

→ Arcot interview ^{15*}
transcript

NIAS, Tuesday, April 10, 2018

I: Interviewer (Gentleman).

R: Interviewee (Gentleman).

L: Lady.

I: I remember that you had told me that B. D. Pandey had told you that ...

R: Yeah.

I: ... (Not clear; 00:00:06) to ask you why I had left ... if you recall ...

R: I don't recall.

I: You don't recall?

R: Hmm ...

I: You phoned me ... or rather you told me that B. D. Pandey had called when I had decided to resign and go ...

Speaker 2: Hmm.

Speaker 1: ... as to why I was doing that and so on.

R: Mm-Hmm ... what did I say?

I: That ... (laughing) ... I wanted to know from you ... whether you recall ...

R: No, I don't recall it now.

I: You don't recall it now? Okay. (00:00:32). Now ...

R: But B. D. Pandey called me and asked me "Who is responsible for the ... that approach paper?"

I: Huh.

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17 Dec 2017

1100 > ~~1100~~
1330

V Siddhartha
Interview of
Arcot Ramchandran
Ex Chairman, TFR

R: And I told him _____ (Not clear; 00:00:41), it's ... handwriting is _____ (Not clear; 00:00:44).

I: Oh! Okay.

R: But don't put that.

I: Okay. I won't. And ... once that ... that period ... when ... when did that, sort of ... you know, die down as it were, and BST started moving into their implementation phase, including these three things ... you said, the most important three things that were done ... which then became departments ... later on ...

R: Hmm.

I: ... what was the creation of the National Biotechnology Board ...

R: Yeah.

I: And NCPC was there at the ...

R: Yeah. National Committee for Environmental Planning and Coordination.

I: ... that ... the chairman of which was ...

R: Pant.

I: Pant.

R: Now ... before Pant it was ... that Kashmiri man.

I: Who?

R: Not Pitambar Pant. Before Pitambar Pant.

R: _____ (Not clear; 00:01:51) Pitambar Pant.

I: Hmm.

R: Now, Pitambar Pant was the chairman, NCEPC ...

I: Yes.

R: And he handed it over to Dr. Choudary (Not clear; 00:02:05) I think.

I: Oh. I see. And the biotechnology board?

R: Biotechnology board was ... our friend ... FRS ... the short man ...

I: Short man, FRS?

R: Botany.

I: Oh! Botany ... Maheshwari? In ...

R: Not Maheshwari ...

I: Huh ... (00:02:34).

R: Maheshwarai's successor.

S1; In Delhi University.

R: In Delhi University. You ...

I: Oh! You are talking About G. P. Talwar?

R: No.

I: No (?).

R: FRS ... In FRS ...

I: Ah ... yeah, yeah, yeah. I ... I think I know who you ,mean.

R: Very good man.

I: Yes. It will come back ... it will come back. And who was the ... who was the person who appointed to that person. I mean, it was all under Indira Gandhi.

R: NO ... my recommendation ... Subramanyam ... appointed ... that time ... appointed.

I: I see.

R: C. Subramanyam.

I: C.S. C.S. Okay. On your recommendation.

R: Appointments were all made by prime minister.

I: Yes, of course.

R: These are all people who were intermediaries.

I: Yes. Of course.

R: She was all powerful.

I: Who? Of course ... no question. No question. And took a direct interest (00:03:31).

R: Yes ... took a direct interest ...

I: Direct interest. It was her territory. It was her constituency.

R: Because ... when _____ (Not clear; 00:03:38) retired ...

I: Yeah.

R: ... he became the vice-chancellor of Nehru University ...

I: Yes.

R: He moved from environment planning to Jawaharlal Nehru University.

I: Yes.

R: And this man ... this gentleman, botanist ... of FRS took over. Short man.

I: Can't recall him ...

R: Can't recall his name. He was a quiet person. He did his job very good ...

I: North Indian, or South Indian? (00:04:04)

R: North Indian.

I: Oh! Can't recall. Hmm ... and then ... on ... on the next one, after NCEPC and then Bharat Technology Board ... and who was the brain behind the creation of the _____ (Not clear; 00:04:22). Of course, NCST had recommended it. But I am wondering who was ... sort of ... moving spirit?

R: It was the gentleman who I mentioned. (00:04:37)

I: Oh! I see. Okay. It is interesting that you should mention that and I don't even remember. I should ... I should know. I don't. I will check. And ... and then, of course, NRSA.

R: National Remote Sensing Agency ...

I: Yeah.

R: ... was created by me ...

I: Yes.

R: I had appointed Wing Commander Rao ...

I: Yes.

R: ... as a research director.

I: Yes. (00:05:01).

R: Department was not happy about it at all.

I: Yes ... now tell me about that. The ... the issue ... in fact, I think I would like to have some background ...

R: I ...

I: _____ (Not clear; 00:05:14) problem between yourself ... which was ... which was ... which was genuine, in the sense that it was not personal at ... or was it personal? It was more a disagreement with regard to the institutional arrangement, rather than personal. (00:05:29)

R: No, it was not personal.

I: Sorry?

R: It was not personal.

I: It was not personal. Yes.

R: I mentioned Professor Naidamma (Name not clear; 00:05:36) ...

I: Yes.

R: and I also told ... Doctor Satish Dhawan ...

I: Yeah.

R: You deal with space ...

I: Yes.

R: ... I deal with the government.

I: Yes.

R: And I say ... receiving the ... dealing with the data on the ground ...

I: Yes.

R: And implementing on the ground.

I: Yes ... yes.

R: That's the difference between NRSA and the Department of Space.

I: That's right.

R: And then I appointed Wing Commander Rao ...

I: Yes.

R: ... which they didn't like.

I: Who didn't like?

R: I am told, the Department of Space didn't like because he was not ... he was not a persona grata.

I: With? (00:06:09)

R: With Satish.

I: Or, was it N. G. K. Menon?

R: I don't know whether (it was) Satish Dhawan, or M. G. K. Menon. M. G. K. and Satish Dhawan never make enemies – that I know.

I: NO ... but Goku (Not clear; 00:06:20) Menon had very strong views about people.

R: I don't recollect ... Goku Meno never mentioned this to me.

I: Huh ... (00:06:30)

R: Could be ... because Goku Menon was taken over as a Sarabhai Man.

I: Yes.

R: Yeah ... and Wing Commander Rao might have come at that time.

I: Yes.

R: Satish Dhawan is a good friend of mine, because we got along very well.

I: Yes. Satish ... am I right in ... in ... in saying that Satish Dhawan was quite ... sort of, neutral on where DOA ... or where NRSA should be? If you wanted it, fine. If you wanted to keep it, fine, if you wanted to oppose it, fine ... (00:07:03)

R: He didn't ... he didn't oppose my creating NRSA.

I: Yes.

R: That's all I can put it.

I: Yes.

R: He didn't oppose my creating NRSA.

I: Yeah.

