

The Science Circle

The Future of Fukushima

-The reconstruction and the radiation protection-

Presented by Fumon Crystal



"The Future of Fukushima"

-The reconstruction and the radiation protection-
by Fumon Cristal, a student presentation from Japan

Friday, November 3th at 8 AM PDT

Latest Tweets

RT @ScienceCircle: #Vacature Wij zoeken een Nederlandse #Accountant voor de positie van #Penningmeester in een internationale NGO... <https://t.co/1mmvZODXH6>
1 day ago

"The Fantastic Life in the Oceans"
by Linda Morris Kelley Sunday,
Nov 5th at 7 AM PST Join us
LIVE... <https://t.co/BihIpW4jvr>
1 day ago

When: Friday 3th Nov 8 AM PDT

Where: Epidaurus, The Science Circle

<http://maps.secondlife.com/secondlife/The%20Science%20Circle/61/127/32/>

la Médiathèque de la Radioactivité, The Science Circle

<http://maps.secondlife.com/secondlife/The%20Science%20Circle/180/62/4013>

Presenter: Fumon Crystal, Curator of Abyss Observatory,
born in a local city north next to Fukushima prefecture,
science teacher in the cram school

<Abstract>

The moment magnitude 9.0 earthquake on 11th March 2011, tsunami and the nuclear accident. There are the evacuees over 80 thousand people on 2017.

They come to grips with the reconstruction and decontamination after the disaster and enjoy their everyday life. There are the dignified smiling people and the diverse cultures in Fukushima. For the renewal of the agriculture and the fishery, scientists, engineers, and local medias are collaborated in the science communication and the public understanding of science on the radiation and the health care from the external and internal exposure based on the evidence.

This Science Circle session provides the actual cases how to live in the low dose waiting zones according to the major concepts by ICRP publications, and the reconstruction of the social infrastructures.

Presenter visualized such efforts as evidences of history at "la Médiathèque de la Radioactivité" under consultation by Yan Lauria.

After presentation, presenter will guide you to the Fukushima exhibition at 4,000m Sky of Edu Portal, The Science Circle.

<Participants>

Alexander SL (Alex2509), 有羽 (Alha Iwish), Arianne (ArianneJP), artifactsofmars Omegaman (artifactsofmars Omegaman), Beragon Betts, Bruce, Chantal Jager (Nymf Hathaway), Dae Miami, Dirlandaa (Dirlandaa Pfeffer), Jawesome (Jes Cobalt), れいちえる (Ley Tachikawa), Mike Shaw (Shawza Tunwarm), Softly, Stefano (Stephanos Kowalski), Vicarious Lee, Yan Lauria

[07:45] Dae: Fumon I am sorry but I can only stay for half of your presentation. I have to test at 8:30 AM SLT

[07:45] Dae: my students in RL

[07:51] Chantal: Fukushima today <https://www.tubantia.nl/buitenland/spookstad-fukushima-nederlandse-fotograaf-neemt-kijkje-6-jaar-na-kernramp~va2c17d69/> (note : A video report in Fukushima by Bob Thissen from Netherlands.)

[07:56] Dae: Fumon and I were chatting yesterday about Cs137. I looked it up and it has a half life of 30 years. To me that means it will take 300 years for the radiation to die down around Fukushima. Is that true?

[07:57] Dae: I am not sure what are considered safe limits

[07:57] Fumon: yes, half-life of Cs-137

[07:58] Fumon: ummm, depend on scholar...

(note: Ikuro Anzai, the emeritus professor of Ritsumaikan university: "Cs137 needs 100 years for 1/10 decay. “ 立命館大学名誉教授・安斎育郎（放射線防護学）「原発事故で放出されたセシウム137の半減期は30年、10分の1まで減るには100年かかる。

<http://www.nhk.or.jp/etv21c/archive/150418.html> 」 ICRP Publication 111:"According to the characteristics of the situation, with the presence of relatively long-lived radionuclides in the environment affecting living places, protective actions are expected to be implemented for a long time (up to several tens of years)." <http://www.icrp.org/publication.asp?id=ICRP%20Publication%20111>)

[07:58] Yan: Jes and Chan, let me talk at first about Fumon's presentation.

