



Church's Auxiliary for Social Action

NATIONAL CHURCH LEADERS' CONSULTATION ON RIGHT TO WATER

6-7 September 2007 , Nagpur, MH

A Concept Note

"Two third of earth is covered by water. Nearly 97% of the world's water is saltwater or otherwise undrinkable. Another 2% is held in ice caps and glaciers. That leaves just one percent for all of humanity's needs - agricultural, residential, manufacturing, and community needs."

- (United States Geological Survey)

a) Water Facts (Statistics) - Global Scenario

Maude Barlow, National Chairperson, The Council of Canadians says, despite the everyday dependence we have on water, access to fresh water is far from equal or guaranteed. Of the world's population of 6 billion, at least 1.5 billion people do not have access to clean drinking water and another 4 billion lack adequate sanitation services. In parts of the developing world, a child dies every 15 seconds due to easily preventable water-related diseases.

Global water corporations, international financial institutions, trade agreements, governments and even parts of the United Nations have been promoting privatisation and commodification of water as a way to deal with this crisis.

But the evidence shows that privatisation leads to rising water rates, unclean water - and of course, soaring corporate profits. Water should be safe, affordable, and accessible to everyone - not just those who can afford to pay.

In November 1980, The General Assembly of the United Nations declared the eighties (1981-1990) as the *International Decade of Drinking Water and Sanitation*. It suggested the action plan that had been proposed by the UNITED NATIONS conference in Mar del Plata (1977): "At the end of the current decade (1980-1990), all human beings should have access to drinking water and sanitation services".¹

¹ Average consumption levels in Africa, Europe and the United States are respectively 30, 200 and 600 litres per person per day (a bath holds about 100 litres). In some countries young girls walk everyday more than 10 km to bring 20 l of manually extracted water.

During the eighties, substantial financial efforts (about 134 billion dollars) were devoted to water resources management (55 percent for drinking water, and 45 percent for sanitation). For all developing countries, the population with no access to drinking water was reduced from 1.8 billion in 1980 to 1.2 billion in 1990. During the same period, the population with no access to wastewater treatment plants (*i.e.* 1.7 billion people) has not changed (source: WHO). During the nineties, the situation has worsened in terms of both freshwater supply and sanitation services (1.9 billion people had no access to sanitation services in 1994, according to Warner, 95).²

Today, two decades after the action plan, the share of world population having serious freshwater access hindrances amounts to about 20 percent, while one-half of world population does not have an adequate sanitary environment.

All figures pertaining this “crisis” (that vary according to the author) indicate a hard reality, verify a failure and raise questions about the day-to-day life of the 8.3 billion earthlings of year 2025.

According to Indira Ghandi, “only developed countries have the means to take into account environment conservation”, because food supply remains the highest priority for any country.

A similar policy is followed in China. On the other hand, developed countries invoke similar, essentially economic, reasons for curtailing every environmental policy closely linked to Water. For these developed countries, one solution is known: a radical behaviour and lifestyle change that saves natural resources and slows down energy consumption.

“Three planets Earth would be needed if the whole world population was to have North America’s consumption and development style”.³

- **The Nuances of the Water Crisis:** There is not a single water crisis, but an infinity. The features of every water crisis are specific to every geographic zone, basin, etc., and therefore possible solutions do only have a regional scope. **“Crisis” means, “no-decision”.** This lack of decision is the consequence of the antinomy *growing demand / shrinking resources*, the lack of an information and education policy, etc.

In Europe, at the end of the 19th Century, a similar practice could be observed. In *Les Misérables*, Victor Hugo describes Cosette, a Parisian girl: “The weight of the bucket tensed and hardened her meagre arms; the steel handle ended up numbing and freezing her small wet hands”.

