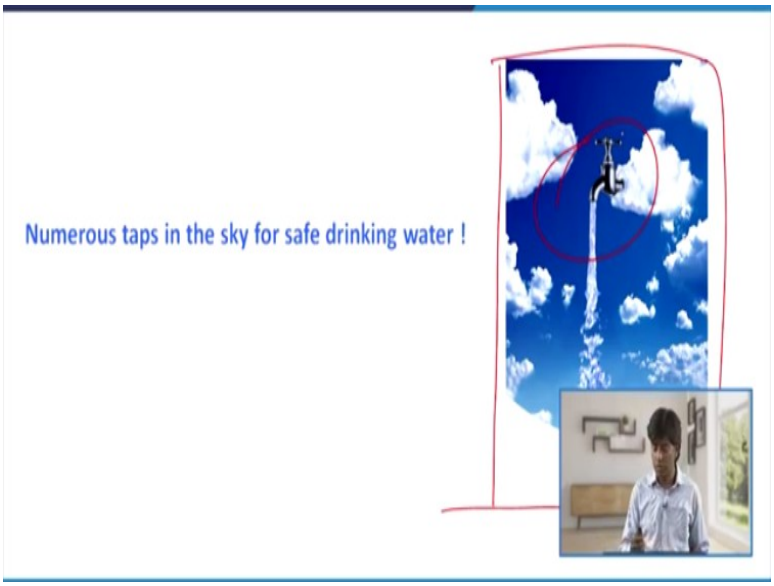
because of their financial condition, it is really tough for them to look into other matter okay, so it is a kind of background risk.

Also, there are other factors people identified, these are lack of education, distrust and distrust in government agencies and NGOs, they cannot believe that these NGOs, nongovernmental organizations and governmental organizations are really honest promoting any kind of alternative drinking water technology because in 1980's they were told that okay your surface, your ponds are contaminated, please use tube wells, it took a long time to convince people not to use surface water, they are more, more comfortable, much, much more comfortable using surface water which took much longer time spending a lot of investment projects to motivate people to use tube wells not surface water. Now, you are again saying that do not use that one, where should I go; it is not a very prosperous area economically.

So then what else, are you hopeless, we cannot do anything, some people coming with accepting that challenge, coming with a very innovative idea, a very innovative idea and very simple. They said hey, come on we have plenty of water actually, numerous stamps in the sky for safe drinking water, the sky will provide us drinking water and do not worry, yes like this tap.

(Refer Slide Time: 15:42)

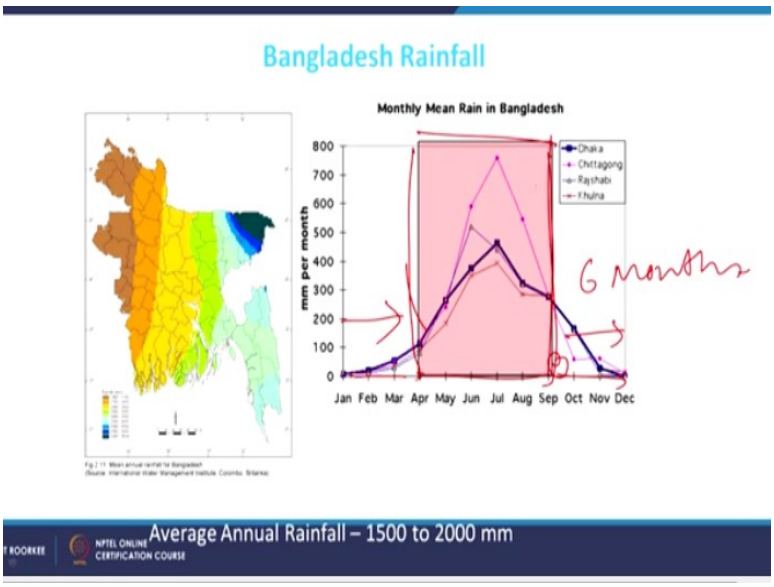


Like this tap, you get, so each one we can get gallons and gallons of water okay, who said we do not have water.

(Refer Slide Time: 15:51)

There is a Japanese organization, non-profit organization people for rainwater, they said okay, this is called Amamizu, in Japanese is called a kind of rainwater that will bring smile to every home therefore, diffusion of innovation is inevitable. This is a model tank at the household level, during the rainy season you have to collect water and from the roof water, this will come channelize okay, and we will store it here, simple; very simple and there is a small net, pipes and Phukets okay, so this small simple technology you need.

