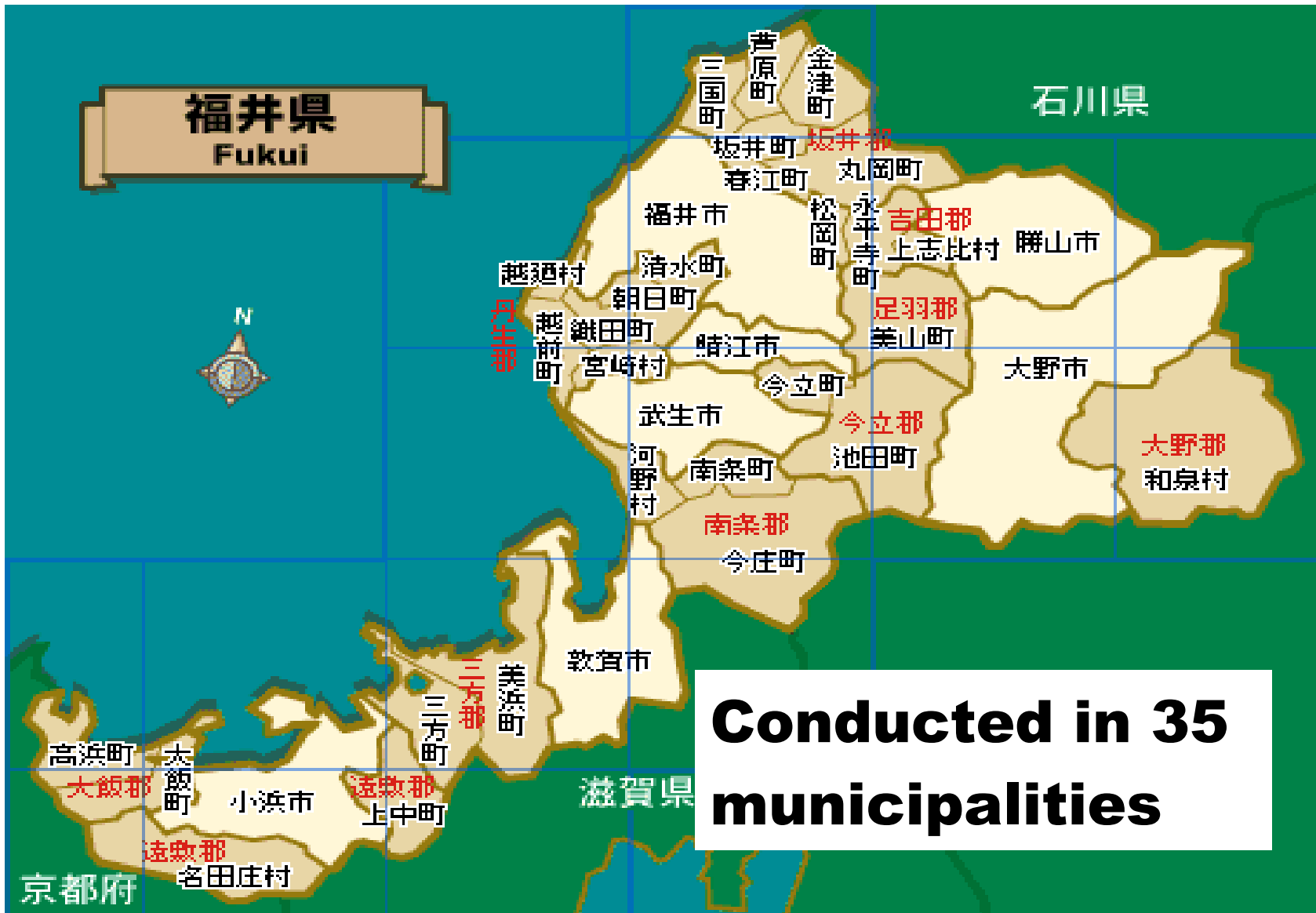
**I find it doubtful that the law can be applied to all cases.**

