

IN THE HIGH COURT OF JUDICATURE : : ANDHRA PRADESH : AT HYDERABAD

(SPECIAL ORIGINAL JURISDICTION)

FRIDAY THE TWENTY FOURTH DAY OF AUGUST, 24-8-20001

TWO THOUSAND AND ONE

PRESENT

THE HONOURABLE MR. S.B. SINHA, THE CHIEF JUSTICE

AND

THE HONOURABLE MR. JUSTICE V.V.S. RAO

WRIT PETITION NO : 7021 OF 2000

Between:

P.R. Subas Chandran

..... Petitioner

And

Govt. of A.P. rept. by its Chief Secretary.

1. Govt. of A.P. rep. By its Secretary, Health Family and Environment, Secretariat Buildings, Hyderabad.
2. District collector, Nalgonda.

..... Respondents

Petition under Article 226 of the constitution of India praying that in the circumstances stated in the affidavit filed herein the High Court will be pleased to issue a writ order or direction declaring the action of the Government in permitting the authorities of Nalgonda district to consume water with high fluoride content and not providing for water with fluoride within permissible limits for human consumption as arbitrary, illegal, unjust, as a denial of basic human rights, as a breakdown of Government machinery and is violative of Fundamental rights guaranteed under Article 14 and 21 of the constitution of India apart from being contrary to the guidelines contained Articles 39 (b) (e) (f), 41, 43 and 47 of the constitution of India and issue consequential directions to the Government to forthwith ensure proper drinking water to the residents of the villages o Nalgonda.

For the petitioner: Mr. L. Ravichander. Advocate

For the Respondent: The Advocate General

The court made the following order:

SRI SATYABRATA SINHA

THE HON'BLE THE CHIEF JUSTICE

AND

THE HON'BLE SRI JUSTICE V.V.S. RAO

W.P. NO. 7021 of 2000

Oral order: (Per the Hon'ble the Sri Justice V.V.S. Rao)

The petitioner a resident of Hyderabad claiming to be a public spirited citizen and having belief in the Fundamental Duties under Article 51-A of the Constitution of India, has filed this writ petition bringing to the notice of the Court of human problem of gigantic proportions, prevailing in Nalgonda District, due to nature's curse in endowing the District with ground water containing high fluoride content. By this writ petition, the petitioner prays for a declaration that the action/inaction of the authorities in permitting the people of Nalgonda consume water with high fluoride content and not providing them water containing fluoride within the permissible limits as unconstitutional. He also seeks consequential directions to the Government of Andhra Pradesh in Health, Family and Environment, Department to provide water-containing fluoride within permissible limits, to the people living in the fluoride-affected villages of Nalgonda district.

The pleadings:

In the affidavit filed in support of the writ petition, the petitioner states that out of 1178 villages in Nalgonda district, people of nearly 691 villages suffer to consumption of water containing high levels of fluoride. The consumption of such water has made many people partially disabled and crippled beyond redemption. All the residents of the said villages, suffer in some measure or the other either biologically or psychologically or sociologically.

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The petitioner further submits that the permissible limit of fluoride content in water, prescribed by World Health Organisation (WHO), is 0.5 to 0.8 PPM (Parts Per Million). However, the drinking water in the various villages of Nalgonda district has high fluoride content ranging between 1 and 13 PPM, which is 200% more than the permissible limit prescribed by WHO. The water with high fluoride content in Nalgonda district has become a silent killer and people living in the affected villages have started deserting them for want of safe drinking water.

The Government in its governance is to be guided by Articles 39(b)(e)(f), 41 43 and 47 of the Constitution of India. The citizens have a fundamental right under Article 21 of the Constitution of India to have clean and health air and water, but the Government has turned a blind eye. The Government has made only half-hearted attempts by installing 12 fluoride water treatment plants, and they have since become defunct and even if they are put to use they are woefully inadequate to enable proper curing of water, which is supplied to the people. The petitioner therefore, suggests the following solutions to combat problem of fluoride.

1. The Government must be called upon to supply regular water tankers and transport water of healthier sources over to the villages affected by the said water supply and ensure that the said water is consumed by the villagers.
2. Government should also examine the possibility of increasing the release of water from Krishna now under supply to the city of Nalgonda and from there either supply water to the villages affected through already existing pipe lines or if need be to lay pipelines for supply of the said water to the villages.
3. On a long term basis to ensure supply of Krishna water through a protected water supply schemes to all the villages affected.