R: It was people around him who tried to bring about differences between him and me.

I: Like who? U. R. Rao?

R: Huh?

I: Like U. R. Rao?

R: No. U.R. Rao was not involved in it. He has supported me.

I: Huh. No, no. Opposing the creation of NRSA.

R: No. He didn't oppose.

I: No. Huh ... (00:07:30)

R: There were people who were against Wing Commander Rao ... in space ...

I: Huh.

R: ... who didn't like it.

I: Oh! The SAC people.

R: He ...

I: Space Application Center.

R: That's where ... yes.

I: Would that include Yashpal?

R: I don't know the relation between Wing Commander Rao ... I ... they said he was not good with the Department of Space. That's all that I have heard. (00:07:54).

I: Wing Commander Rao was looked as ... as the Sarabhai Man.

R: Oh, I see. That I didn't know. (00:08:02).

I: Yes. Very much a Sarabhai Man. And ...

R: And I tell you, he was excellent.

I: He was excellent. He was a ...

R: And he created NRSA and made it grow.

I: Yes.

R: I have ... (you) know ... renamed it as something else.

I: Tell me what was the role of this younger fellow, who was at the DST at that time – who wrote the report ... Khan, was that his name? There was a Muslim man. Was it Khan, who actually wrote that report on NRSA ... in DST? (00:08:34). He was not Khan. He was something else. He was a Khan, or Kabir, or something like that.

R: There is nobody who wrote that report.

I: Yes. He has ... who wrote the first creation ... report on the creation of the NRSA? There was a sort of a ... a preliminary feasibility report, or a detailed project report, or something like that.

R: I do not recollect.

I: On what basis did the Planning Commission and Indira Gandhi approve the creation of NRSA? (00:09:03).

R: Because I argued with them ... this deal ... that we will not deal with space at all ...

I: Yes.

R: ... with no interference ...

I: Yeah.

R: ... and it will be down to earth.

I: Quite literally.

R: Literally.

I: Yes.

R: Because I said, it will deal with the states.

I: Yes.

R: The states must be involved with it.

I: Yes.

R: Otherwise, what is the use of ... NRSA?

I: Yes.

R: And I set up a center in Tamilnadu.

I: Yes.

R: Gindy College.

I: Yes. (00:09:30).

R: ... in U.P ... in several places – that was the job of Mr. Venkataramana Rao, to go and convince the state governments that they should take it ... the application. My justification to the Planning Commission was, that it will help in the planning ... commission's efforts in food production, in protecting the environment, etc. (00:10:01).

I: And ... and ... was **Haksar** (Not clear; 00:10:08) in any way, responsible – for all practical purposes, of shifting of NRSA to space? (00:10:14).

R: That, I don't know. That was done after me.

I: Oh! It was done after you ...?

R: Hmm (Yeah) after I left it was not done during my tenure (not clear; 00:10:22). Anyhow ...

I: Ah! That's important. It was done when Ramchandra ... when ... what's his name? Took over ... Varadharajan took over. (00:10:33). He told you?

R: Yeah ... it was done during that time period. Not during my time.

I: Ah! It was when Varadharajan took over from you.

R: Yes ... I couldn't ... I wouldn't say ... definitely, I don't remember it ...

I: Hmm.

R: ... it could be.

I: But ...

R: But it was not during my tenure.

I: Ah! Okay. (00:10:59).

R: See, that time, it has come down ... B. P. Pal ...

I: Oh! That's right. That's right. That's right. B. P. Pal. Yes. That's right. Yes.

R: He was the fellow who ... we were all _____ (Not clear; 00:11:13).

R: Yes, yes. That's right. That's right. That's right. Yes, yes, yes, yes, yes.

I: Names come like that.

Speaker 3 (A lady – S3): Hmm ... suddenly ...

I: Yes. Yes. B. P. Pal. I remember this. There was this thing about Bal Pal ... something. Bal Chandra, something (00:11:33) ... Tilak. Bal ... B.P. Pal ...

R: No ... B. P. Pal ...

I: ... and Bal Pal Lal.

R: He was a great supporter for me in the environment program. He was a member of the National Committee for Environment Planning and Coordination ...

I: Yes.

R: He took over as chairman ...

I: Yes. From Pant.

R: From Pant.

I: After Pant died.

R: No, no ...

I: Before that he ...

R: Pant was a member of the full Planning Commission, he gave it up. (00:12:03).

I: Ah! I see.

R: And B. P. Pal was appointed by Suramanyam.

I: Ah!

R: B. P. Pal was the senior most member of the group – NECPC group.

I: Ah.

R: Being a fellow of the Royal Society, he was promoted as the chairman of the NECPC.

I: Good. And ... and you think he did a good job?

R: Oh, yes.

I: Hmm. The ... this ... this NRSA creation was when (00:12:34) ... Varadharajan took over from you, right?

R: Varadharajan took over from me.

I: Yes.

R: No, no. M. G. K. Menon took over from me.

I: Oh! That's right. That's right ... oh ... that's right.

R: Famous controversy (Not clear; 00:12:46). Last minute appointment.

I: Oh! Who was the first ... appointment changed from, originally?

R: Vardharajan had to be appointed, everything had been decided.

I: Hmm.

R: You know what? I will tell you the story.

I: Please.

R: Nirmal Mukherjee ...

I: Yes.

R: ... was told by Morarji Desai ... he wanted to get rid of M. G. K. Menon as the chairman of the Electronics Commission. (00:13:05).

I: Yeah.

R: Nirmal Mukherjee, the secretary ... the cabinet secretary suggested the name of M. G. K. Menon.

I: Hmm.

R: And that's how he got suddenly appointed ... one evening ... as Secretary of DST.

I: No, no. Nirmal ... you said that Nirmal Mukherjee was told by ...

R: By Morarji Desai to find a way of getting rid of M. G. K. Menon from Electronics Commission.

I: Oh! (00:13:31).

R: He wanted him out of Electronics Commission.

I: Hmm.

R: And therefore he was appointed "Secretary, DST".

I: But you know why ... Morarji Desai wanted him out of Electronics Commission?

R: He didn't like the way ... licenses are being denied ...

I: Oh!

R: It was political.

I: I see. (00:14:00).

R: He acted as a block ...

I: For everything ...

R: For everything.

I: I see. Okay. And ... and that's how he became Secretary of DST ...

R: Yeah.

I: And he lasted there until when?

R: Till M. G. K ... till ... he was sent as "Secretary, CSIR". He was both, Secretary DST, and Secretary CSIR. (00:14:32).

I: Yeah, and DG, CSIR.

R: Yeah, DG, CSIR.

I: Yeah. (00:14:35).

R: Once ... Morarji Desai decided that he should not ... the ... people like him ... uncertain, unhappy about this ...

I: Yes.

R: He was removed from DG, CSIR, and M. G. K. Menon ... then ... Varadharajan became Secretary, DST.