[07:58] Chantal: The floor is yours and Fumon's, Yan ☺

[08:00] Yan: Then, Time to start

<Presentation at Epidaurus >

[08:01] Fumon: Hello everyone!

[08:01] Yan: Let me talk about background as a manager of Abyss.

[08:01] Yan: Abyss Observatory is an Earth & life science museum of Japan,

[08:01] Yan: so how to archive memory of 3.11 Japan Earthquake is important problem for us.

[08:01] Yan: We also exhibit global warming

[08:02] Yan: and it was said nuclear energy is major mitigation method of carbon dioxide

[08:02] Yan: until Fukushima accident.

[08:02] Chantal: :(Yan

[08:02] Artifacts: Which is a hoax

[08:02] Yan: Fumon's today's presentation and her new exhibit is one of our answer.

[08:03] Yan: then, please Fumon-san

[08:03] Fumon: ty Yan san

[08:03] Chantal: Thank you, Yan ☺

[08:03] Fumon: .
Hello Science Circle!
Thank you for coming and offering this SC Session.
For the long term decommissioning of broken reactors after NPP (Nuclear Power Plant) accident on March 2011,
Big help from the scientists and engineers all over the world is needed.

[08:03] Fumon: .
And for long term decontamination of evacuation zone,
Science communications are needed.
I will report non-exaggerated facts as a neighbor of Fukushima.
Discuss free here, please.

[08:03] Fumon:
In Fukushima, 3 districts weather forecast are announced,
called Hama (seaside), Naka (central), Aizu (west mountain side).
NPP is located in Hama (seaside) district.

[08:04] Fumon:
<Google Earth> Fukushima is 3rd largest prefecture in Japan. This calligraphy signboard is put at entrance of Fukushima station.

[08:04] Fumon:
<Fukushima Festa> Wild Horse Festa is popular. Tablet PC for evacuees.

[08:05] Fumon: Mayor is from town-wide evacuation zone

[08:05] Artifacts: Nice FX up in the sky!

[08:05] Fumon: :)

[08:05] Fumon:
<local paper> Branch schools for evacuees. Students other than evacuation zone can take an examination of these High School now.

[08:06] Fumon: they are very cute

[08:06] Fumon:
<local paper> Many top level school chorus clubs in Fukushima.

[08:07] Fumon:
<Unit 1> These super science high school students only could go in NPP site as teenager.
<Unit 2> Remote control robots went into PCV (Primary Containment Vessel) for confirming Fuel Debris.
Scorpion could see Fuel Debris

[08:08] Fumon:
<UNSCEAR> New white paper on October 2017. However, according to the questionnaires by Fukushima Medical University, 37.6% citizens are still concerned about "genetic influence", so we need more science communications in education and media. (UNSCEAR: <http://www.unscear.org/unscear/en/fukushima.html>)

[08:09] Fumon: We need to say to Fukushima girls "you are no problem" this is the biggest issue now

[08:10] Fumon: and... thyroid cancer (甲状腺がん) is the hottest discussion on media now

[08:11] Fumon:

<Iitate Village (飯舘村)> Popular sight seeing spot now. Strawberry and green been from hot-house cultivation became of the village brand. Beef is the brand too.
<Fukushima Medical University> Ultrasound echo test. No need to concern of Thyroid cancer in highest dose area.

[08:12] Fumon: red zones are Iitate village and Namie town (浪江町)

[08:13] Fumon:

<Iitate Village 飯舘村> Popular sight seeing spot now. Strawberry and green been from hot-house cultivation became of the village brand. Beef is the brand too.
weekend traffic jam there now

[08:15] Fumon: This building is a new road side station , called " MADEI-KAN (まदैい館)"

[08:16] Fumon: Iitate Village is not so farfrom Fukushima Station.