# **Direct Dialogues with Residents (Home visits)**



**Visiting all 26,000  
households in Tsuruga**

福井県  
Fukui



**Conducted in 35 municipalities**

# Meetings with the Residents (phase-1)



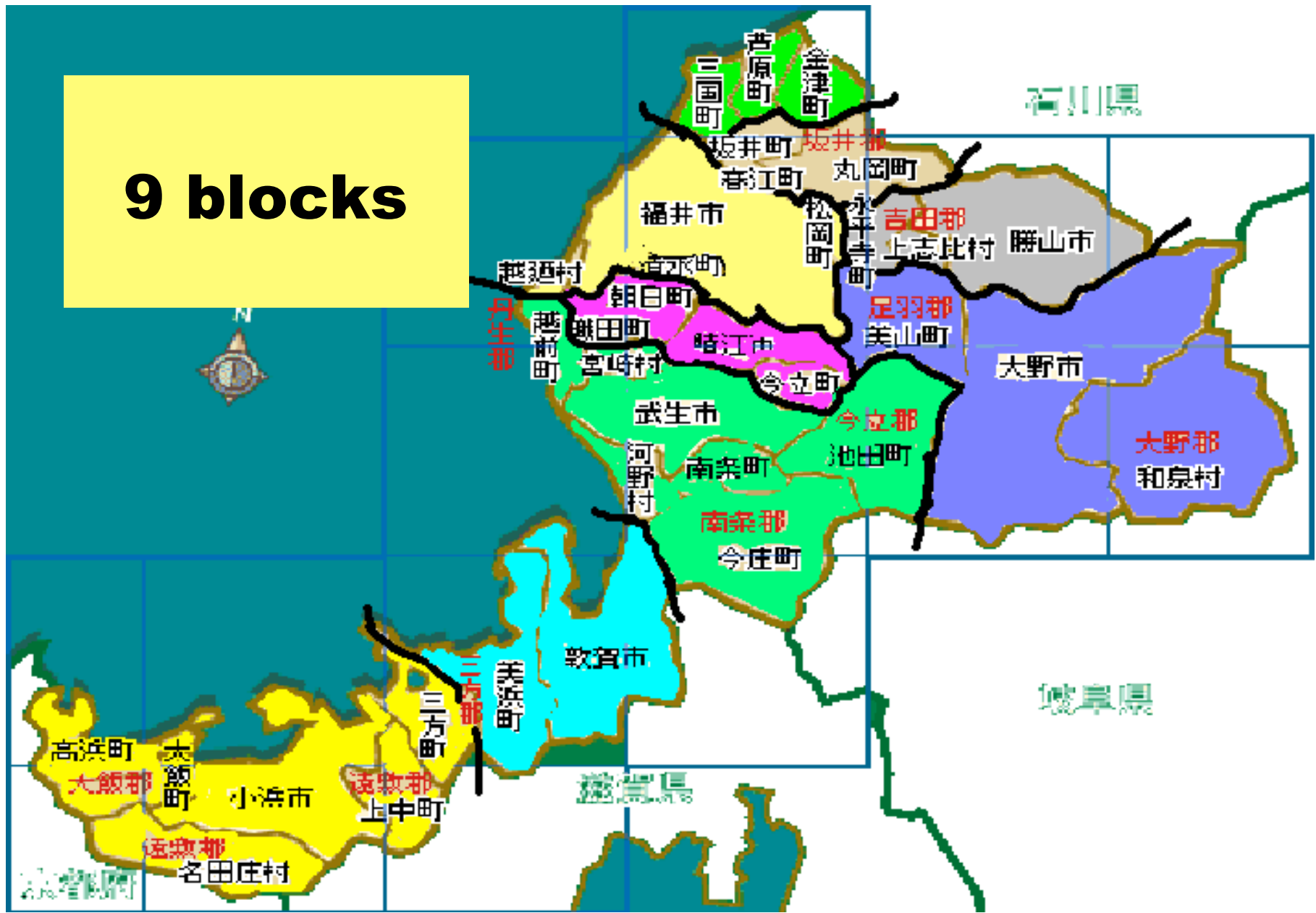
**At takahama**



**At echizen**

**2600 participants**

# 9 blocks



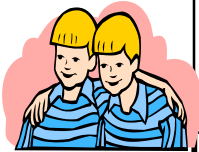
# **Meetings with the Residents (phase-2)**



**2400 participants**

# High context cultures and Low context cultures

Edward Hall



	<b>High context cultures</b>	<b>Low context cultures</b>
<b>Human relations</b>	<b>Deep association</b>	<b>Individualism</b>
<b>Information</b>	<b>Shared</b>	<b>Not shared</b>
<b>Communication method</b>	<b>plain messages for inference</b>	<b>Explicit messages to put forth one's opinions</b>
<b>Typical example</b>	<b>Japan</b>	<b>USA</b>