I: Yeah. But ... how ... how ... (00:15:00) ... the relationship of you know ... but how was M. G. K. Menon then accommodated? After Varadharajan ... Oh! By that time, Indira Gandhi had come back, or what?

R: I don't know. I can't say that, because I was away.

I: Yeah. You ... you left when?

R: I left in 1978 ... October, 10th.

I: For ... habitat (Not clear; 00:15:28)

R: For habitat.

I: So, what would you say, Dr. Ramachandran, would be the highlights of ... I mean, apart ... apart from the habitat, what would be the primary highlights of what you said, what would be your ... I mean, what did DST do, which changed the face of the way in which science and technology in the country were being administered? (00:16:00) ... fundamental ...

R: Fundamental change is that we are receptive to ideas.

I: Such as ...?

R: Creation of the Oceans, Science and Technology Cell (Not clear; 00:16:13).

I: Hmm. That is important.

R: **OSTA** (OSTC? 00:16:15).

I: No, who was behind OSTA, apart from you?

R: He was a Wing Commander ... a naval man ...

I: Oh! Commander.

R: Hmm (Yes).

I: Who was that?

R: I forget his name ... Singh ... some "Singh".

I: Oh! And how did he get roped into the exercise? (00:16:34).

R: He was a member for (of) committees, and I was impressed by his performance.

I: Hmm. But what committee was that?

R: Dealing with ocean development.

I: Oh! That is Ocean Development ... what is it called?

R: Ocean Science and Technology ...

I: OSTA ...

R: OSTA ... Oceans Science and Technology ...

I: Now, who created OSTA? You did.

R: I created it.

I: yes.

R: With the help of this ... Wing Commander ... (00:17:02)

I: Commander, yeah. Not Wing Commander. He wasn't in the Air Force. He was a Navy
Commander.

R: Yeah.

I: Yeah. And ... and when OSTA was created – and it was there for some time – when did it become trans ... when did it ...

R: Become a department.

I: ... become a department?

R: After I left.

I: Oh! After you left. And it was again the doing of ... of ...

R: Department of Ocean Development ...

I: Yes ... was created again by Indira Gandhi. (00:17:33).

R: Yes, yes. Of course.

I: And is that because it was created for Kasim (Not clear; 00:17:37), or it was done independently of that?

R: Kasim was not in-charge of it initially.

I: Yeah. Who was in-charge?

R: This Wing Commander was in-charge.

I: Ah! Even of the department?

R: It was not a department at that time ...

I: Yeah.

R: ... the department was created later.

I: And when it was created, Kasim was the first secretary.

R: I don't know ... Kasim, maybe ...

I: Yes. Yes. Kasim, I think was the ... (00:18:02)

R: Because he was against it.

I: Who was against it?

R: Kasim ... was against creation of OSTA ...

I: Oh!

R: ... because he was _____ (Not clear; 00:18:08) his company, NIO.

I: Yes.

R: National Institute of Oceanography.

R: Yes.

I: But I told him, I **felt it is this incident** (Not clear; 00:18:16) ... Morarji was there. Finance Secretary was there. Finance Minister was there. All of them in a cabinet meeting to consider the proposal of OSTA to become Department of Ocean Development. (00:18:32). Dhawan was there. Menon was there. All of them in the committee.

I: At that ... that cabinet ...

R: I told them ...

I: ... meeting.

R: I told them, I need 20 crores for operating the ... vessel. Morarji Desai asked ... looked at the finance minister ... who was the finance minister at that time?

I: I don't remember.

R: One Gujarati was there.

I: Oh! Patel? (00:19:00)

R: Haan (Yes), Patel.

I: Patel.

R: Patel.

I: I. G. Patel.

R: Not I. G. Patel. Other ... other Patel.

I: Oh. I don't remember. Hmm ...

R: H. M. Patel.

I: H. M. Patel. Yes.

R: I said, I don't need them ... then I said "I don't need the money". He said "What do you mean?". I said "I am getting a free ship ... from Germany – Research Vessel. All that you have to do is, give me operating costs". Then he looked at H. M. Patel. (00:19:30). H. M. Patel said, he can provide it. That's how it got created.

I: Oh!

R: And in 45 minutes, the whole thing was approved. Dhawan, coming outside my room said “How did you manage it?”. I said “I managed it in front of you only. All of you. You were looking at me. Free ship – German vessel was ...”

I: How did you manage that German vessel?

R: I talked to the German Ambassador.

I: Oh! (00:20:00).

R: And I talked to the people who had ... who had dealt with me in the IIT-Madras ...

I: Ah! The IIT-Madras Connection ... with Germany.

R: Yeah.

I: That's right. The IIT-Madras Connection with Germany on the second trench (Not clear; 00:20:14).

R: Yeah.

I: Not the first one.

R: Yeah.

I: That had a lot to do with you, no?

R: Yes.

I: Now, in that ...

R: But since the time (Not clear; 00:20:26), I got the IBM computer.

I: Yes. Now, the second trench ... (00:20:30)

R: Yes.

I: ... with the IBM computer, it was ... would you say, it was not a success? I mean, many people believe that the second trench, and the way it was run from the German side, was not as successful as the first one.

R: I wouldn't say that.

I: You wouldn't say that?

R: No.

I: Ah ... what was the characteristic from what you inherited ... after all, you inherited the first one.

R: The first one ...

I: ... what you inherited from Sengupto ...

R: Sengupto. (00:21:00).

I: And I was there at that time, a student.

R: First trench was not successful because you see, the relationship between the German professors and the Director, IIT-Madras was not good.

I: Really?

R: No ... not good. Sengupto ... he talked too well with them.

I: I didn't realize that. I was under the impression that with people like ... now, who is no more ... what's his name? Cline ... Nicholas Cline ...

R: Cline was ... very friendly fellow.

I: Yes. (00:21:33).

R: But they ... the German professor team did not get along well with ... Sengupto.

I: Who was leading that German team?

R: German team was led by ... there was a ... there was a ... name, I forgot ... Klein.

I: Klein. Klein was one. He was teaching German.

R: Huh?

I: Klein was teaching German.

R: Yeah.

I: **Hitrand** (Name not clear; 00:22:00) was in heat transfer.

R: Hitrand was in combustion ...

I: Combustion and heat transfer.

R: Yeah.

I: And then, there was another person who was very good, who was in fact, what _____

Sheer (Not clear; 00:22:09).

R: Sheer ... Turbo-machines.

I: Turbo-machinery. And he was superb (Not clear; 00:22:14).

R: So?

I: And Kock. There was a man called Kock, who was doing physics.

R: Kock.

I: Kock. Yes.

R: He was this old man.

I: Old man.

R: He was ...

I: The leadership of the group was whose?

R: It was done by this special man appointed by the ... name (00:22:33) ... I don't remember the name. There was another man the Germans sent separately.

I: Oh. So, he was not a faculty member?

R: No.