On behalf of the respondents, the Chief Engineer, Rural Water Supply (RWS) has filed a counter-affidavit. He has questioned the locus standi of the petitioner to file the writ petition. He contends that the problem of fluorosis is not a new one, and that the Government have for the last two decades attempted various measures to combat the problem. The counter-affidavit enumerates the following measures taken by the State Government in combating the problem of fluorosis in the district of Nalgonda: - (a) Since 1979 under the Netherlands Assistance Project (AP-1) was taken up at a cost of Rs. 44.59 lakhs for providing fluoride free water. Under the said project, an integrated water supply and sanitation proposal covering about 660 fluoride affected habitations at an estimated cost of Rs. 277.00 crores in 1989 with Nagarjuna Sagar Left Bank Canal as source also was taken up. Subsequently, it was reformulated with an estimated cost or 45.00 crores in 1996 with groundwater based individual schemes in the habitations where fluoride free water is available. However, the people of Nalgonda were not in favour of the said scheme. And therefore, it was not pursued: (b) De-fluoridation plants and hand pump de-fluoridation plants at a cost of Rs. 1.57 Crores were however were handed over to village panchayats. The Government of India constituted Technology Mission during 1996. Sub-mission programmes were identified under the Rajiv Gandhi National Drinking Water Mission for providing safe drinking water to fluoride affected villages. As the defluoridation plants did not achieve anticipated results, the Government of India introduced sub-Mission programmes for control of fluorosis to take up water supply schemes with sustainable water sources instead of ground water which contents high levels of fluoride. Under the said program, in 1991-93 a random survey was conducted, and based on the survey results, out of 1108 fluoride affected habitations, 21 habitations were provided with safe drinking water containing less levels of fluoride. Action plan in respect of 894 villages, covering about 1119 fluoride affected habitations has been prepared at an estimated cost of Rs. 283.16 crores: (c) in 1996-97 Netherlands Assistance Project as well as the Sub-Mission Project was withdrawn and the Government prepared 8 projects covering 34 Mandals and a population of 9.74 lakhs at an estimated cost of Rs. 227.30 crores. Out of 8 projects. Government of India has cleared one project under Submission programme at an estimated cost of about Rs. 26.77 crores. The Government of Andhra Pradesh also cleared another project at an estimated cost of Rs. 15.00 crores and the remaining 6 projects are under active consideration of the Government of Andhra Pradesh: (d) During 1990-91 to 1999-2000 various amounts were released under Rural Water Supply Schemes. In addition to this it is proposed to cover all the fluoride affected habitation in the district in a phased manner with public involvement and participation under Section Reforms Programmes, launched by the Government of India. Under the said scheme, the assets created will be maintained by the

community (panchayats), (e) The Government of India has sanctioned a pilot project to Nalgonda district at a cost of Rs. 40.00 crores under Accelerated Rural Water Scheme (ARWS) to cover 248 fluoride affected habitations in phase I. The Government of India contributed 90% of the funds under the said scheme and the balance of 10% will be borne by the community / beneficiaries. This programme also creates awareness among the people regarding the ill effects of consumption of fluoride content water and brackish water besides aiming at supply of safe drinking water.

The respondents while denying all other allegations further stated that the petitioner has exaggerated the descriptions of the situation prevailing in the fluoride affected villages which is incorrect. The administration of the State is making its best efforts to combat the problem of fluorosis for the last more than 12 years within its financial resources, and there is no serious dent or violation of basic human rights as the problem is being addressed in right earnest, and to a large extent remedied. Adverting to the solutions suggested by the petitioner the respondents submit that they are impracticable of implementation. The State Government is examining and exploring the possibility of supplying safe drinking water from the available surface water resources. Supply of water through tankers to all the fluoride-affected habitation is impracticable. It is also impracticable to draw more water from Krishna River by laying pipelines for the pipeline system in Nalgonda is designed to cover the requirements of Nalgonda town only. The Government is making endeavour to supply Krishna water from Srisailem Left Bank Canal (SLBC) and the project is also nearing completion.

When the writ petition was listed for admission on 27-4-2000, a Division Bench of this court while ordering notice before admission directed.