<Namie Town> A health insurance hospital was built in the temporary housing zone of Nihonmatsu City.

[08:16] Yan: For Dae's question, extensive decontamination efforts are also executing at contaminated area.

[08:17] Fumon: well... removing soils...

[08:17] Dae: good to hear that

[08:18] Fumon: only 381 residents in Namie town now. but new hospital was built in 2017

[08:19] Fumon:

<ICRP> ICRP does not ignore unknown effect dose. LNT and ALARA are both important. under 20mSv/y (*5years=100mSv) does not mean evacuation order being lifted soon. Naraha town is already reasonable low dose.

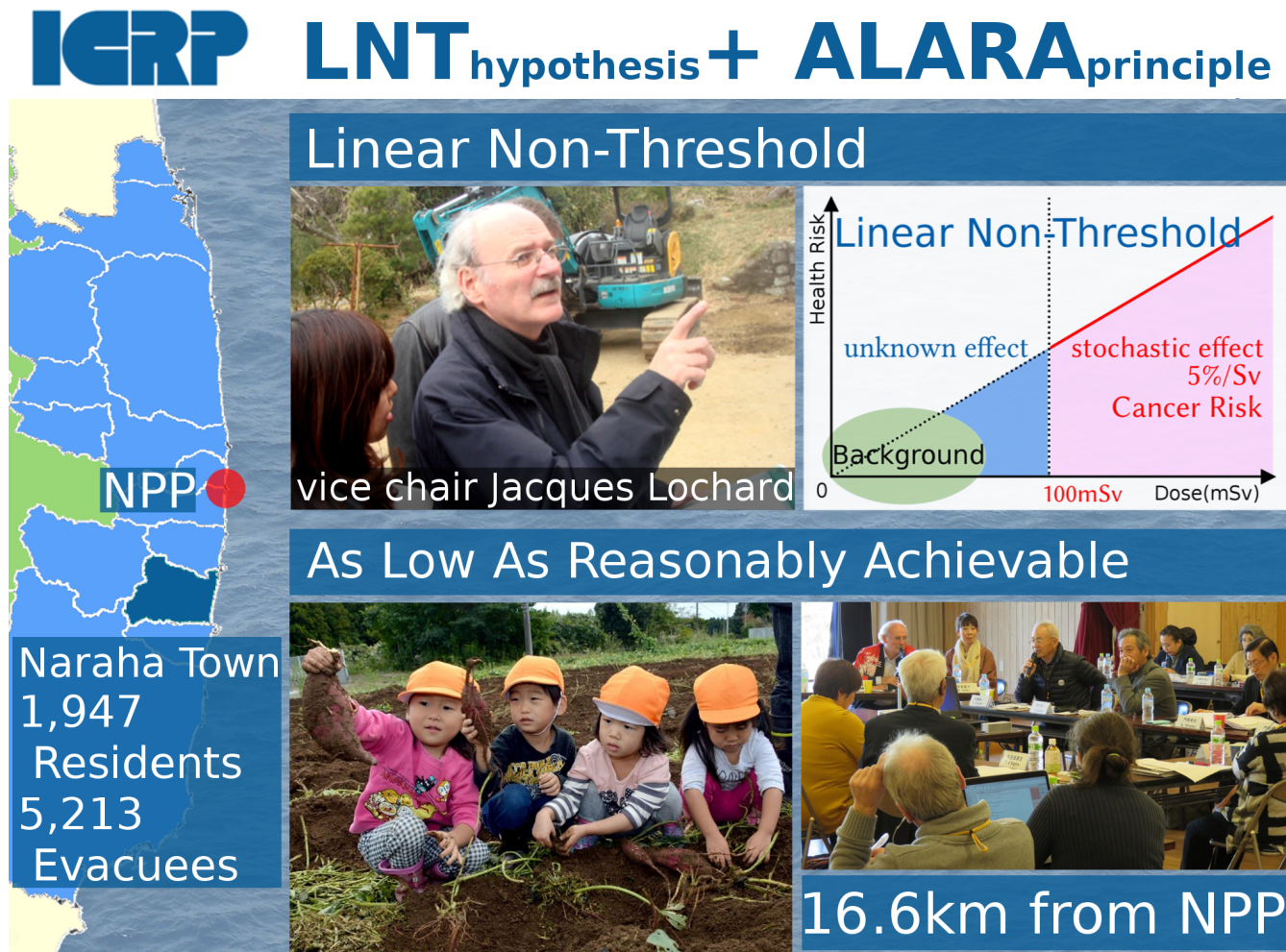
(note:note:ICRP: International Commission on Radiological Protection, LNT: Linear Non-Threshold. ALARA: as low as reasonably achievable.