# Exchange with Opinions Formers



1999/7/12

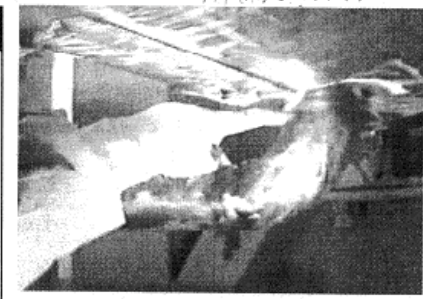
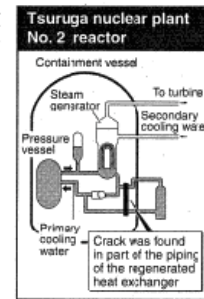
# Disclosure to Mass Media (Primary coolant leakage at Tsuruga -2)

**Leakage of primary coolant in the reactor containment 51 ton**  
**Manual shutdown of the reactor**  
**No radioactive impact on the environment**  
**Source of plant's coolant leak located**



An 8-cm crack has been found in a pipe in the containment building of the Fukui nuclear power plant where a massive amount of radioactive cooling water leaked Monday, government officials reported to the Nuclear Safety Commission on Tuesday.

According to the Natural Resources and Energy Agency as well as plant officials, the crack was found in a stainless steel pipe in a regenerated heat exchanger in the containment building after five workers at Japan Atomic Power Co.'s Tsuruga plant entered the facility just before 7



— An official of Japan Atomic Power Co. points to the crack in the Tsuruga nuclear plant No. 2 reactor where a massive amount of radioactive water leaked from a crack. COURTESY OF JAPAN ATOMIC POWER CO.



led to conduct the next of checkups in 2001, id. Members of the Nuclear Commission pointed possibility of a defect, because the crack formed in the middle of the pipe, not in a weld where pipes are connected. Minister of International Trade and Industry Kaoru Yosano told a news conference, because the

CONTINUED ON PAGE 2

**Disclosure to Mass Media  
(Primary coolant leakage at  
Tsuruga-2)  
Thorough information  
disclosure**

**Establish a local media  
center**

**to extend detailed  
support to reporters.**

**Release information on-  
site, video footages and**

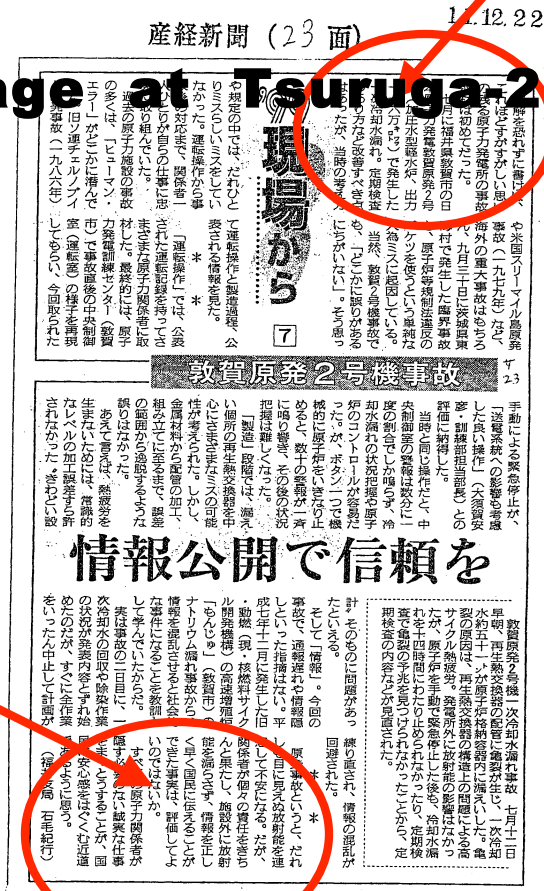


# Disclosure to Mass

# Media

## (Evaluation by media) **Coolant leakage at Tsuruga 2**

"News of an accident at a nuclear power station would make anyone feel concerned because of its association with invisible radiation. Yet, what deserves credit in this incident is the fact that all persons involved fulfilled their respective responsibilities, prevented radiation leakage to outside the facility, and delivered information accurately and swiftly to the general public. The commitment on the part of all nuclear power operators to sincerely undertake their duties and eliminate the need for cover-up, would be the only way toward building a sense of security among the Japanese public."