² We keep on making massive investments in insecurity instead of devoting preventive funds for Peace. Just 130 billion dollars would be needed to offer a roof, freshwater and basic sanitary devices to the 1.3 billion poor people on Earth (according to Wally N'Dow, secretary general of the Summit of the Cities). This hardly accounts to 15 percent of military expenses worldwide (namely, 900 billion dollars per year).

³ Jérôme Bindé, *Prêts pour le XXI^e siècle? (Ready for the 21st Century?)*. Bindé heads UNESCO's analysis and prevention office.

- More than one billion people lack access to a safe supply of **drinking water**. **Water-related diseases** are the leading cause of death in the world. This killer takes the lives of more than 14,000 people each day and is responsible for 80% of all sickness in the world. Compounding the problem is the fact that more than 50 percent of the water supply projects in the developing world fail.

India's huge and growing population is putting a severe strain on all of the country's natural resources. Most water sources are contaminated by sewage and agricultural runoff. India has made progress in the supply of safe water to its people, but gross disparity in coverage exists across the country. Although access to drinking water has improved comparatively, the World Bank estimates that 21% of communicable diseases in India are related to unsafe water. In India, diarrhoea alone causes more than 1600 deaths each day – the same as if eight 200-person jumbo-jets crashed to the ground each day. Hygiene practices also continue to be a problem in India. Latrine usage is extremely poor in rural areas of the country; only 14% of the rural population has access to a latrine. Hand washing is also very low, thereby increasing the spread of disease. In order to decrease the amount of disease spread through drinking-water, latrine usage and hygiene must be improved simultaneously.

According to the National Water Policy of India- 2002, out of the total precipitation including snowfall, of around 4000 billion cubic meters in the country, the availability from surface water and replenish able ground water is put at 1869 billion cubic meters. Because of topographical and other constraints, about 50% of this i.e. 690 cubic million meters from surface water and 396 billion cubic meters from ground water can be put to beneficial use. The availability of water is highly uneven in both space and time. Precipitation is confined to only about three or four months in the year and varies from 10 cm in the western parts of Rajasthan to over 1000 cm at Cherrapunji in Meghalaya.

Floods and droughts affect vast areas of the country, transcending state boundaries. A third of the country is drought prone. Floods affect an average area of around 9 million hectares per year.

Growth process and the expansion of economic activities inevitably lead to increasing demands for water for diverse purposes: domestic, industrial, agricultural, hydro- power, thermal-power, navigation, recreation, etc. So far, the major consumptive use of water has been for irrigation. While the gross irrigation potential is estimated to have increased from 19.5 million hectares at the time of independence to about 95 million hectares by the end of the year

1999-2000, further development of substantial order is necessary if the food and fibre needs of our growing population are to be met with.

Production of food grains has increased from around 50 million tones in the fifties to about 208 million tones in the year 1999-2000, but this will have to be raised to around 400 million tones by the year 2025 AD. The drinking water needs of people and livestock have also to be met.

III. Action by the Global Players

The leaders of the Nations have realised the importance of water. Therefore, the United Nation has been making several efforts to save water, as “The extent to which water resources development contributes to economic productivity and social well-being is not usually appreciated, although all social and economic activities rely heavily on the supply and quality of freshwater”. -Agenda 21: Chapter 18 of Commission on Sustainable Development, UN General Assembly 1992.

The UN has been consistently focusing on the issue of Water related issues and making a conscious effort in promoting awareness, policy formulation, study and research, so that every individual in the world will have access to safe drinking water to meet their basic requirements.

In the 93rd Plenary Meeting of the UN General Assembly in 1992, it was resolved that from **1993 onwards, March 22 shall be observed as World Water Day, every year**. It declared year 2003 as the “Year of Freshwaters”. *Taking note* of the Ministerial Declaration of the Third World Water Forum, held in Kyoto, Japan, and the Dushanbe Water Appeal, proclaimed on 1 September 2003 at the International Freshwater Forum, held in Dushanbe from 29 August to 1 September 2003, the 58th session of the UN General Assembly proclaimed **year 2005-2015 as the International Decade for Action: ‘Water for Life’**. The Secretary General of the UN and its relevant bodies have been called upon to deliver a coordinated response, utilizing existing resources and voluntary funds, to make “Water for Life” a decade for action.