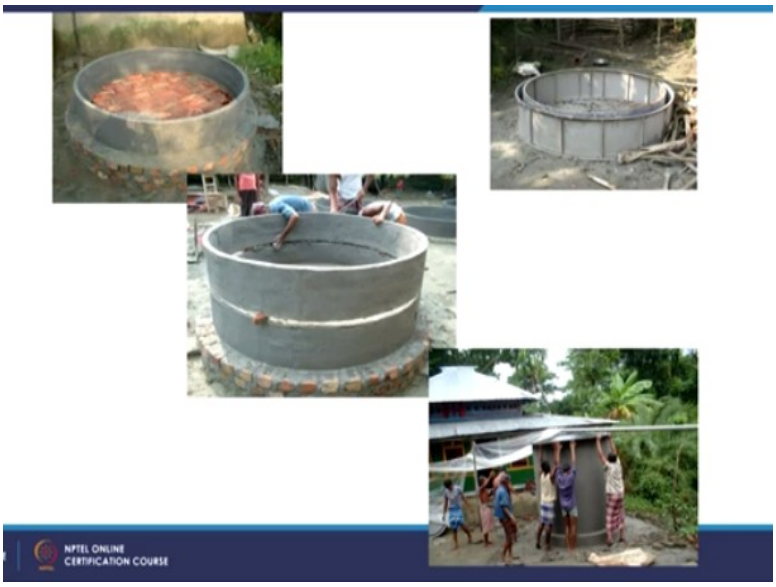
(Refer Slide Time: 16:41)



Bangladesh which has a very good rainfall like this one from April to May, you get a rainwater so, it continues till September so, from October to March, 6 months you need water so, you preserve water during this time in the end of this and then you can continue for this 6 months and during this time you have always rainwater.

So, you do not need to worry. So they have average rainfall of 1500 to 2000 millimetre but concentrated only in these months.

(Refer Slide Time: 17:27)

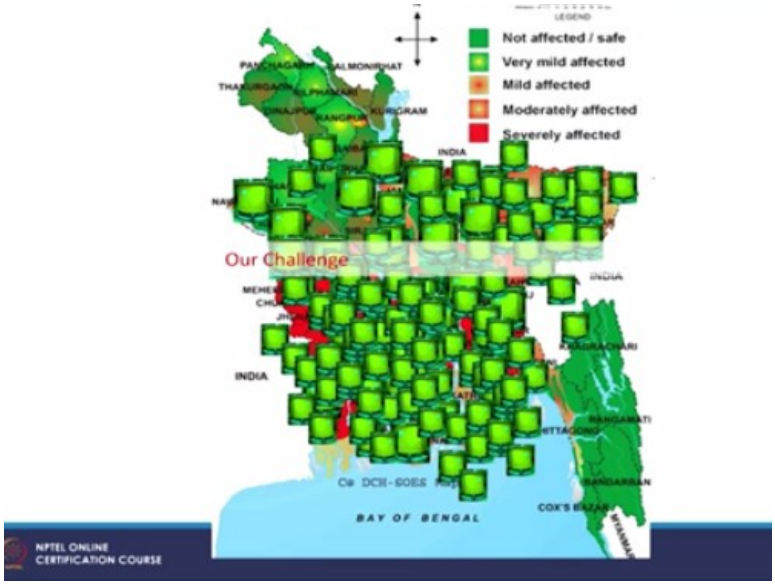


So, some people came up with that okay, we can do it, if we have around 5000 litre water tank, then if 4 and 5 members family can easily run 6 months with this preserved water for drinking purpose, okay.

(Refer Slide Time: 17:50)

So, this is a small tank at the household level, he is the NGO person, and they are the users so, we need to install this tank which is not very costly, little costly.

(Refer Slide Time: 18:06)



So, the challenge is therefore to solve the drinking water risk in Bangladesh, you need to install many, many, many, many so, this is our challenge so, how we can recover from this how, we can promote these rainwater harvesting, right so, this is our challenge given that how we can solve this problem. So, as a planner, as a practitioner, we are saying that okay, you need to promote this tank to stop drinking water risk to reduce drinking water risk in Bangladesh, tell us what is the solution?

People have water problem, people have habit problem, people have problem of risk ignorance so, they are not considering so, many problems, one is socio-economic problem, another one is the educational problem so, during such a complex situations, the government is hiring you and asking you that what solution you can give.

So, in order to encourage people you first need to know why, what they need, what is the role of information, what kind of information we should provide to them? And how we should provide to them, so that they would be motivated, encourage to install these tanks. So, this is the ideal the small, small support, we do not need a very gigantic bigger effort but very small.