The State will take all necessary steps to provide drinking water to the fluoride-affected villages in the meanwhile. If there is no difficulty to implement the orders, the Government will be at liberty to apply for proper modification of the orders.

After service of notice, the matter was listed before a Division Bench of this Court on 26-12-2000, on which day the writ petition was admitted, and having regard to the fact that the Government has filed its counter, directed the matter to be listed for final hearing.

The matter was heard by this Court on 5-7-2001. Having regard to the seriousness of the problem, we directed the Member Secretary of the Andhra Pradesh Pollution Control Board (APPCB) to appear before this Court with necessary suggestions if any. On 19-7-2001, we again heard the matter having regard to averments the additional counter and additional documents filed by the learned Advocate General. We also had the advantage of hearing the comprehensive and significant submissions made by Sr. Chaterjee, IAS, Member of APPCB.

The additional counter-affidavit filed on behalf of respondent's gives the following details of the problems as well as steps taken by the Government. There are 1155 revenue villages, covering 3359 habitations with rural population of 26.75 lakhs. Out of 3359 habitations, 1122 habitations have been identified as fluoride affected. In the rural areas of Nalgonda district the Government has provided the following safe drinking water facility:

1. Total number of Hand pumps working 16701
2. Total number of MPWS/PWS schemes working 2081
3. Defluoridation plants

(a) Fill and draw type	5
(b) Number of hand Pumps attached	270

The Government prepared a new project for providing safe drinking water to fluoride affected habitation in Chityal, Choutuppal. Kanagal, Nalgonda, Narketpally, Pochampally, Ramannapet, and Thipparty areas covering 368 habitations at an estimated cost of Rs. 125 crores. This project was prepared considering Panagal Medium Irrigation Tank near Nalgonda, as a water source, which will be fed by SLBC Krishna water. The Government has already approached National Bank for agriculture and Rural Development (NABARD) for sanction of an amount of Rs. 266.5 crores to providing fluoride free water to people living in 368 habitations. The Government of India also sponsored another supporting scheme called ARWS programme to be taken up every year. For the year 2000-2001, 196 schemes, including 35 high levels of fluoride affected habitations were sanctioned at an estimated cost of Rs. 777.25 lakhs. The schemes will be completed by the end of this year. The Government also sanctioned a comprehensive Protected Water Supply for providing safe drinking water to 108 habitations. Including 85 excess fluoride habitations at an estimated cost of Rs. 26.76 lakhs and the project is under execution. Thus out of 898 habitations 488 habitations are covered by various projects. The balance 410 fluoride habitations which fall in Chanddur, Chintapply, marriguda, Mungode and Narayanpur areas are proposed to be covered by drawing water supply pipeline of Hyderabad Metro Water Supply and Sewerage Board (HMWSSB) from Krishna river. It is further submitted that the Panchayat Raj Engineering Department (PRED) has studied the situation and submitted a proposal for restoration of defluoridation plants. In addition to this, 500 domestic defluoridation filters developed by Dr. Narayana, were distributed in Narketpally and Narayanapur Mandals where the problem of fluorosis is acute. If the said filters prove effective, they will be given on subsidized rates to households living below poverty line in villages where it is impossible to provide fluoride free water.

Rival submissions:

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Sri. S. Ramachander Rao, learned senior counsel appearing on behalf of the petitioner has drawn out attention to the statistics prepared by the Executive Engineer, RWS Division, Nalgonda, to the highlight his submission that is more than 200 villages the fluoride content in drinking water is in far excess of the WHO standards. He submitted in a welfare State. It is the bounden duty of the Government to protect the lives of its citizens by supplying potable drinking water with least health hazards. Any apathy on the part of the Government in combating the problem of fluoride, would aggravate the problem and result in more and more number of people getting disabled and crippled. He submits that the fundamental "right to life" guaranteed under Article 21 of the Constitution of India, includes right to health life and right to have pure water. Any delay on the part of the Government in solving the problem of fluoride would result in violation of Article 21.