"Despite the possibility of causing misunderstanding, I dare say that this has been the most refreshingly pleasant media coverage of an accident at a nuclear power station"

# **Disclosure to Mass Media**

**(Primary coolant leakage at Tsuruga-2 reactor)**

**Information disclosure is an extremely important task. In this aspect, the reactor operator and administration authorities should be congratulated for their handling of the accident.**

(excerpt of opinion report, 1999/10/25)

**the Nuclear Safety Commission**

# Newspaper Advertisements

## でんインフォメーション

●教賀発電所で働く仲間たち―8●

手作りのおいしさが、  
発電所の活力源となっています。



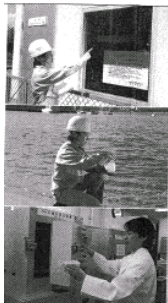
食堂スタッフの皆さん

元気で働くには、おいしく健康的な食事は欠かせません。教賀発電所内には、安全でおいしい食事を提供する「食堂」があります。献立は専用の炊飯器で調理し、栄養バランスのとれたメニューを提供しています。安心して発電所をめざして、毎日の暮らしを過ごしてください。



自分の仕事も電力供給を支えていると実感、やりがいを感じます。

教賀発電所・電気保修課 門馬伸之



確かな環境モニタリングで、地域の皆様に安心をお届けしたいですね。

教賀発電所・環境保安課 北田 桂

Safety First  
びんぞん

安心して発電所をめざして

おでかけください！ げんでんふれあいギャラリー  
開催中！「日英小学生絵画交流展」 12/26(木)まで  
～教賀市とイギリスの小学生たちの絵画交流展～  
入場無料 開館時間10:00～16:30(年末年始を除き年中無休) 教賀駅より徒歩10分  
お問い合わせ ☎0120-749-201 (なかつふれあい)  
併設のふれあいホールにておこなわれます。

## でんインフォメーション

●教賀発電所で働く仲間たち―9●

運転手は発電所の「足」であり「顔」。  
安全で快適な運転を心掛けています。



運転手の方々

げんでんふれあいギャラリー  
「先を知る～お話し会」が人気です  
12/26(木)10:00～16:30(年末年始を除き年中無休) 教賀駅より徒歩10分  
お問い合わせ ☎0120-749-201 (なかつふれあい)  
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☎0120-749-201  
併設のふれあいホールにておこなわれます。

株式会社 電力株式会社  
〒990-0001 秋田県秋田市大森町1-1-1

# TV Commercials



# Sponsoring Newspapers and TV Programs



「昭和二十七年に始まった『だけふ菊人形』の前年に結成された武生菊花同好会、今年で四十五年になります。今年も、会長の大下さんと、小島さまなど見事な菊は、会場さんたちの目撃した作品です。『菊づくりに関わっていると、要入あつかいされますよ（笑）』それほど菊づくりはむずかしく大変らしい。

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菊の園花は日本全  
満開は十一月初旬  
一月ともなると早く  
よな土地柄。だか  
移 には開花を十月二  
部と咲の部に分け  
つています。  
早咲の部に出展す  
から日照や温度など  
から、十月に満開に  
せん。『それには  
日間は、どこにも行けません。もちろ  
ろん、家族に任せるワケにもいきま  
せん。菊畑様のお守りで、つきま  
り、台風時には、すべての鉢を座  
敷にいれました』と、笑う木下さん。  
会場への搬入にも細心の注意を払  
います。土づくりから始め、さ  
し芽、鉢上げ、支柱、水の遣  
定、肥料調整、夏越し対策  
などなど、一年間手廻に  
かけて咲かせた菊の花が  
何かの弾みでポロッと落  
ちてしまう悲劇もありま  
す。それだけの苦労をし  
てまで、菊づくりに打ち込