I: I see. Now, the ... the ... I remember both _____ (Not clear; 00:22:47) and Kock, and one other person who was dealing with ... I have forgotten his name ... machine design – I remember – they were all ... had some connection with the V2 project. Certainly ... certainly ... (00:23:04)

R: You have ...

I: Turbo-machinery ... what's his name?

R: Sheer.

I: Sheer. He had a lot to do with that V2 project, as a young man.

R: Which ... which V2 project?

I: V2 ... the German V2. He was the designer of those turbo-machines for the German V2 project.

R: I see. I don't know that.

I: Because a lot of them were connected with those projects ... with military projects in ... in the ... in Germany. And then they were set to ... because they were under trouble ... there was a lot of trouble in Germany, in regards to what is to be done with them. (00:23:34). Many of them of course, Jewish, they went away to ... to ... to ...

R: US.

I: ... to the US. But the others, there was a bit of a problem, I understand. I was wondering whether you know anything about it.

R: No, no. Nothing. I don't know anything about it. All that I knew was, when the relations between the ... when the Germans went on a strike, within one month after I went to ... took over as director ...

I: Oh! (00:24:00).

R: ... they said, they won't work, because unless things are changed ... they wanted negotiation ... re-negotiation with the ... German government.

I: Ah!

R: Then I came ... then they came to see me. The team which came from ... Hofmann (Not clear; 00:24:17). And a group came to sort it out. Hofmann, I knew his ... Institute of Science Space ... he was ...

I: Hmm. (00:24:30).

R: And I sorted out. I said ... I told them I will ... you will ... have a fresh ... a fresh director, give me time to sort out all these difficulties.

I: What was the basis of the difficulties?

R: First of all, many of them felt that they were not given full independence.

I: Hmm. (00:24:59)

R: I don't think ... it was a very serious matter.

I: You know, because it represented to some extent, the attitudinal changes which were happening at that time.

R: I got along well with the Germans.

I: Yes.

R: Particularly with Ruhe (Not clear; 00:25:20).

I: Right. Ruhe ... that's right.

R: Hydraulics man.

I: Yes. He was very good.

R: He was very good.

I: Yes.

R: I used him to sort of the problems in the German group. (00:25:30).

I: I see. And what kind of independence did they have ... want? Teaching? Way of teaching?

R: They didn't want too much of this ... they didn't like the idea of having exams every week.

You remember you had ...

I: Periodicals, yes.

R: Periodicals and all that kinds of stuff.

I: Yes. Okay (00:26:00) ... now, in this ... you remember ... and I think ...

R: I ... because with the new group, I got a new idea completely.

I: Yes, exactly.

R: The second team ... got the idea of the computer.

I: Yes.

R: And then the priority issue.

I: Haan (Yes).

R: Because, at that time, remember Kanpur had this ...

I: Yes.

R: IBM ...

I: 360, or something.

R: Not 360 ... they had ... I got the 360.

I: Oh!

R: They had the 120.

I: Yes. Yes. (00:26:32).

R: So, that was also decided in a very peculiar way.

I: Haan (Yes).

R: I had two committees. One from Germany, and one from India to select the computers suitable for the I.T. First problem is, they should provide maintenance for that. I had put a condition.

I: Who? That the Germans should provide the computers ...

R: Whoever supplies the computer. At that time, it was not decided that it was Germany.

I: Ah! Right. (00:27:02).

R: Problem with proper maintenance.

I: Yeah, second? Second condition?

R: Second condition, that I should have an Indian appointed ... they wanted an Indian appointed ... they wanted an Indian to be appointed as director, head of the center. I selected Mahabala ... (Not clear; 00:27:20).

I: Mahabala. Yes.

R: ... from IIT-Kanpur.

I: Kanpur. Yes.

R: And got his association (Not clear; 00:27:27) also to come with him. (00:27:29). The selection committee was also considered ... I appointed 2 committees. One, a German committee, headed by professor Arkan (Not clear; 00:27:45).

I: Professor, who?

R: Professor from the University of Arkan.

I: Oh! Yes, yes. That was Hitrand.

R: Not Hitrand. His name is ... I forget his name ... Sheer

I: Sheer. Wolman Sheer (Not clear; 00:27:57).

R: No, Sheer was for Turbo Machinery.

I: For Turbo Machinery. Yes. Very good. (00:28:01).

R: I will just tell you his name ...

I: Yeah.

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R: It was a professor for Arkan.

I: Okay.

R: ... Chairman of the committee, one German committee. Indian committee, I had my ... three members – Mahabala, Sampat, and one from the Department of Electronics. Both the ...

(00:28:30) ... both the committees unanimously recommended ...

I: Was ... was the professor from the Department of Electronics, Sheshagiri, by any chance?

R: No, not Sheshagiri. Somebody else.

I: Oh!

R: He was close ... a good friend of Sampat's.

I: Oh! Okay.

R: Both the committees unanimously recommended IBM 360 ... and indicated to the Ministry of ... Education ... that if I don't receive a reply from you within 2 weeks, I will go and place the order.

(I: Laughing)

R: Hmm? (00:29:03)

I: And you didn't receive a reply?

R: Chandrakant didn't reply.

I: Chandrakant ... oh ... yes.

R: The secretary.

I: Yes. L. S.

R: L.S.

I: Yes.

R: He said, you give me two weeks' notice, you act.

I: (laughing). I keep quiet, you do what you want ...

R: Correct. I ordered it.

I: Yes.

R: That made M. G. K. Menon furious.

I: Ah!

R: Because he was anti-IBM.

I: Yes. Why ... apart from the anti-IBM ...? (00:29:33)

I: But I told him "Your committee, Electronics Committee has a representation in the Electronics Commission ...

R: Yes, why didn't you say that?

I: Why didn't you say that?

I: Hmm.

R: But the chairman was overwhelming saying maintenance.

I: Yes.

I: IBM promised maintenance ... and spares, etc. So, that's how the IBM you see, came to ... and in the meantime, I made the necessary arrangements for housing the new computer ...

I: Yes. (00:30:02).

R: ... Air conditioned room, etc ... and the Department of Computer Sciences ... started.

I: Ah! Under Mahabala.

R: Under Mahabala.

I: Yeah. With Muttukrishnan there? No, he had not joined ...

R: MUttukrishnan had also joined.

I: He had just joined?

R: Yeah.

I: Muttukrishnan and I were classmates.

R: I see. There was another person who was there ...

I: In IIT.

R: Yeah, in IIT-Kanpur.

I: Yeah ... Kanpur.

I: IIT-Kanpur had come ... as a deputy to Mahabala ...

I: I see.

R: He also came with him ... (00:30:31). Who very _____ (Not clear; 00:30:32) became the director of IIT-Madras.

I: Srinath?

R: No, not Srinath.

I: After him.

R: Srinath was ...

I: L.S's ... Chandranath's brother.

R: That I know. He was appointed Turbo-Machines ... he was in ... the ... Srinath was very good.