(Refer Slide Time: 19:58)

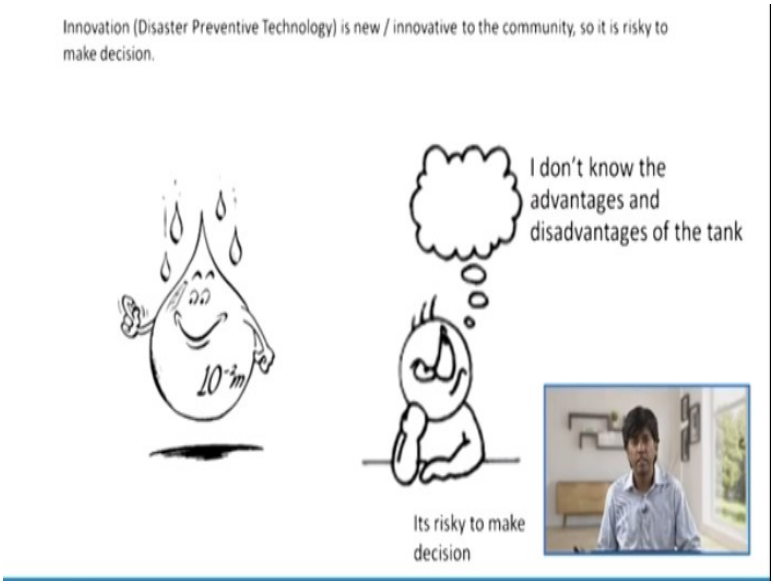
This small effort can have a very gigantic impact like diffusion is of innovation, this innovative technology is inevitable for sustainable climate change adaptations and disaster risk management so, putting a lot small power together adds up to big power right, putting a lot of small power, small power ending at a very gigantic big power, okay.

(Refer Slide Time: 20:30)

Research Problem

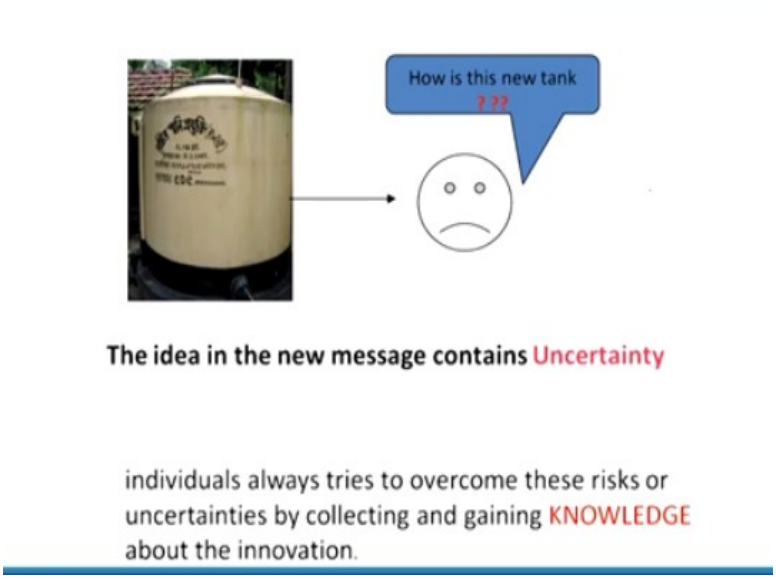
So, our research problem then,

(Refer Slide Time: 20:32)



If we are asking people to install this tank, imagine this is a tank, we ask people hey, install this tank at your house oh, I am really confused why? It is not easy to make a decision why; because I would really do not know the advantage, merits and demerits, how should I believe you, how should I trust you right.

(Refer Slide Time: 21:12)



So, I need information because this is a new, no one before tried this one, this is an innovative technology so, innovation is also very dangerous in some sense because this is new and as it is new, its advantage and disadvantages are not known to the people, so people have no idea, they have to make decision of adoption, decision of installation in an uncertain situation, right.

If you are buying this one is already existing a community no problem, you can buy this remote but if you are; if this one is not available, never came before so, how people would make a decision that is a big question.