The learned Advocate General submits that the Government is aware of the problem of fluorosis for the last more than two decades. Within its financial capacity and resources, it is taking all possible steps to tackle the problem on a war footing. In support of this submission, he placed reliance on various Government Orders, whereunder administrative sanction was accorded for various projects. He submitted that the Government in combating the problem of fluorosis is adopting short term and long term measures. Projects have been planned to utilize surface water resources with less fluorine content, and also to revive the defunct deluoridation plants, besides

supplying 500 defluoridation filterfs in two mandals. The Government has been bestowing its best attention to solve the problem of fluorosis. Through sustained efforts the Government intends to supply Krishna water to 6 out of 8 major projects undertaken in Nalgonda district in order to supply less fluoride content water. Since the problem of fluoride is received the deserved attention, he submits that the solution suggested by the petitioner are impracticable of implementation.

Sri Chaterjee, IAS, Member Secreatry of APPCB submits tht the Government of Andhra Pradesh has undertaken various projects during 1979-1999. 262 defluoridation plants with technique called Nalgonda Technique, 29 community defluoridation plants of fill and draw, 26 Activated Alumnia plants one Ion Exchange plant and one plant with Exchange Absorption, were established, but all of them have become defunct. He submits that the individual defluoridation units developed by Sri Satya Sai Institute of Higher Learning (SSIHL) can be used as effective short term measures for they can be manufactured by DWACRA groups (Development of Women and Children in Rural Areas) with simple training, at a cost of Rs. 900/-. He also placed before us a note containing solutions/ suggestions which we will advert to a little while later.

The problem of fluorosis :

Deficiency of fluorides in human body (less than 0.8 to 1.0 mg/ltr.) causes dental caries, excess concentration of fluorosis in drinking water (more than 1.0 mg/ltr) results in defective calcification of teeth and mottling of enamel in children. If the concentration of fluorides in water is far in excess than required, it causes a disease known as "Skeletal Fluorosis"

The characteristics of the symptoms of these ailments are taught natural movement in the neck become difficult due to stiffening of the back. The chest loses its mobility making breathing abnormal, and deformation of the bones, beside causing generalized fleeting pain. Even animals suffer due to high fluoride contents.

Encyclopedia Britannica (Micropedia), Vol.IV.1974 Edition gives the following description of Fluorosis :

Fluorosis : Chronic intoxication with fluorine (usually combined with some other element to form a fluoride) that results in changes in the skeleton and classification of tendons and ligaments. Exposure to fluoride in optimum amounts (about 1 part per million of fluoride to water is claimed to be beneficial to the teeth (in the prevention of caries) and probably to bone development; fluorides ingested in very high amounts over a short period are generally poisonous that produce quick death. Mild chronic exposure (6-8 parts per million of fluoride to water) will cause mottling of teeth enamel in children, but the bones are unaffected. In more severe chronic exposure, bone calcium is gradually replaced by fluorine, the bones become soft and crumpled and are chalky white. Protrusion of new bone development in abnormal places. These are few early symptoms when nerves of the spinal cord are compressed. Chronic exposure occurs from air pollution in cerain areas, among worker in the insecticide, aluminium - mining, and phosphate and fertilizer industries, and in whole groups of people who live in areas with water naturally high in fluorides. The latter from of exposure is not a significant cause to fluorosis in the Western hemisphere, but in parts of India and Arabia. Bone affections are endemic. Treatment is orthopedic; the preferred approach is to prevent the disease by reducing exposure in endangered groups.

The problem of fluorosis, and efforts for removal of fluorides from drinking water is not new. As early as in 1934, the world of science made attempts to remove excess fluorides from drinking water. Excessive content of fluorides in drinking water was noticed in western countries like USA etc. They have evolved method to chemically treat waters with fluoride content, before it is supplied for consumption by human beings. The investigations made since 1934 reported the peculiar disease 'Skeletal Fluorosis' in parts of Andhra Pradesh, Bihar, Kerala, Maharashtra, Punjab and Tamil Nadu (formerly Madras State). In Andhra Pradesh, the areas where there is high incidence of fluoride were identified in Nandigama taluk of Krishna district, Nalgonda district, Gooty, Dharmavaram, Narayandurg and Rayadurg taluks of Anantapur district.

In 1963, WHO, prescribed 'international Standards for Drinking Water'. According to these standards, a threshold limit of 1 to 1.5 PPM generally holds good. In assessing the safety of water supply with respect to limit prescribed therein, special consideration as well, should be given to the total fluoride intake by the individual. For India, the standard prescribed is 1.0 PPM. As a general principle, the scientists believe that where the temperatures are high, a low optimum fluoride level is to be used, and therefore, where the annual average temperatures are greater than 70.F, the optimum fluoride concentration should not exceed 0.8 PPM. It is to be further recognized that the problem of defluoridation is universal, and in a number of places in India, problems due to excessive fluoride content in water is very acute.