I: Is Srinath still alive?

R: I don't know. I ... his wife is here. L. S. Srinath ... (00:31:03)

I: L. S. Chandrakanth and my father were colleagues. Long time ago.

R: he was ... he was fully supportive. By the time both of them ... Chandrakanth had left ...

I: Yes.

R: ... and I had left. Though Menon could not make it ... make a case against us. L. S.

Chandrakanth went to Colombo ...

I: Yes. (00:31:30).

R: He had a job there in the U ...

I: UN.

R: UN ... UNDP.

I: Yes.

R: And ...

I: Menon then went away somewhere else.

R: Menon was in electronics.

I: Yes.

R: Then he came to DST.

I: Yes.

R: After DST, then he went away as DG, CSIR.

I: Yes ... that's right.

R: And then he ended up in Planning Commission.

I: Your ... your ... throughout, your relationship with Menon was somewhat difficult, right?

(00:32:00).

R: I wouldn't say that.

I: No?

R: We got along well. But ... but we had differences in ...

I: But ... and there were ... but there were ... you are ... you are reiterating that they were not personal. They were fundamental policy difference.

R: Correct. Only policy differences. No personal differences. Because we were good friends.

I: Yes.

R: With Satish Dhawan, I was very friendly.

I: Yes.

R: I remember coming and giving a lecture here, Chidambaram Chettiyar Memorial Lecture (00:32:30) on New and Renewable Energy Resources. Full plan ... that was how I put that plan into action and ... then ... as MNRE ... became the minister of New and Renewable Energy Resources.

I: Uh ... so, that was another department which was created from ...

R: Yes.

I: Ah! So ...

R: MNRE ...

I: Who was the ...

R: And the Department of Environment, also was created ...

I: Yes.

R: ... separately. (00:33:00).

I: But department of ... was MNRE under the department, initially?

R: No, no. _____ (Not clear; 0:00:05) separately.

I: Who ... who ... what was the MNRE before, while it was still in DST ... as a program?

R: It was a program ...

I: Yeah.

S: ... DST ...

I: Yeah, who was running it?

R: I had started it.

I: You started it.

R: Yeah.

I: Who was running it, actually ... in DST?

R: In DST? I forget the name ... (00:33:32)

I: ... Pandey ... ?

R: Maybe ... maybe **I. V. Rao** (Name not clear; 00:33:36) was running it for me

I: I. V. Rao, okay.

R: I. V. Rao was running the SERC also ...

I: Yes.

R: ... Science and Engineering Research Council ...

I: Yes.

R: Which I started, SERC

I: Yes. SERC ... very

R: Important ...

I: Very, very important. But you should say that in terms of seminal transformational contribution that would be the better ... most

R: Exactly ... SERC was ... SERC was one of the game changers.

I: Game changers.

R: Because it did not believe in giving one lakh of rupees, and two lakhs of rupees ...

I: Yes. (00:34:04)

R: It made him give him 10 lakhs of rupees.

I: Yes.

R: Large sums of money for the projects. And ...

I: Now ...

R: ... and at SERC you can ask I. V. Rao.

I: I. V. Rao.

R: He will give you a full account of it.

I: Okay. Now, this relationship between the AICTE and the funding programs ...

R: Yeah. I am not really ...

I: ... and the SERC ...

R: AICTE has no connection with us at all.

I: Ah! It was separate entirely and dealt separately. (00:34:30).

R: It was under the ministry of education.

I: That's right.

R: And I did not interfere at all.

I: You just didn't bother with it.

R: No. I didn't bother with it.

I: What about the UGC itself ... and SARC?

R: UGC was **professionally** (Not clear; 00:34:41) ... it was quite good. Because ...

I: Who was the chairman at that ...

R: Deshpande was a leak.

I: Which Deshpande?

R: R. D. Deshpande.

I: Oh! R. D. Deshpande. Okay. And where did ... what's his name ...? He was also there, but I don't know whether he came after you ...

R: You mean, Nag? (00:35:01)

I: No. I am talking about ... the Pune man.

R: Deshpande?

I: No, no.

R: Pune man?

I: He is now in Pune ... I know him so well ... the name, it skips me right now ... our friend, I say – he was in Pune ... you know him.

L: Vijay?

I: Laskare.

L: Vijay ...

I: Vijay Laskare.

R: No connection at all with this DST. He was the maintenance man. (00:35:30).

I: Ah! And he ... he joined DST after you left?

R: He... may ... may have joined, but I don't know him at all.

I: He was not there at your time. Yeah. Okay. So, what were ... what would ... and in terms of budgetary resources for DST at a time when money was short, which is not now, what were your ... who was the main help in getting you all the money you wanted?

R: I think they had a ... B ... Bidappa (Not clear; 00:36:06). The Joint Secretary Finance was Bidappa.

I: Was?

R: Bidappa.

I: Bidappa. Bidappa.

R: One old Loyola College colleague.

I: I see.

R: I ... forget his name ... IAS.

I: Ah ... and ...

R: Finance Secretary. He was the man in-charge of finance. I told him "Your job is to find finance" (00:36:30). When ... first day when he came to see me ... I have known him from Loyola College days. So, I told him "Your first job in the department is to get me finances ... and only job. You do that, things will move".

I: And who was the ... the ... planning ...

R: Belliappa.

I: Huh?

R: Belliappa was the finance ...

I: Belliappa. I see. Blliappa.

R: Finance Secretary.

I: And the ... and ... in terms of your relationship with the planning commission,, for planned funds...

R: It was good. (00:37:02)

I: Who was the planning commission S&T man, then at that time?

R: I had problems with ...

I: Guku.

R: Not Goku. His deputy. He is ... he is no longer alive ...

I: Oh! Don't know.

R: Sheshagiri.

I: Sheshagiri! Yeah, M. Seshagiri.

R: He was the problem man.

I: Oh, really? Huh. Sheshagiri was definitely a **menace man** (Not clear 00:37:31).

R: Yeah.

I: Yeah.

R: That's what I said, a menace man.

I: Yes.

R: Caught up one day, and he says “ **Choke up** (Not clear; 00:37:40) the Cabinet Secretary’s order says, this is function of ... DST. Why is this getting into these areas?” I said ... I said “Sit down. I know the rules more than you do”. I was arguing with Sheshagiri. Don’t put that one. It might (not) look nice ... (0:38:02).

I: No, no. no. Don’t ... I won’t ... those who are living, I won’t put.

R: He is not living.

I: Well, Sheshagiri is living.

R: I don’t think he is living any more.

I: No, Sheshagiri is living. Sheshagiri is living. In Pune.

R: I see.

I: And Sheshagiri was also NIC, no? National Information and Informatics ...?

R: Yeah ... he’s ... that’s why he opposed my NISSAT.

I: Yes. NISSAT, because you respect ...

R: ... Bengalis ...

I: ... it was my creation, if you remember ...?

R: Bengalis _____ (Not clear; 00:38:30)?