ICRP は確率的影響未満の空間線量率を無視してない。避難指示解除の要件（閣議決定）は「空間線量率で推定された年間積算線量が20ミリシーベルト以下になることが確実であること http://www.kantei.go.jp/saigai/pdf/hinan_youken.pdf」であるが、避難解除区域は合理的かつ十分に低い空間線量率を達成している。）

[08:19] Fumon: a bit difficult concept..

[08:21] Fumon: Jacques Lochard is a French . and he often go to Fukushima for decontamination

(note: Jacques Lochard Vice-Chair of ICRP http://www.icrp.org/icrp_group.asp?id=6/)



[08:22] Fumon:
 <Whole Body Counter, WBC> If we eat wild mountain vegetables everyday, WBC may detect Caesium. Almost all residents buy foods of supermarket, WBC only detected K-40.

[08:23] Fumon: There are so many WBC in Fukushima now

[08:23] Fumon: As we know well, Cs-134 has 2 peaks on Spectrum
 not so easy to sum

[08:26] Dae: Cool Chemistry....Mike must be happy

[08:26] Fumon:
 We have about 4,000Bq K-40. But Fukushima residents do not ignore low dose of Ceasium.
 <Rice> Agriculture population is declining every year, so the reconstruction unions are established in the local governments.

[08:27] Fumon: Kennedy went to NPP, too

[08:28] Fumon:
 <New Plan 2017> Pass for evacuees or NPP workers is not needed to through expressway since 2017. Motor bikers also can go there. Two new interchanges will be built in town-wide evacuation zone. About 3,000 workers come to NPP site everyday.
 (note : 福島復興再生特別措置法に基づく特定復興再生拠点区域が該当自治体の議決を経て内閣が承認した。 <http://www.reconstruction.go.jp/topics/main-cat1/sub-cat1-4/saiseikyoten/20170913162153.html>)

[08:28] Chantal: My government last month provided every child in a radius of 200 km of a nuclear power station with iodine... my son got them too, since Germany has one close to our border.

[08:29] Fumon: yes, I-131

[08:29] Fumon: This map is the core project in Japan now

[08:29] Dae: We have a reactor in Northern Virginia, but there is no discussion of Iodine tablets. My son lives in northern VA

[08:30] Chantal: :(

[08:30] Fumon: Futaba(双葉) and Okuma(大熊) are only town-wide evacuation now in 2017

[08:30] Dae: I have to go give a test on oceanography to students. Thanks for the presentation so far Yan and Fumon....I want to learn more

[08:30] Fumon: yes yes, Iodine tablet was the hottest discussion on March 2011 in Fukushima

[08:30] Fumon: see you next Dae

[08:31] Arianne: bye Dae

[08:31] Fumon:
 <Okuma Town(大熊町)> Town council is located in Aizu castle city now. Rice in Test farm is safe from act on food sanitation and is restricted by act on Nuclear emergency. Wine is the brand.

[08:33] Fumon: They go to their own test paddy fields every week

[08:33] Fumon: not so easy way

[08:33] Fumon:
 <Route 6> In Okuma town, expandable barricades of houses are put for security. Most important problem is wild animals (boar, raccoon and rat) now. Police and local government staffs go on patrol.