As a concrete effort in this direction, the World Water Week will be observed in Stockholm, Sweden during August 21-27, 2006, where government and CSOs will participate to discuss and debate on various water related issues.

IV. Issues and Challenges related to Water

Red tape & bureaucracy⁴

Red tape and bureaucracy of governments and large institutions regarding water management seems to be a common feature among all presentations. Internal conflict within these institutions gives rise to poor communication, mismanagement and wastage of water

Price of water and Privatisation

Though in some cases privatisation may look fine, the state cannot escape its mandatory duty vis-a-vis providing clean water and services to all sectors of the community. The general situation of the countries represented was that industry and agriculture is more often than not the main polluters of water. There is a general feeling that these sectors must be liable for their responsibility in the degradation of the aquatic environment. However, this should not be taken as a waiver for pollution to continue. Regarding price, it is to be noted that in many societies and even Constitutions (e.g. Argentina, South Africa...) water is seen as a human right and every decision on price must consider this.

Privatization, the inadequate solution⁵

It's not surprising that water's increasing scarcity – and hence its growing market value – has drawn the attention of profit-motivated multinational corporations.¹⁸ Nor is it surprising that governments desperate for quick fixes to water woes are increasingly turning to such companies for meeting immediate water needs. These companies treat water not as a human right, but as a commodity to be bought and sold for profits. Their ethic is that “free global markets” – or globalization – serve human progress by encouraging business decisions that ensure efficient use of resources.

Churches and other critics of the negative impacts of globalization challenge that fundamental assumption. We believe that human beings come first, and that while efficient business decisions may increase profits for shareholders, they do not address the poor and the vulnerable who cannot always pay to access a resource such as water.

Governments are attracted to privatization because of the enormous costs involved in operating large-scale clean water delivery and wastewater

⁴ “MEETING WATER CHALLENGES IN THE 21st CENTURY” - 19/23 JANUARY 1997, PENANG (MALAYSIA)

⁵ CWS water campaign

removal systems. Globally, an estimated \$14-\$30 billion in additional annual investment is needed to keep up with growing demands – and that's on top of the \$30 billion spent on maintenance.

The financial costs are staggering, not only for governments in developing nations, but increasingly for regional water districts in the United States, where some 15 percent of the water systems, covering more than 40 million people in 1,000 communities, have been taken over by private companies. Globally, private companies currently operate water systems – either through outright ownership, lease, or contracts to manage – for about seven percent of the population. By 2020, the prediction is private firms will control as much as 75 percent of the water systems in Europe and North America alone.

In the developing world, the International Monetary Fund (IMF) and the World Bank are the prime movers of privatization of previously public-owned sources and systems. The IMF and the World Bank contend that profit oriented private companies are better able to manage water delivery and wastewater removal systems than public entities.

Public entities, they say, are more likely to be inefficient, inadequately funded, and subject to political whims. We have observed that the reality of water privatization proves otherwise – and that the private sector is least likely to deliver adequate service for poor people:

Sustainable development and Water issues

Water should be directed to alleviate the suffering for and the betterment of human life for generations ahead. The conservation of the physical environment both at present and in the long term must be accounted for. In modern society, water management is generally directed to economic growth which is a result of the present day exploitative and predatory world view. The general consensus of the group is to call for sustainable values in all development particularly in relation to water issues. This is because the present situation cannot continue or humankind and the natural world are doomed for destruction.