I: Yes.

R: A Bengali chap was in-charge.

I: Yes.

R: His name was Bose or Ghosh?

I: Bose, I think.

R: Bose.

I: Yes.

R: He was very good.

I: Yes.

R: He did it and organized it in 2 or 3 places.

I: Yes.

R: At Center for technological Research ...

I: In fact, I don't ... my recollection is that, our acronym NISSAT ...

R: Yeah.

I: I provided it when ... I remember when I was there, when ...

R: National Information for Science and Technology ...

I: ... Science ... Science and Technology. Yes.

R: NISSAT.

I: But at a time when there was no internet, no nothing.

R: Nothing.

I: Yes.

I: That's right. And I ... I ... yeah, there was a Bengali guy who was the judge of it. (00:39:05).

R: He was very good.

I: Yes.

R: Bose ...

I: ... or Ghosh. Yeah. Is there is anything more significant than most of the significant things that happened at that time which now are essentially bearing through, which you would like to mention?

R: I ... I started a ... idea of research and manufacturing.

I: Yes.

R: And remember ... when they wanted (00:39:35) ... I forgot ...

I: Re-access machines, or something like that ...

R: No, no ... the R&D fellows wanted ... and I asked ... I got ... (00:40:01) ... _____

(Not clear; 00:40:04) to do it for me.

I: Did you fund them?

R: Of course.

I: Through what? Through which ...?

R: Through SECRC.

I: Through?

R: Through SECRC ...

I: Oh, through SECRC. Ah, yeah. Now, the ... what was the relation ... when was the National Manufacturing ... that CMTI ...

R: CMTI was there ...

I: Under the industries ...

R: Under the Machine and Tool ...

I: Yes. You funded them also? (00:40:31).

R: not ... I didn't fund them. But they have ... they had my full support.

I: Yeah.

R: Because I knew them when they were here ...

I: Yes.

R: ... in Bangalore. When I was in Bangalore, I had good relations with them.

I: Yes.

R: The director had put me in the committees, etc ...

I: Yes.

R: So, and the Central Machine Tool Institute was a good one.

I: Yes.

R: Unfortunately, it went off ... the map.

I: Yes.

R: Again, it is being revived, I am told.

I: yes. Because I think all the three departments wanted to revive. Atomic Energy Space Defense Research.

R: I see. (00:41:00).

I: I wrote that paper ... one, before I had left ... I had told Atrey that "Look, we are going to be in serious trouble because of the _____ (Not clear; 00:41:07).

R: Because they didn't give money and it was not modernized.

I: No. and ... and ... the ... and its relationship with that Special Machine Tools Division in Hyderabad, of HMT ...

R: Yeah.

I: I am wondering whether anything about that had been done in your time.

R: No. No.

I: No.

R: No.

I: Okay. So, basically this ... this you could say that research and manufacturing in Kirloskar Machines, funded by you, for R&D in what? (00:41:32).

R: Making ... you know, in the ...

I: Milling machines, or what?

R: No ... I was only like ... _____ (Not clear; 00:41:57). I forget it, I say.

I: No, what ... what is the process? (00:42:0).

R: You know, casting.

I: Oh! Investment casting.

R: No, not investment casting. Casting.

I: You ... you are talking about ... not investment casting ... what kind of casting? From?

R: Army wanted it and we got it done.

I: Who wanted it? Army wanted it?

R: Hmm ... Yeah ...

I: I'll check. Who was in-charge _____ (Not clear; electronic device buzzing loudly; 00:42:30) in Kirloskar?

R: I don't remember.

I: You don't remember ... yeah. This was Kirloskar, Pune?

R: I couldn't say that. It was ...

I: Or Madras?

R: Kirloskar had no ... nothing in Madras.

I: No? I see. But in Pune, they had.

R: Yeah. Bangalore, they had ...

I: Bangalore and Pune.

R: Pune.

I: And ... casting, they wanted, is it? I don't know what casting. (00:43:00).

R: It was a ... it was like investment casting.

I: Ah ...

R: Very precise, you can make ...

I: Ah. I see. And ... and ... and who was the ... the R&D Chief of the Kirloskar was enthusiastic about that?

R: They said they will be able to do it. That's how ... that's how ... I called them and asked them ... "Will you be able to do it?" they said, yes. We placed the order.

I: Oh, this was your order? There was no R&D involved? (00:43:30).

R: No R&D involved.

I: Oh. And ...

R: But I had to experiment, you see?

I: Yes. Yes. Of course. Ah ... and ... this manufacturing – it didn't take off very well, afterwards.

R: No, then ... because they ... the successors didn't like ... Menon didn't want to go into manufacturing at all. (00:44:04). One potential member by name "Menon", he generally ... they looked down upon manufacturing.

I: That ... including Varadharajan? Which supplies ...?

R: I wouldn't say that about Varadharajan.

I: Menon ...

R: I wouldn't say that about Varadharajan. Because Menon was there with me for 2-3 years. Varadharajan joined much later.

I: Yes. But manufacturing in general ... R&D and ... (00:44:32)

R: Manufacturing in general was started by me, here in Bangalore only.

I: Yes.

R: At the institute ...

I: And the relationship with CNTIA was good ... from the institute.

R: Yes.

I: When did you become the Mechanical Engineering Head in IIT, I mean in the Institute?

R: 1957 (00:45:00).

I: Wow! Who was the director then? Ghosh?

R: Bhagawantam.

I: Bhagawantam? Hmm. And this was before he went as director ... DG of DRDO?

R: Who?

I: Bhagawantam.

R: Ah, yes. Before ... he was there (00:45:31) ... he was director ...

I: Huh?

R: He was director nearly for 5 years.

I: Yes, that's right. Correct. That's right. DRDO set-up in '58.

R: Yeah.

I: Yes. That's right. Okay. And ... and you were an institute until you went to IIT-Madras.

R: Went to ... until went to IIT-Madras. Yeah.

I: Which was in 1966.

R: December '68 ... no '67 ...

I: It was in '67. Hmm.

R: '67-'73, I was the director IIT-Madras. (00:46:02). '73, I went and joined IIT ... the DSC.

I: There. The ... I wanted to check with you something. Not ... not directly connected with ...
your view on that – not directly connected with you time in IIT. You remember, one of the key

points that the Germans were very keen on, and they ... because in those days, it was a 5 year course, and they hammered it in (00:46:31) that we should work with .. that all students should work with their hands in the ...

R: Ah, correct.

I: ... in the ...

R: ... Central Workshop.

I: ... in the Central Workshop.

R: Yes.

I: In fact, the whole creation ... the idea of creation of the Central Workshops and all that was that the Central Workshops would be ... do two things ...

R: Yeah.

I: Try and do things that the individual department workshops could not do.

R: Correct.

I: That was the idea.

R: Yeah.

I: It worked very well.

R: Yeah. Yes.