Locus standi of the petitioner:

The petitioner claims to be a citizen interested in welfare activities. He filed 14 cases before this Court. A list of these cases is annexed to the writ petition. Though an objection is raised in the counter – affidavit filed on behalf of the Government that the petitioner has no locus standi, the learned Advocate General has not taken serious objection. We therefore proceed on the footing that the petitioner has locus standi to file the writ petition, which is concerned with the problem of fluorosis, affecting parts of Nalgonda district.

Problem in Nalgonda district:

Nalgonda district was part of Hyderabad State under the rule of Nizam. The geographical area of the district is 14,217 sq. KM, comprising 4 Revenue Divisions, 59 Mandals, 1158 Revenue villages with almost equal number of Gram Panchayats. As per 1991 census, the total population of the district is 28.52 lakhs. Krishna river forms the southern boundary of the district. Nagarjuna sagar a multi-purpose river project is the only major project in the district. Out of 1158 villages only 1119 are inhabited. Out of these villages, 682 villages have protected Rural Water Supply scheme (RWS). There are also 1137 borewells, besides 192 open wells, which provide drinking water. The above figures are furnished by the petitioner – (Source : Executive Engineer, Rural Water Scheme,

Nalgonda). According to these figures, the particulars of problematic villages with high fluoride content division-wise are as under.

S.No.	Name of the Division	Number of villages	Acute Fluoridie villages	Brackish water
1.	Bhongir	295	41	NIL
2.	Suryapet	210	3	NIL
3.	Nalgonda	319	143	14
4.	Miryalguda	295	NIL	1

The learned Senior Counsel Sri. S. Ramchander Rao, has also placed reliance on the statement showing problematic habitations identified with high fluoride content. In some of the villages, like Cheruvugattu in Narketpally Mandal of Nalgonda Division, Pedda Suraram in Tipparthi Mandal of Nalgonda Division, Kothularam in Mungala Mandal, the fluoride content is as high as 6 to 7 PPM. Indeed a bare persusal of the statement filed by the petitioner shows that in some places the fluoride content is more than 10 PPM. In 691 villages, in all Revenue Divisions, and mostly in Nalgonda Revenue Division, the fluoride content is very high. We may also mention that in the additional counter-affidavit, the Chief Engineer, RWS, in para 18 admits that in Narketpally and Narayanpur Mandals of Nalgonda Revenue Division, the problem of fluorosis is very acute. In about 18 villages (25 human habitations) of Narketpally Mandal, the fluoride content in the water ranges from 1.60 PPM to 6.40 PPM. Likewise, in Narayanpur Mandal of Nalgonda Revenue Division, there are about 23 villages (63 human habitations), where the fluoride content in the water ranger from 1.80 PPM to 7.00 PPM. The various particulars filed by the petitioner, though are of the year 1996-97, they are not specifically denied by the respondents.

From the various statements, containing statistical figures, filed by the petitioner, as well as from the admissions made by the Chief Engineer RWS. In the counter-affidavit, filed on behalf of respondents, it can reasonably be inferred that the problem of fluorosis in Nalgonda District is a general problem more especially in Nalgonda Division, where there are more number of inhabited fluoride villages – as many as 319 habitations. Out of these 63 habitations in Narayanpur Mandal and 25 habitations in Narketpally Mandal, the problem is more acute and endemic. It demands immediate attention from all concerned.

A few Constitutional Fundamentals:

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The constitutional governance by rule of law must be aimed at securing to all citizens of India – justice, liberty and equality. The principles adumbrated in Part IV of the Constitution of India are fundamental in the governance of the country, and it shall be the duty of the State to apply the Directive Principles of State Police, especially Article 38(1), 30 and 47, and strive to promote the welfare and health of the people, including women and child. Under Article 47 of the

Constitution, the State shall endeavour to improve public health, viewing it as a primary duty. The community health would become a reality only when the State endeavours to protect and improve the environment, which includes flora, fauna, forests and the natural wealth. After the Constitutions (42nd Amendment) Act 1977, Article 48-A was inserted in the Directive Principles of State Policy, which speaks of improvement of environment. In catena of decisions the apex Court has ruled that the right to healthy environment and enjoyment of quality life are part of right to life and liberty. [See CHHETRIYA PRADUSAN VIMUKTHI SANGARSH SAMITHI v. STATE OF UP¹, SUBHAS KUMAR v. STATE OF BIHAR², VIRENDER GAUR v. STATE OF HARYANA³, DR. ASHOK v. UNION OF INDIA⁴, M.C. MEHTA v. UNION OF INDIA⁵.]