[08:35] Fumon: now... about 2 railway station , we wait being lifted now

[08:36] Fumon: In Okuma town, oldmen go on patrol

[08:37] Fumon:
 <Tomioka Stn. 富岡駅> In autumn, goldenrod grows there and here.

[08:37] Fumon: back to panel for seeing Tomioka Station.

[08:38] Fumon: underside of this panel is the Tomioka Station.

[08:38] Fumon:
 <Nepal> A comedian, Nasubi climbed the 8,850m summit of Mt.Sagarmāthā. He is a science communicator in Fukushima.

[08:39] Fumon:
 <Saltwater Fish> Fukushima fish go to Tokyo fish market auction now. Fishermen cooperative wait the restrictions being lifted.

[08:40] Fumon: potassium (K) channel of saltwater fish

[08:40] Fumon: So fishermen wait biological half time

[08:41] Fumon: next is the last panel here

[08:41] Fumon:
 <Aquarium> 54.6km from NPP. Breeding staffs also offer dietary education, because kids do not want to eat fish with bones.

[08:42] Yan: China and Korea still prohibit to import fishes in Fukushima.

[08:42] Yan: reputational damage is preventing Fukushima's reconstruction

[08:43] Vicarious: :/

[08:43] Fumon: yes , not only Fukushima. but also near prefecture too

[08:44] Fumon: any topic, please

[08:44] Fumon: or go to the new museum?

[08:44] Yan: welcome guided tour^^

[08:44] Fumon: I see , Yan san:)

[08:45] Chantal: Please follow us, to the exhibition la Médiathèque de la Radioactivité
<http://maps.secondlife.com/secondlife/The%20Science%20Circle/218/62/4002>

[08:45] Fumon: location : <http://maps.secondlife.com/secondlife/The%20Science%20Circle/180/62/4013>

<Field Trip at la Médiathèque de la Radioactivité >

[08:45] Fumon: Thank you everyone, and applause for wonderful Fukushima citizens

[08:46] Beragon: A*P*P*L*A*U*S*E!!!

[08:46] Arianne: ♥*♪° —————ДррLдмsëëëë—————° ♪*♥

[08:46] Vicarious: ^ :)

[08:46] Fumon: Please come to the new museum

[08:46] Yan: Please click slurl in near-by chat

[08:46] Mike: <applause!>

[08:50] Automatic Ticket Gate:
 The laurels is shining on you (Yūji Koseki)
<https://www.youtube.com/watch?v=C57dscgDesg>
 Google Map <https://www.google.com/maps/place/Fukushima+Station/?hl=en&gl=JP>

[08:51] Fumon: this area is for the education of basic radiation

[08:51] Fumon: any new ideas please , SC members

[08:52] Fumon: Clicking panels , you can see the info on chat

[08:52] Chantal: I am wondering Fumon... what is the information the gov spreads? Do they

acknowledge they have a problem or don't they?

[08:53] Fumon: aww , Fukushima governor's add is on last panel of this museum

[08:53] Fumon: a bit long sentence:)

[08:54] Chantal: Give it a try my Japanese is horrible ☺

[08:55] Fumon: Look at this panel, Fukushima students are co-author of refereed paper

[08:56] Fumon: These are real science communications in Fukushima

[08:57] Arianne: Here is the statement from Governor of Fukushima.

[08:57] Fumon: nods

[08:57] Fumon: true, Arianne

[08:58] Chantal: How cultures differ... this would not have been enough for Dutch people

[08:59] Fumon: yes yes yes, I know Holland SL users a bit)

[08:59] Chantal: :)))

[08:59] Fumon: but Holland citizens are all calm in SL:)

[09:00] Chantal: Incredible amount of work, Fumon! wonderful

[09:00] Stefano: really great work, congratulations

[09:00] Fumon: JAMSTEC ship detected sea water radiation in detail

[09:00] Fumon: ty Stephanos

[09:00] Mike: The exhibit is delightful. Very informative. I also like the little touches, the drones and the water features especially!