I: Then the whole scheme ... and drawing ... of course ... very, very important.

R: yes.

I: And Sheer, my god – he sued to ... we had a hell of a time. But there were two extraordinary teachers. I don't know whether they were there in your time. They probably were. One was a man called Sood.

R: Huh?

I: Mechanical Engineering, Sood.

R: No ...

I: He was a Bengali. And there was another one, whose name is Swaminathan. Also Mechanical Engineering, who was teaching us mechanical drawing and workshop practice.

R: Hmm.

I: Workshop practice declined to almost zero in ... in IIT-Mardas. Why? (00:447:34).

R: Not during my time.

I: Not during your time. No. but afterwards.

R: Afterwards.

I: Yeah.

R: because these fellows did not work with their hands.

I: Who?

R: Faculty itself was part ... partly against workshop practice.

I: Really?

R: Faculty itself was ... except Mani, the workshop superintendent ...

I: Yes.

R: He was in charge.

I: Yes.

R: He ...

I: Damn good.

R: Damn good.

I: Yes.

R: He came from HAL.

I: Yes.

R: I recruited him.

I: Yes. (00:48:01)

R: He ... till he was there, workshop was there.

I: Yes.

R: After he left, they disbanded the workshop.

I: Tell me why.

R: The attitude.

I: Attitude. Was it a Brahminical attitude or those who were ...

R: I don't ... I won't call that ... I don't call that Brahminical attitude ... or a Hindu attitude.

I: because ...

R: Working with hands ... working with hands ...

I: I remember ...

R: Because I insisted that the workshop should continue as it is ...

I: Yes.

R: And I ... I think ... I improved it, even.

I: Yes. (00:48:31).

R: But it is a part of the attitude from the Institute of Science ... who don't want to work with their hands ... or create things

I: So ...

R: For example during that period, they designed and developed a (an) operations table ...

I: Yes.

R: ... for horses.

I: Yes.

R: Surgery on horses ... they made a table (00:49:00), operating table for horses. Stand directly, and tie it up, then turn it around, and perform the operation. And one of the guys who was _____ (Not clear; 0:49:16), and we had it done at ... at IIT-Madras. Successful. Mani was very interested because he came from HAL.

I: Yes.

R: He was very interested in keeping the workshop going. (00:49:31). He did a good job. But subsequently I am told ... the workshop has been disbanded ...

I: Almost. Now, even in the ports where control ... we were ... we were hammered ...

R: Drawing ...

I: Drawing and workshop ...

R: Yeah, but that is difficult for the Germans ...

I: Yes. Now the ... the point here has been, the Germans in their second term ...

R: Change it now.

I: They didn't ... they kept it.

R: They kept it.

I: Oh. I was ... that's the most important. (00:50:04). But who ... was L. S. Srinath against it?

Who ... when did ... in what time, it did, sort of decline?

R: I don't recollect ... the ... the exact timings.

I: Because attitude, yes – that is true. And also ...

R: My attitude was, supporting because I started the Central Workshop at the Institute of Science, even.

I: Yes.

R: I had a Central workshop organized, re-organized.

I: Yes.

R: We didn't want departmental workshops. I said "They have not been able to do precise work"

I: Yes. (00:50:31).

R: It is better if it is done at a central place.

I: Yes.

R: For example, starting of Foundry Engineering ...

I: Yes.

R: ... was also done by me at the Bangalore institute. Masters Degree in Foundry Engineering.

I: Yes.

R: And students are all over the country.

I: Yes.

R: Now, working in foundry is up ...

I: Yes.

R: ... including Ashok Leyland.

I: Yes.

R: Because I was ... was pro-workshop.

I: Yes. "Pro Hands Working"

R: Correct, correct.

I: Very much so. I remember, this ... this ... on a ... on a ... (00:51:01) larger issue, this IIT re-education, all this is going on, you know? All this education reform, all this, that. In my judgment, correct me if I am wrong ...

R: I ... I am ... you see, it is part of an attitude. Hindu attitude ...

I: Correct.

R: ... or Brahminical attitude ... whatever you want to call it.

I: Yes.

R: Working with hands is supposed to be not ...

I: Dirty.

R: It is not intellectual.

I: And not ... too ...

R: Not intellectual.

I: Did the ... did the ... did the induction of women into IIT-Madras have something to do with this? (00:51:36).

R: No. Women were first introduced by me ... first students.

R: First three students.

I: Did ... did ...

R: I did not introduce at all because they were ... they were ...

I: They were okay to work with hands?

R: They were okay ... and ... Lakshmi was there. Pappu Subba Rao's daughter ...

I: Who? Pappa Subba Rao?

R: Pappu Subba Rao's ... daughter-in-law ... or daughter. (00:52:01). She was a widow, she joined IIT-Madras. She and one other was there, Annamma, Kerala woman, Christian ... She ... they both worked ... did all the workshop completely. There was nothing ... it was a prejudice among the students itself ... among the staff.

I: Staff?

R: Hmm. I would say. That it's not intellectual.

I: You know the staff was also, I think, divided. C. V. Sheshadri was very pro-workshop.

(00:52:32)

R: C. V. Sheshadri didn't stay long in IIT-Madras.

I: He did not stay. He went away to IIT-Kanpur.

R: Kanpur.

I: Yes. That's true.

R: Because ... workshop was superintendent was in need of money ...

I: Yes.

R: Workshop superintendent ...

I: Yes.

R: he was quite good. He had all power to do it. And the German professors are (were) also supporting him.

I: Yes. Of course. Germans were definitely supportive. (00:53:00). Sheer in particular, and that other chap – his name was Heinzenbien (Not clear; 00:53:02) ... Heinzenbien was really very, very, very good. He was in ... German in-charge of workshops. After you went to the UN, what would you say, was the most significant developments, of which you were party, contributor, or managed to get countries like Egypt and other countries to support the habitat?

R: I would say, UN Shelter for the Homeless.

I: International ...?

R: International Year (Not clear; 00:53:31) Shelter for the Homeless.

I: That continues to be the case ... there is only one ... have they repeated it, or what? Have they ... has it been institutionalized, or what?

R: No, that was a program which was started at that time ... each country had to show how much work they were doing for the ... homeless.

I: International ... what's it called?

R: International Year for the Shelter for the Homeless – IYSH.

I: Ah, what was the year of that?

R: 1987.

I: Ah ... and ... (00:54:02). And do you think that was successful?

R: It was successful ... because they had the support, mainly from _____ (Not clear; 00:54:12) sent a circular, cyclical to all the ... these complete ... direct ... he sent a complete note circular ... not cyclical, or whatever they call it ...

I: Yes, yes. That's right. By whom? The Secretary General? (00:54:32)

R: Yeah. Now ... you know ... _____ **is the Pope** (Not clear; 00:54:32)

I: Oh, the Pope himself? The _____ (Not clear; 00:54:35).

R: Hmm, the _____ (Not clear; 00:54:37) guy ... to all the institutions to celebrate the International Center for Homeless ...