In SUBASH KUMAR'S case (supra) the apex Court further held that fundamental right to life under Article 21 of the Constitution also includes right to enjoyment of pollution free air and water. The following observations are apposite and demand excerption.

..... Right to live is a fundamental right under Art. 21 of the Constitution of India and it includes the right of enjoyment of pollution free water and air for full enjoyment of life. If anything endangers or impairs that quality of life in derogation of laws, a citizen has right to have recourse to Art. 32 of the Constitution for removing the pollution of water or which may be detrimental to the quality of life.

In the State of Karnataka v. State of Andhra Pradesh⁶, the apex Court held that right to water is right to life, and thus a fundamental right (see part 178 of SSC – concurring judgment of Sethi, J) In NARMADA BACHAO ANDHOLAN v. UNION OF INDIA⁷, the apex Court indicated that right to water is a fundamental right under Article 21 of the Constitution of India, There it was held :

¹ AIR 1994 SC 449

² AIR 1991 SC 42

³ (1995) 2 SCC 577

⁴ (1997) 5 SCC 10

Water is the basic need for the survival of human beings and is part of the right to life and human rights as enshrined in Article 21 of the Constitution of India, and can be served only by providing source of water where there is none. The resolution of the UNO in 1997 to which India is a signatory during the UN Water Conference resolved unanimously inter alia as under :

All people whatever their state of development of their social and economic conditions have the right to have access to drinking water in quantum and of a quality equal to their basic needs.

Therefore, under the Constitution, the role of the State to provide every citizen with adequate clean drinking water and to protect water from getting polluted is not only a fundamental Directive Principle in the governance of the State, but is also a penumbral right under Article 21 of the Constitution of India.

The State is assigned a positive role to help people realize their rights and needs. The Roman Law principle "salus populi est suprema lex" (welfare of the people is paramount law) is the abiding all pervasive preambular faith of the Constitution of India. Fundamental Rights and Directive Principles of State Policy, the legislative Entry 17 in List II of the VII Schedule to the Constitution of India places "water" for drinking and for irrigation at the disposal of the State. The Public Trust Doctrine is now part of India Constitutional Law. In *M.C. MEHTA v. KAMALNATH*⁸ (supra) the apex Court categorically ruled that the doctrine of Public Trust demands the sovereign to protect and regulate all environmental aspects of water and land, and therefore, there cannot be any doubt that the State is not only bound to regulate water supply, but should also help realise the right to healthy water and prevent health hazards.

The learned Advocate General does not dispute these principles of law. He has successfully demonstrated before us that the Government of the day is taking all steps / measures to combat the problem of fluorosis – both long term and short term, and to evolve / implement such projects which would ensure supply of drinking water with optimum fluoride content. We have no reason to doubt the sincerity of the Government in their endeavour to complete the various projects as noticed supra within a reasonable time. However, in some areas of Nalgonda District, the problem is acute. This Court has to address the issue in this case having regard to the known constitutional principle that the court is also to be guided by the Directive Principles of State Policy, in interpreting and enforcing laws (see *ATAM PRAKASH v. STATE OF HARYANA*⁹, *BIHAR. LEGAL SUPPORT SOCIETY v. CHIEF JUSTICE OF INDIA*¹⁰, *SACHIDANANDA PANDEY v. STATE OF WEST BENGAL*¹¹).

Defluoridation Methods – Long Term and Short Term solutions :

There is near unanimity among researchers that the problem of high fluoride content in drinking water can be solved.

- i) by dilution with low fluoride waters so that combined water has a fluoride content below the safe limit.
- ii) By arranging alternative supply of drinking water whose fluoride content is low enough; and
- iii) By chemical methods of treatment of the water to bring down the fluoride content.