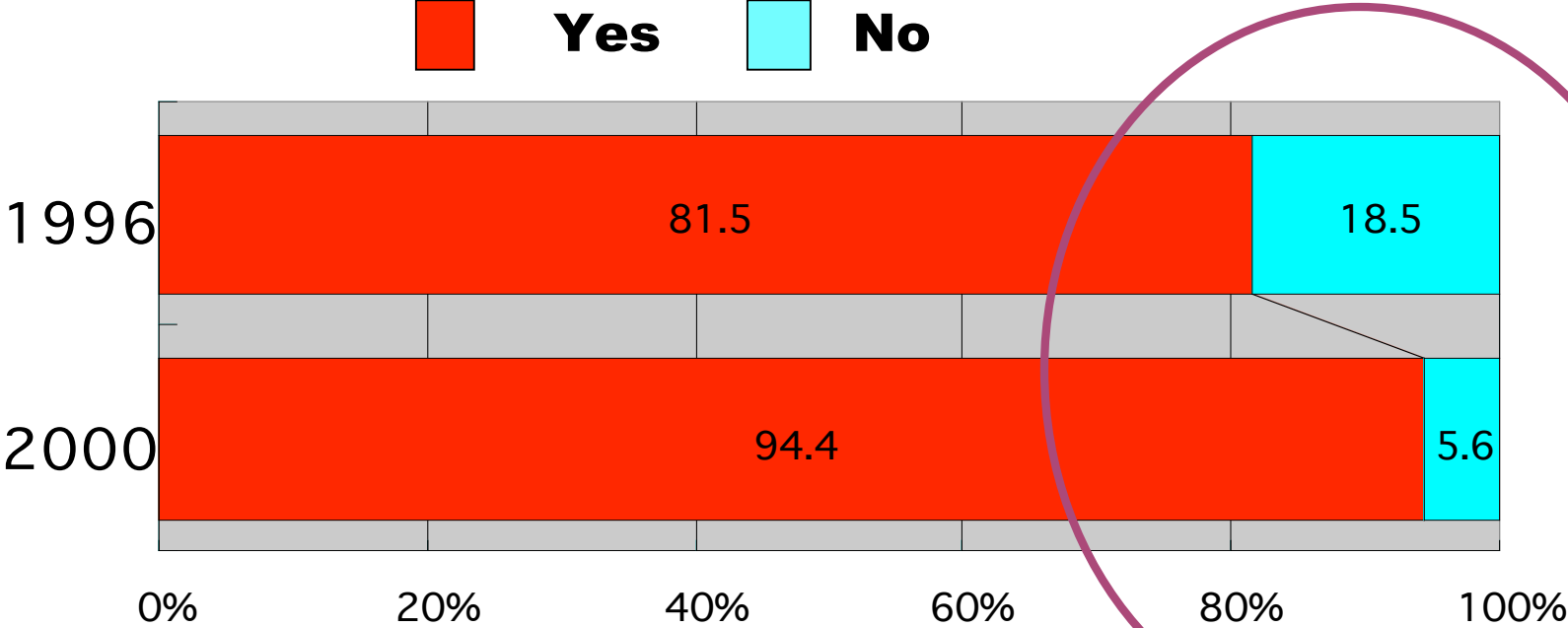
外でこれまで二百回を超える舞台を  
踏んで来ました。でも、私たちの活  
動の柱となっているのは今年も通三  
回の練習です。『と、部長の上坂さん  
は語ります。  
「私たちは半世紀にわたる太鼓の世  
界では第一人称といわれる源近洋一  
先生、林英村先生と出会うことがで  
きました。でも、まだお練習  
が足りないのもっと練習しては  
持たないでいって行かなくて』  
太鼓の世界は奥が深いから、と語  
る上坂さん。でも、そんな凝  
しい練習を経て舞台に立った  
ときの感激はひとしおだそう  
です。『各様に喜んでいただ  
ける喜び、  
チームのみんな  
と力をあわ  
せて演奏でき  
る喜び、そし  
て太鼓を通し  
て福井の名  
を多くの人々  
に知らせら  
れる喜びを感  
じます。』