[09:01] Stefano: how long will it stay on ?

[09:01] Yan: I feel Fumon-san's love to Fukushima.

[09:01] Fumon: any time please:)

[09:02] Fumon: yes, I am the neighbor of Fukushima

[09:02] Beragon: very comprehensive. good job Fumon

[09:02] Chantal: we have no time limit set on the exhibit, Stefano

[09:02] Fumon: ty Beragon

[09:02] Stefano: That's great, i will try to bring people here

[09:02] Chantal: ☺

[09:02] Jes: ☺

[09:02] Fumon: ♥

[09:03] Yan: thank you Stefan^^

[09:03] Dirlandaa: no talking, no ads, no music

[09:03] Chantal: Yes that becomes rare hehe

[09:04] Yan: full of appealing culture of Fukushima

[09:05] Fumon: and Emileigh may build a new mesh reactor model

[09:05] Beragon: o.0

[09:05] Fumon: yes!

[09:06] Yan: Chan, do you accept to keep this exhibition at "The Science Circle"?

[09:06] Chantal: yes, Yan

[09:06] Beragon: Thank you. Have a good day or evening everyone

[09:06] Fumon: aww ty ty Chantal

[09:06] Yan: very thank you ^^

[09:06] Chantal: Fumon did a great job, good addition to sl

[09:07] Vicarious: Agreed :)

[09:07] Yan: I'm grad to hear that

[09:06] Stefano: btw, while I was watching the presentation, I was watching on TV a news report about our bigger environmental disaster, that is completing 2 years this weekend

<https://www.theguardian.com/sustainable-business/2016/oct/15/samarco-dam-collapse-brazil-worst-environmental-disaster-bhp-billiton-vale-mining>

(note : https://en.wikipedia.org/wiki/Bento_Rodrigues_dam_disaster)

[09:07] Fumon: Goianiga in Brazil?

[09:07] Chantal: Gosh Stefano... didn't even hear of it

[09:08] Stefano: it is still going on here, no one was punished, the wildlife consequences are still terrible

[09:08] Chantal: :(

[09:08] Fumon: this article is different topic from the Radiological Accident in Goiânia

(note: <http://www-pub.iaea.org/books/IAEABooks/3684/The-Radiological-Accident-in-Goinia/>
ブラジル国ゴイニア放射線治療研究所からのセシウム 137 盗難による放射線被ばく事故
http://www.rist.or.jp/atomica/data/dat_detail.php?Title_No=09-03-02-04)

[09:08] Chantal: did you try to activate Greenpeace?

[09:09] Chantal: an email or tweet will be enough, Stefano

[09:09] Fumon: off course, We want to hide radiation. so We need to learn ARALA concept of ICRP

[09:10] Arianne: The memory of disaster often goes far way, we need to keep information and I will worn next generation.

[09:10] Fumon: yes , that's true

[09:10] Chantal: Interesting subject, Arianne

[09:10] Stefano: the Goiania incident was very mild, but many of the victims are still in treatment

[09:10] Chantal: loss of data

[09:10] Fumon: nods , Stephanos

[09:11] Stefano: radiation disasters are generations disasters. they take to long to disappear

[09:11] Chantal: check Chernobyl and you know enough

[09:11] Fumon: yep

[09:12] Stefano: even so, nuclear plants are in general a lot safer

[09:12] Arianne: It should be discussed whether we will need nuke plants or not.

[09:12] Fumon: true

[09:12] Yan: Fumon is focusing on Reconstruction. It is effective than simple display of disaster

[09:12] Stefano: I agree Yan

[09:12] Fumon: and.. a small memorial for Patio , here too

[09:13] Arianne: I might be one of political issues , but we should have scientific eyes on it.

[09:13] Mike: I noticed that. very classy :)

[09:13] Fumon: :)

[09:13] Chantal: they cannot be Stefano... we live on a planet which is alive... storms, earthquakes, tsunamis etc

[09:14] Chantal: and do not forget the people who love to blow themselves up

[09:14] Stefano: true

[09:15] Chantal: ♥

[09:15] Chantal: Great work, Fumon!