The first and second methods may not be feasible in all cases, and therefore, the third method has to be resorted to. However, the chemical method involves huge costs. Sri. T.M.Amir Ahmed. Professor in the Department of Civil Engineering in his paper titled "Engineering Aspects of Defluoridation" suggests that the use of paddy husk would be cheaper. While dealing with various aspects of defluoridation the said Professor recommended use of paddy husk in defluoridation filters in the place of Alam. Be that as it may, the solutions – both short term and long term should be effective. The various projects out of eight projects to be precise; undertaken by the Government, two projects are at various stages of implementation. All these projects aim at long term solutions by which the Government intent to supply drinking water with optimum levels of fluoride content. The learned Senior Counsel for the

petitioner does not dispute that these projects undertaken by the Government are going to help the area. What he submits is that the Government should examine the possibility of releasing water from Krishna to the city of Nalgonda, and from there supply of water to villages affected through already existing pipelines or if necessary to lay pipelines for supply of water. He also submits that Krishna water should be supplied to all the villages by taking up necessary protected water supply schemes. In the counter-affidavit filed by the Chief Engineer, RWS Department, it is contented that the existing pipelines in Nalgonda were designed only for supplying water to Nalgonda and it is not possible to supply more water through pipeline than what they were designed for. There is no reason to disbelieve the version of the Chief Engineer. In any view of the matter, these are matters for the appropriate Government to decide having regard to the expert opinion.

In this connection, we may refer to a judgment of the Division Bench of this Court, in *PENNAR DELTA AYACUTDARS ASSOCIATION v. GOVERNMENT OF ANDHRA PRADESH*¹² to which one of us (V.V.S.Rao, J) was a member. The appellants therein sought for a writ of mandamus directing the Government to release water from Somasila Project in Nellore District for the second Rabi crop on the ground that even after providing for other requirements, there is still water in the Somasila Reservoir. This Court considered two questions as to whether a policy decision in regard to irrigation management system is justiciable and whether the decision of the Government not to release water for rabi second crop is arbitrary and irrational. Both the questions were answered in the negative, and it was held:

We, therefore, hold that the decision taken by the Somasila Irrigation Committee in 1996 to maintain dead storage (MDDL) at 7.5 TMC in Somasila Reservoir is a policy decision, which cannot be held to be unconstitutional. We also hold that the issue whether the dead storage should be maintained at 7.5 TMC and whether dead storage below the required level, are matters, which are not justiciable. Further, when the decision was taken not to release the water for Rabi second crop, the respondents have taken all the relevant facts and factors into consideration and the decision-making process does not call for any judicial review.

Therefore, whether the Government should release water from Nagarjuna Sagar Project or Sriasailam Project is a matter to be decided by the Government, and no mandamus can be issued.

As noticed above, the Member Secretary of APPCB who appeared at our request has suggested that a Committee of Experts namely Dr. K.A.V.R.Krishnamachary, Health Advisor, Ashoka Fellow Society for integrated Development in Urban and Rural Area (SIDUR); Dr. A.K. Susheela, Director of Fluorosis Research and Community Development, New Delhi and Dr. k. Venkateshwara Rao, Professor, Department of Biosciences, Sri Satya Sai institute of Higher Learning, Prashanti Nilayam, Puttaparthi, be appointed for constantly studying the problem of defluoridation in all areas where the problem is acute. He also suggested that defluoridation units developed and demonstrated by Sri Satya Sai Institute of Higher Learning, Puttaparthi, should be extensively used. While submitting that early action in rural areas would prevent possible fluoride effects in the vast expanding urban areas, he suggested the following solutions:

1. In the short term, individual defluoridation units as demonstrated by SSHIL, Puttaparthi, to be manufactured through DWACRA groups at Rs. 900-1000 per family after training.
2. Micro credit system for manufacturing these individual units, initially in Nalgonda
3. Under "Neeru-Meeru" programme, construction of lined cement tanks compatible in size was the number of affected families in each village to collect rain water and surface run-off. This will contact with fluoride rich soils:
4. under National Green Core, training of teachers and children to manage school level defluoridation plants which can be replicated in villages also. Fluorosis affect child on more than adults;