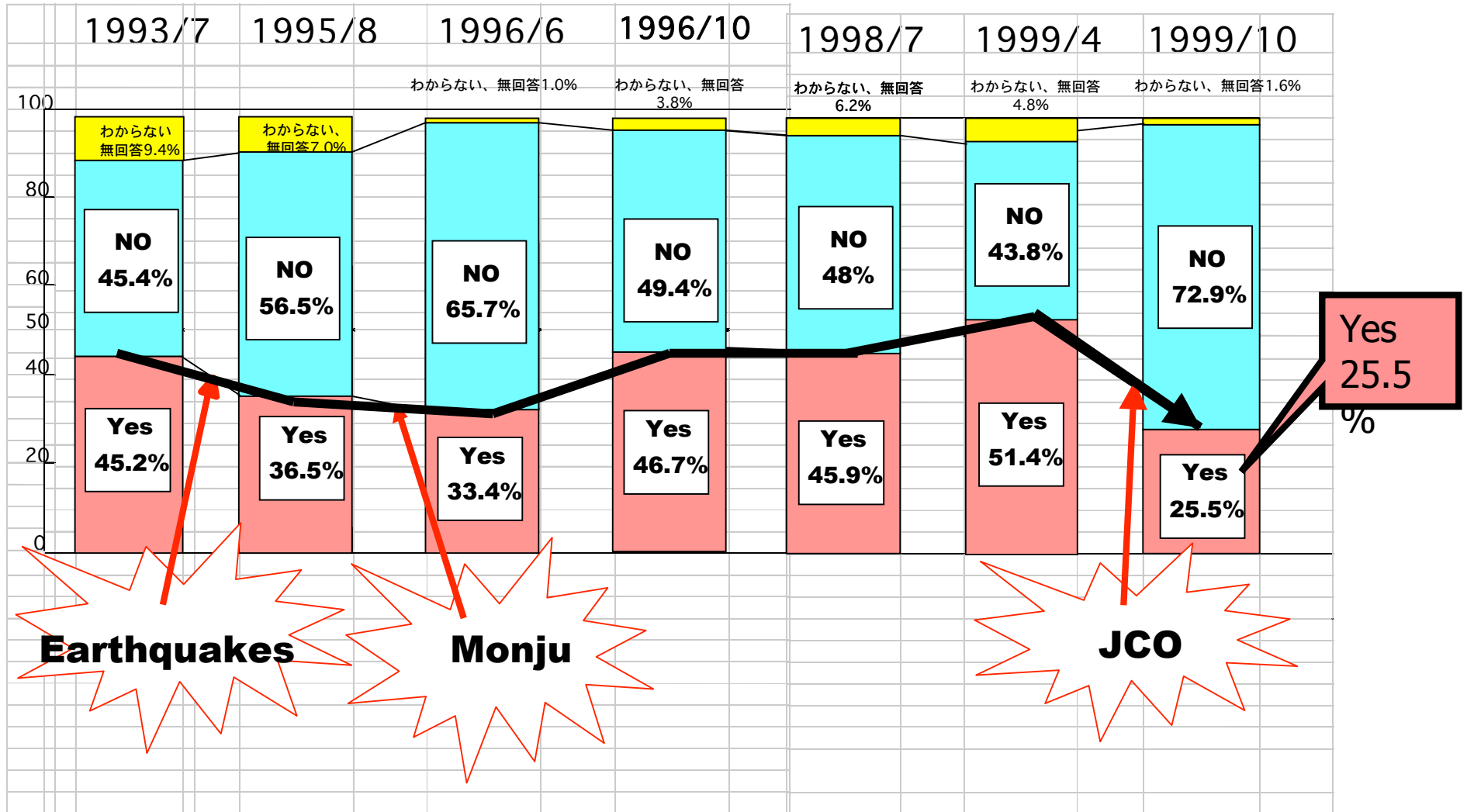
んはまたまた今年テーマに挑戦してい  
ます。『今年ではお祭太鼓を中心  
にしてみました。心は踊り、  
笛、獅子舞などの日本の伝統にもう  
一度目を付けて、古典と新作を交え  
た新しいステージをつくっていきま  
いと思っています。』