[09:15] Fumon: ty Chantal

[09:15] Stefano: here in Brazil we rely heavily in hydroelectricity

[09:15] Chantal: I like that!

[09:15] Chantal: making use of nature in a green way

[09:15] Arianne: Terra! Home. I'll go home. And I'll think of some way to get nature back. After all...

tomorrow is another day.

[09:15] Yan: Fumon has changed after 3.11. She becomes active.

[09:16] Fumon: yep. Hanford site has the serious problem yet

[09:16] Stefano: not for the wildlife behind the damn.. or the Indian tribes that live there

[09:16] Chantal: really? :(

[09:16] Chantal: gosh

[09:16] Fumon: ahaha

[09:16] Stefano: there are always consequences

[09:16] Chantal: yes

[09:16] Fumon: Yes maybe:)

[09:16] Stefano: it is always a trade off decision to make~

[09:17] Chantal: yes but damaging earth isn't one of them for me

[09:17] Vicarious: cheers to that

[09:17] Fumon: 日本語で：宮城県 うまれ のあたしが 風評被害の元になったら おしまいw

[09:18] Fumon: そんなのいやだw

[09:18] Vicarious: but on that note, I think George Carlin said it best. "The earth's not going anywhere- WE ARE!"

[09:18] Yan: なるほど ^ ^

[09:18] Arianne: むずかしいところですねー それって

[09:18] Stefano: we are only here to make plastic :D <--? plastic?

[09:18] Chantal: Excellent! Vicarious

[09:18] Fumon: ですね。課題はたくさんある

[09:18] Vicarious: hehe yes!

[09:18] Vicarious: Earth+plastic :)

[09:18] Mike: Thanks for an excellent presentation Fumon! Fumon and Yan, this exhibit is delightful!

I have to be going now, but I will come back and look in more detail.

[09:18] Stefano: great George Carlin :)

[09:18] Jes: see you again mike

[09:18] Fumon: ty Mike!

[09:19] Chantal: Have a nice weekend, Mike!

[09:19] Stefano: see you Mike

[09:19] Mike: Bye!

[09:19] Mike: See you Sunday

[09:19] Chantal: yes ☺

[09:19] Jes: yep

[09:19] Arianne: cya around everyone

[09:19] Vicarious: Thank you for sharing knowledge! Definitely lming this place! <--??

[09:19] Chantal: ok... having a flu... time for me to log off too

[09:19] Fumon: see you next , Arianne san!

[09:19] Jes: waves Chant ☺ get well soon

[09:19] Jes: bye, ArianneJP

[09:19] Arianne: Have a nice weekend everyone

[09:19] Chantal: Thanks again Fumon and Yan and looking forward to Sunday ☺

[09:20] Fumon: sure!

[09:20] Chantal: ♥

[09:20] Chantal: Huggles sweets

[09:20] Jes: Great work Fumon, thank you for this addition to the SC land

[09:20] Yan: Battle for "Reputational damage" is very long way.
[09:20] Ley: see you(*° —°)ノ
[09:20] Fumon: ty , Jes
[09:20] Jes: I will log off too, busy day ahead
[09:20] Fumon: にゃ～にゃ～♪
[09:20] Vicarious: Take care everyone <3
[09:20] Jes: thanks again ☺ see you all on Sunday, hopefully :)
[09:21] Stefano: I have to go too, nice to meet you all and congratulations again !
[09:21] Arianne: May the force be with you all
[09:21] Yan: Thank you for participating today, everyone. ^o^
[09:28] Fumon: 深夜まで おつかれさまでしたあ
[09:28] Yan: ま、とにかく今日はこれで
[09:28] Yan: おやすみ
[09:28] Fumon: あいー
[09:28] Fumon: にゃ～にゃ～♪
[09:28] Yan: Good Job !
[09:28] Fumon: ty ty!