5. The anti-fluorosis network of NGOs established in Nalgonda under the aegis of Dr. K.A.V.R.Krishnamachari to be involve in disseminating training and coordinating the implementation programmed.
6. Revitalisation of the NEERI designed Nalgonda technique community projects through the NGOs network and a task force approach using surplus pool staff of the irrigation, Panchayat Raj and related departments in partnership at the rate of about 20 habitations per mobile task force;
7. Task forces to be under the control of Mandal Praja Parishads.
8. In the long term to bring Krishna water to the affected villages, Nagarjuna Sagar right canal aqueduct has already been implemented and fluoride-affected villages of prakasam district have been saved. Similarly, the left canal going to Miryalguda and proposed supplies to Nalgonda and Hyderabad can also supply fluoride water to villages alongside:
9. The villages seriously affected should be shifted to safer areas as a government sponsored Rehabilitation & Resettlement (R&R) programme.

After giving our anxious consideration, and having regard to the submission made by the learned Senior Counsel for the petitioner, and the learned Advocate General for the State as well as the Member Secretary of the APPCB, we are of the opinion that apart from the eight projects undertaken by the Government (two of which are already sanctioned) for bringing water from Srisailem Left Bank Canal as well as other balancing reservoirs in the district, we also deem it appropriate to direct the Government to immediately take steps as under:

1. Among the villages / habitations of Narketpally and Narayanpur Mandals of Nalgonda Revenue Division, the Government / District Collector should identify the villages which have more acute problem of fluorosis and immediately take steps for supplying water with optimum fluoride content through water tankers till the project / schemes undertaken by the Government are completed.
2. We also direct the Government to consider the feasibility of first concentrating on the Mandals where the problem is more acute. We are giving this direction having regard to the fact that out of four Revenue Divisions in the district in Nalgonda division there are more number or villages where the fluoride content is more.
3. We also direct the Government to provide special medical care to all the people who are afflicted with fluorosis free of cost by involving non-governmental organizations.
4. We direct the Government to consider involving non-governmental organisation like Society for integrated Development in Urban and Rural Areas (SIDUR), Sri Satya Sai Institute of Higher Learning etc.
5. it is established scientific fact that the ground water in most parts of the district contains excess fluoride than the standards. Therefore it is appropriate for the Government to educate the people about the use of groundwater from the borewells. If necessary steps may be taken to close down the borewells where the problem of fluorois is endemic.
6. We direct the Government to consider the feasibility of evacuating the people from affected villages to safer places by planning and undertaking a rehabilitation and resettlement programmed and
7. We direct the Government to consider all the recommendations made by Sri. Chaterjee, IAS, Member Secretary of A.P.Pollution Control Board, extracted herein above, and appoint a

Committee consisting any two out of three scientific experts viz., Dr. k.A.V.R.Krishnamachary, Health Advisor, Ashoka Fellow Society for integrated Development in Urban & Rural Area (SIDUR); Dr, A.K. Susheela, Director of Fluorosis Research and Community Development, New Delhi and Dr. K. Venkateswara Rao, Professor, Department of Biosciences, Sri Satya Sai Institute of higher Learning, Prashanti Nilayam, Puttaparthi, to study the problem of fluorosis immediately and take necessary action in accordance with the report of the said committee.

With the directions as aforementioned the writ petition disposed of giving liberty to the parties to approach this Court for any clarification/s if so required. No costs.

Sd/- T.R. Ratnakumar,

Asst. Registrar

/true copy /

Section officer

To

One Fair copy to the Hon'ble Mr. S.B.Sinha, the Chief Justice (for his lordships kind perusal)

One Fair copy to the Hon'ble Mr. Justice V.V.S.Rao (for his lordships kind perusal)

1. The Chief Secretary, Govt. of A.P. Secretariat, Hyderabad.
2. The Secretary, Health Family and Environment, Secretariat, Hyderabad.
3. The Dist. Collector, Nalgonda, Nalgonda district.
4. 8 L.R.Copies
5. The Under secretary, Union of India, Ministry of Law Justice and company Affairs, New Delhi.
6. The Secretary, A.P.Advocates' Association Library, high Court Building, Hyderabad.
7. Two copies to Advocate General High Court of A.P., Hyderabad.
8. The Member Secretary, A.P. Pollution Control Board, Hyderabad.
9. One c.c. to Mr. L. Ravichander, Advocate.
10. 2 C.D.copies.
11. D. Babji