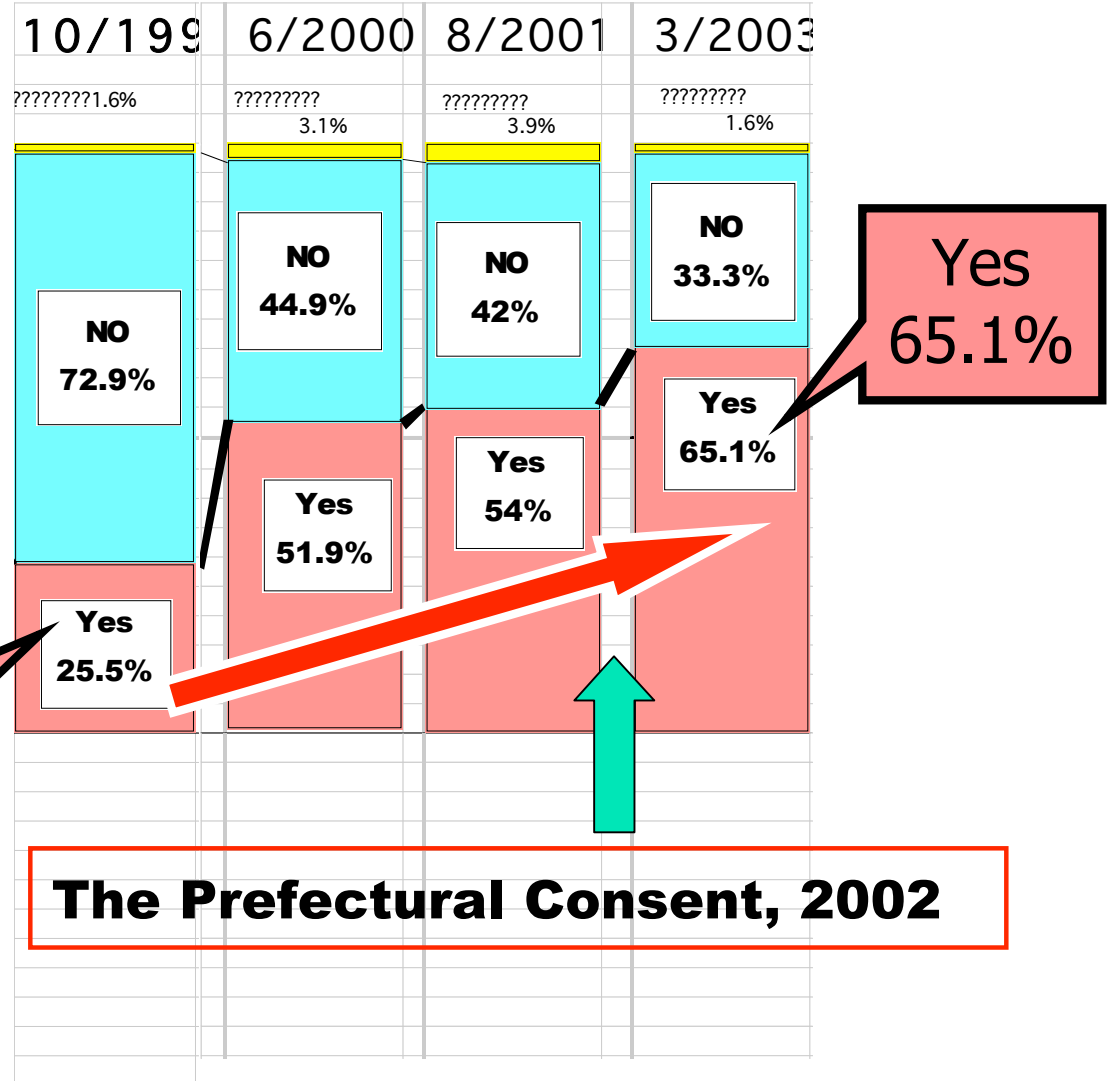
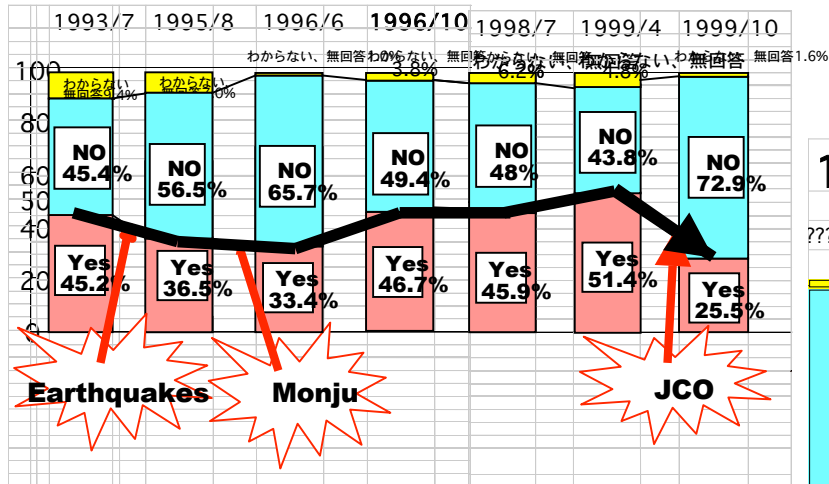
# Resident's Recognition of JAPC