I: Do you ... would you say, it was a successful program?

R: It was ... for a year ... up to ... then, it slowly ... disappeared.

I: Why was that?

R: Money. Money. (00:55:00).

I: Money. Okay. Was the US supportive, or not?

R: US was neutral.

I: It was neutral. Which were the most supportive of the ... of the developed countries?

R: Developed countries ... Germany ...

I: Germany ...

R: The United Kingdom ...

I: yeah.

R: France.

I: France.

R: Developed countries were supportive.

I: Japan?

R: Japan, so-so.

I: So-so. And India? From the developed countries?

R: India was okay. But not a very big supporter.

I: It was not a big supporter ... Sri Lanka?

R: Sri Lanka? Yes – very good. (00:55:33).

I: Very good. I was thinking of that. And ... which were the other ... what would you say, were the other ... sort of highlight(s) of your time at habitat?

R: _____ (Not clear; 00:55:48) member countries ...

I: Which one? Sorry?

R: I assessed member countries ...

I: Yes.

R: In the programs. Helping them to get the funds. And ... to get it implemented.

I: In their respective countries.

R: In their respective countries only. Not ... (00:56:02)

I: Which were ... which were most easy to work with, and which was the most difficult to work with, respective countries?

R: The easiest was Germany.

I: That was a developed country. that was to get the money. And the program ...?

R: And the program also, they did it.

I: Ah, but that is because they are Germany.

R: Yeah. That is right.

I: And the most ... but those who didn't have much, but were greatly enthused and then carried on with the program on their own, as a result of your work? (00:56:35). Homeless in Germany, they would have done it in any case, even if there was no such program ... although they used it ... internally. Which are the other countries which used this program internally to _____ (Not clear; 00:56:52) themselves?

R: There are many countries ...

I: Such as ...? Sri Lanka was one.

R: Sri Lanka was number one.

I: Number one. (00:57:02). Then?

R: I wouldn't put India as the number two.

I: No?

R: No.

I: Bangladesh?

R: Bangladesh was then just getting into ...

I: Yes. Malaysia, any of the South-East Asian countries?

R: Indonesia.

I: Indonesia.

R: Yes.

I: And ... on Wes-Asia countries, Egypt? No?

R: Egypt, no.

I: No. Iran?

R: Iran, yes.

I: Iran, yes. (00:57:30). Any of these African countries? Kenya?

R: Kenya, yes.

I: Kenya, yes.

R: Kenya, yes ... Tanzania?

I: Tanzania, yes.

I: Ah ... South Africa?

R: No.

I: No.

R: South Africa was not independent at that time.

I: Yeah, yeah. Right, right, right. Right, right. Right. And any of the rich countries in ... Nigeria?

R: Nigeria was ... talked a lot ...

I: What?

R: Talked a lot.

I: But didn't do anything.

R: Didn't do much.

I: And in Latin America?

R: Latin America was ... Brazil. (00:58:01).

I: Brazil.

R: Yes ... and ... Columbia ...

I: Columbia. In the Directors General ... not in the Directors General, in the ... Secretaries General, who was the most supportive of you?

R: Pérez de Cuéllar ...

I: Sorry?

R: Pérez de Cuéllar.

I: Oh! Pérez de Cuéllar. I was ... okay. Alright.

R: I was there ... only one year ... with ... World _____ (Not clear; 00:58:28).

I: Yes. (00:58:30).

R: He was supportive

I: Yes. But the ... yeah ...

R: Pérez de Cuéllar was really supportive. 10 years.

I: 10 years. Hmm. Good. And ... and after you came back from Habitat ... what happened?

R: Nothing.

I: No! Something happened. You were still a young man.

R: Became chairman of TERI.

I: Pf? TERI.

R: TERI.

I: And in that period ...?

R: Sustainable development.

I: Sustainable development. (00:59:01)

R: ... (it) was a theme ... of 10 ... 10 conferences. 10 years.

I: TERI, after you came back. Which ... when was ... which year was that?

R: 1993 ... I came back.

I: And you were chairman, TERI ...

R: '94 I became chairman of TERI. No, no ... I didn't become chairman of TERI. I joined TERI board. Darbari Seth was the chairman. (00:59:30). Then after he passed away, I took over the chairmanship.

I: In what year?

R: 1999, I think.

I: Okay.

R: (I was) the chairman of TERI for 10 years.

I: And you would say that sustainable development in TERI would have been the ... most important.

R: The theme of my ... the theme of the time conferences ... (01:00:01) every year in January.

I: Where was (were) the conference held? In Delhi?

R: Delhi. And ... many entities are represented.

I: Huh?

R: Many countries came and **attended** (Not clear; 01:00:20) the meetings ... foreign countries.

I: Such as?

R: All of them ... if I mention ...

I: Okay then ... and in terms of changing what your influence of work in Delhi (01:00:33) on

Maxwell (1:00:34) Programs, here in India, of which ...

R: We had ...

I: Which were the most important?

R: It included some policy making.

I: Such as?

R: That was what TERI was doing in ... in TERI ...

I: Yes. So, which would be the work that you were doing in TERI, which had the greatest influence on policy in India? (01:01:02). On sustainable development, or any other ... non-conventional energy, for example ...

R: Energy ... you can put energy ... planning ...

I: Which planning?

R: Sustainable planning ... of urban centers.

I: Huh?

I: Of urban areas.

I: Oh ... Who was the most supportive of your ideas of ... in the country here? (01:01:28)

R: I gave TERI the credit for it.

I: Sorry?

R: Give TERI the credit ...

I: The credit ... you give TERI the credit. But who would be ... I mean, in terms of making at a certain level at least, receptivity within the government in Delhi ...

R: Within government, I was the chairman of ... the institute set-up by the ministry of Urban Development (01:02:00).

I: That Habitat?

R: Not Habitat. There is another ... the ... Institution in Ministry of Urban Development.

I: Oh. What is it? I don't know. No, that is as far as the institution is concerned.

R: Yeah.

I: Programs ... and training ...

R: Programs ...

I: Such ... for example, change of building codes. Things like that.

R: The ... building ... we didn't go in to change the building codes.

I: You ... went into ...

R: More than building segregation (Not clear; 01:02:32). We had a number of people working for the ... this ... that area.

I: What would you say, would be more significant?

R: A young lady who was working in that area ... I forget her name. Short girl. She did a lot of ... good work.

I: Did she come from abroad?

R: Hmm?

I: Did she come from abroad?

R: No.

I: No.

R: Indian. (01:03:00). North Indian.

I: I don't ... forget ... I forget her name ... no ...

L: Sunita Narayan?

R: Not Sunita Narayan. Sunita Narayan was _____ (Electronic device rings loudly; Not clear; 01:03:12).

R: Hello? (Into the phone).

End of audio file titled "ArcotInterview17Dec2017"; 70.00 Pages; 10,161 words.