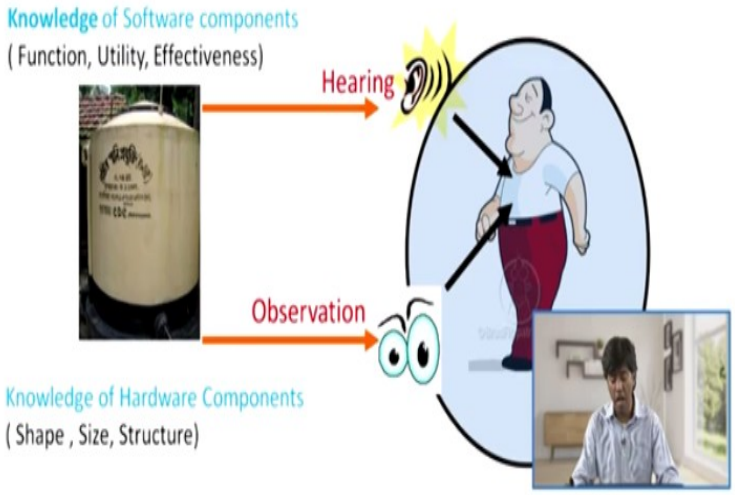
(Refer Slide Time: 22:08)

So, what kind of information people then need, how they would know that okay, this is good or bad, this has this will work for me or not, they need information, right, if we provide, they do not have the information because this is new, but if we provide them information they would eventually know, they would judge and evaluate this innovative technology, this will remain innovative, but this would not be that new, because they would have some feedback.

So, now people need to collect information in order to reduce their uncertainty, no one likes uncertainty, everyone wants to predict their future, like any kind of risk; risk is always future you know that is true, we always face risk in future, future risks cannot be in present or past is always in future like fear, so like uncertainty so, it is always in future.

So, we would like to; no one likes uncertain situation, they want to minimise the uncertainty so, then people would like to collect information, how they can collect information about this tank, this person?

(Refer Slide Time: 23:37)

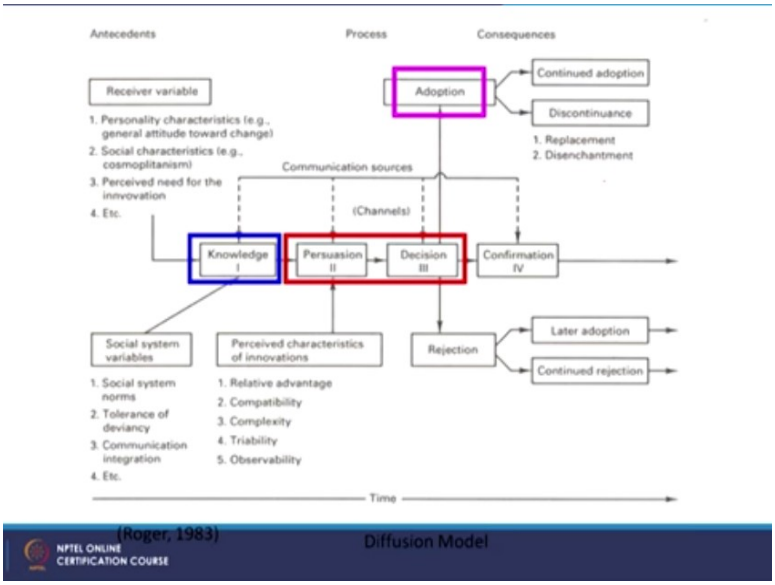


He can collect it; one is through hearing, right another, he can collect from listening or hearing from others, another one is observation or watching this tank, somewhere in some place, friend's place, bazaar, market and anonymous person's house so, they hearing it would give him software kind of knowledge like what is the function of this tank, how does it work, what are the utilities, effectiveness.

So, his friends, relatives or maybe someone neighbours he does not know or from radio, televisions anything, it could be human networks, it could be social networks anything, a mass media so, he or she can collect information about tank through hearing but hearing can only allow you to collect information about the software part, not the hardware part. For hardware part, you need to watch it, what is the shape, size, structure, is it beautiful or not, is it big or small, okay is it round or square so, these are also very necessary.

Because I do not have maybe space to install it or maybe it would look ugly if I put it into in my house so, these hardware components you can only get through observation, okay and then it would complete my knowledge.

(Refer Slide Time: 25:18)



But this is a model of diffusion of innovations developed by Rogers, they are saying that knowledge is important to make decisions like knowledge means, information which we can get through hearing and observation but knowledge immediately does not lead to adaptation; no, no, it takes time, before making adoption decisions, we need to have decision persuasions and decision question.

(Refer Slide Time: 25:53)

So, the persuasion stage and decision stage that means, what is the utility of that from a subjective point of view, I need more information, if subjective interpretations of that one in my condition, it will work or not, this kind of context which I get, which we call discussions so, we have; we need 3 kinds of information; hearing, observations and discussions, okay.

These 3 information would really help me to reduce the decision and making in uncertainty and then I would make decisions. In my 2 other lectures next to that, I would then give you the examples for Bangladesh, the results that feedbacks that how people collect this information, what kind of networks they use and who play a bigger role, okay.

Thank you very much.