# Public Perception about our Construction Plan



# Public Perception about our Construction Plan



**The Prefectural Consent, 2002**

# the Governor's Prefectural Consent

2002/12/25



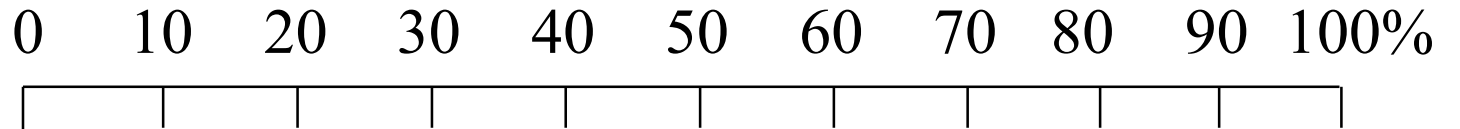
# Thank you !



# Approval for our construction plan

Resident opinion survey 1999

Yes



① Turuga

② Mihama

③ Ohi, takahama

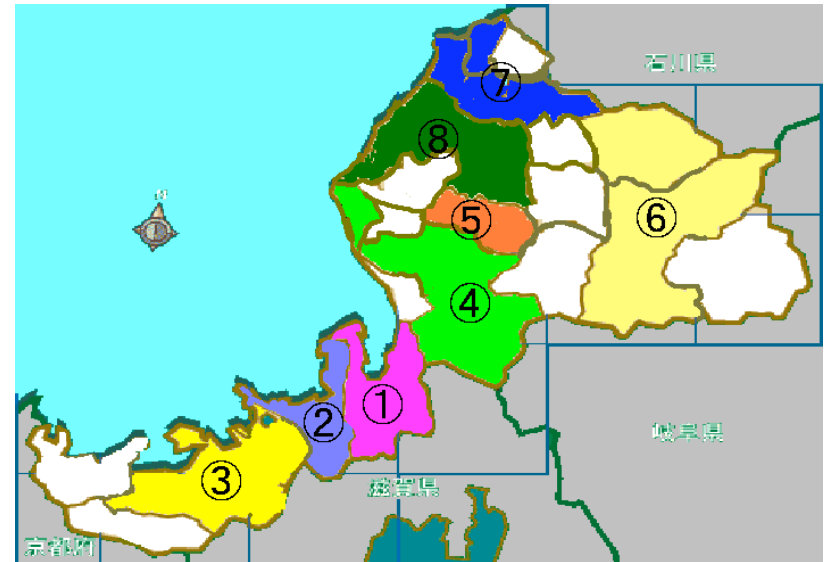
④ Tannan(1)

⑤ Tannan(2)

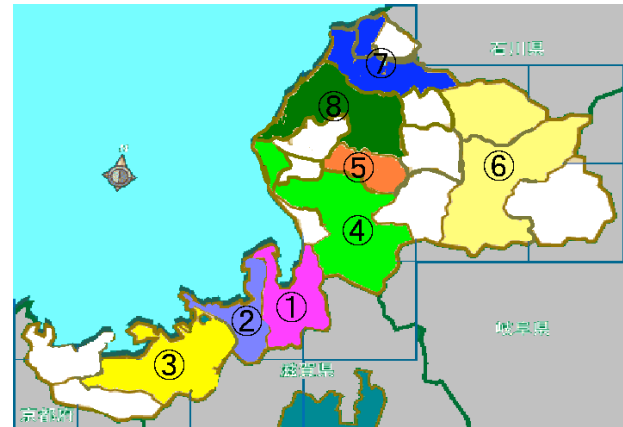
⑥ Okueku

⑦ Sakai

⑧ Hukui



## A local resident's concerns



①	Turuga	Construction planning, Radioactive waste treatment, Accident Disaster prevention measures
②	Mihama	Construction planning, Decommissioning of reactor, Plant life
③	Ohi, Takahama	Siting Criterion, Safety issue, Energy Resources problem
④	Tannan(1)	Disaster prevention measures, Radioactive waste treatment
⑤	Tannan(2)	Disaster prevention measures, Radioactive waste treatment
⑥	Okueku	Accident, Disaster prevention measures, Siting Criterion
⑦	Sakai	Disaster prevention measures, Siting Criterion, Local promotion
⑧	Hukui	Siting Criterion, Plant management