V. National Water Policy of India-2002

-(See Appendix-I)

VI. A critique of the National Water Policy by CSOs:

The Civil Society Organisations need to join hands in discussing and studying the National Water Policy of India (NWPI). There has been so many areas where the NWPI is lacking or otherwise silent, which leads to further deprivation of the marginalised communities. Given below are some of the loopholes of the NWPI,

"The National Water Policy will remain inert and ineffectual because it is far removed from the two simple but important challenges of water management today -- rainwater harvesting and community management in this initiative," said Sunita Narain, director of the Centre for Science and Environment (CSE). The CSE and other leading environmental NGOs and activists hold that India has been hit by water shortages because of a shift away from traditional methods of storing and using rainwater to exploiting rivers, by damming them up through costly and centralized irrigation and drinking water schemes.

According to L.C. Jain, a former member of India's Planning Commission, India has over the last 50 years spent \$50 billion on developing water resources and another \$7.5 billion on drinking water with little to show for the money -- much of which was siphoned out through a corrupt contractor system. Apart from big dams and irrigation systems, the government has encouraged the digging of millions of tubewells and borewells energized by electric and diesel-driven pumps that now provide half of the country's irrigation.

So powerful are the vested interests, says Narain, that they could ignore Prime Minister Atal Bihari Vajpayee's stated view that the National Water Policy should be people-centered and recognize communities as the "rightful custodians of water." Vajpayee also emphasized the need to ease "exclusive control by the government machinery" over water resources so that "we can make a paradigm shift to participatory, essentially local management of water resources." But the final National Water Policy makes no such shift and speaks of communities only as an afterthought. The word "community" itself is used only once in its conclusion: "Concerns of the community need to be taken into account for water resource development.

If the Prime Minister cannot change the mindset of our pipe and drain-driven water policy makers, who can?" asked Narain.

VIII. The Theology of Water and the Church

*Let Justice Flow Like Water*⁷

Few things are as basic as water. In Christian theological reflection, creation began when the spirit of God “swept over the face of the waters.” (Genesis 1:2)

Later, drought becomes a symbol and image of divine judgment (Isaiah 33:9). Yet the prophets express their hope in a coming redemption and restoration through the promise that rivers will spring up in the desert (Isaiah 43:19).

This resource paper affirms that access to water by communities and individuals is a human right. Water is essential to all life on the planet. Therefore, it is not a commodity to be privatized. Its supply and use must be managed through structures representing all sectors of the population, with emphasis on local communities.

a) Water is Life

Acquiring water remains a grueling chore for those in the developing world – primarily women and children whose powerlessness gives them little say over water’s management, but who are forced to spend as much as four hours daily hauling water from distant sources. No water, no life, and no way around it. It’s that basic.

In fact, the human body itself is mostly water – adult bodyweight is typically two-thirds water. We can go weeks without food, but no more than a few days without water before the kidneys cease functioning and death occurs. Again – no water, no life.

In the Holy Bible, Jesus several times refers to the water, though we all believe in Him as the Living Water. Jesus himself was thirsty as a human being and it is recorded in the scripture several times. He asks water from the Samaritan woman at the well (John 4:42); even at the cross, he says “I thirst” (John 19:28) and then he was given water to drink.

The importance of water has been emphasized in the scripture very clearly. Therefore, as the proponent of scripture and follower of Christ who always ensured fullness of life to all (John 10:10), and life without water is impossible, the Church must respond to issues related to water.

⁷ CWS Water Campaign

b) Right to Water

According to *Maude Barlow*⁶, Not so long ago, everyone thought, as much as air is free for everyone to breathe, so is water – free for all! No wonder, while the concerned global leaders were drafting the charter principles of the United Nations and the Universal Declaration of Human Rights, they omitted water from the Basic human rights! Today, 50 years down the line, this has become one of the biggest obstacles in the path of all of us, struggling to make water as a basic human right! The task has become all the more difficult for us when the key players of the World Water Council, including the World Bank have declared water as a “need” and NOT a “Right”! Subsequently, the human right to water was rejected at both the 2nd World Water Forum in The Hague in 2000 and at the 3rd World Water Forum in Kyoto in 2003, even though the majority of civil society groups present there were in favour of water as a basic right for all. The much awaited recently concluded 4th World Water Forum in Mexico City, (March 16-22, 2006) also could not have a consensus on declaring water as a Basic Right.

The so-called forerunners of the Water issue – the transnational corporations and the water ministries of the first world have been emphasising on the privatisation of water. According to them, this is the best way to address the scarcity of water to all. In the absence of a legally binding treaty or convention, however, the decision-making power over water has slowly moved away from the United Nations to the World Water Council, the World Bank and other regional banks, trade institutions like the World Trade Organization, and the big water transnationals. This has allowed the rapid privatisation of the world’s water services, driving up prices and cutting off millions from their water supplies. The process within the UN to a more binding legal framework has already begun. In 2002, ECOSOC – the UN Committee on Economic and Social Council - adopted “General Comment No. 15.” This document emphasized the right to water as the cornerstone for realizing all other human rights and called for water to be treated as a social and cultural good, not primarily an economic good. With General Comment No. 15, the Committee speaks out against the commercialisation and commodification of water and clarifies that an international human rights law would take precedence over international trade law in this regard. The adoption of General Comment No. 15 provides a seminal overarching methodology for determining people’s rights and the obligations of governments. It is a key step in the march toward a binding legal framework. It is clear that the right to water is an idea whose time has come. Those of us

⁶ *Maude Barlow is the National Chairperson of The Council of Canadians and co-founder of The Blue Planet project.*

involved in this campaign have no illusions that this will be an easy fight, nor do we want to get bogged down in interminable UN committees and panels. For us, this campaign must become both a common goal for the many groups fighting for their water rights around the world and a tool for them to use on the ground in their struggles, or it is not worth the work. Nor are we prepared to sacrifice a good treaty for a compromise that would open the door to the private sector. We have a very clear goal in mind, the people power around the world to make it real, and history on our side.

IX. The Consultation on Right to Water

From the above rationale, its very clear that Water is a part and parcel of our lives and Water is Life. However, the Rights over water is denied to many, particularly those who are in the periphery of the society – the poor and downtrodden. To address several issues attached to Water, CASA has been planning to organise a 3 days “**National Church Leaders’ Consultation on Right to Water**” during 6-7 September 2007 at Nagpur, Maharashtra.

a) Aims and Objective of the Consultation:

- Understand the importance of Water
- To address the issues related to water starting from the scarcity point of view to issues of accessibility and equi-distribution of water resources to all.
- Contribute to the process of Ensuring that affordable access to clean water be secured and protected as a basic human right around the world;
- Contribute to the process of making water systems be locally, publicly and democratically owned and controlled, in a transparent manner;

- To generate awareness among the masses on water related issues from the Right Based Approach.
- To this end, create and/or join in a water forum with like minded groups and Organisations around.
- To proclaim that **Right to water is a Human Right**
- To Start the **Water Campaign by the Churches** with the leadership of CASA
- To strategise and evolve the Methodology of the Water Campaign of CASA through the Churches.

X. Suggested Strategy and Methodology: Process of Water Campaign[♦]

1) *Some of the key strategy governing the water campaign suggested are :*

- a. To Set up a Water Taskforce at CASA, drawing colleagues from all the four zones.
- b. Emphasis on the Community Ownership of the water resources, storage and distribution.
- c. Emphasis on Rain Water Harvesting and local *Pani Panchayats*
- d. A bottom-up approach on the water campaign, such as local grassroots level⇒Regional Level⇒ National Level
- e. To consolidate the efforts put forth at the Zonal level by the CASA staff through the Water Committees formed at the Zonal, regional and local level and that of the Church leaders.
- f. To create innovative activities to take the water campaign to the grassroots level through the churches and their existing infrastructure and development bodies.

2) *Plan of Action for the Campaign, suggested:*

- Preparatory meetings, Networking with like minded groups, Public meetings, e-forum, publicity, etc.
- Seminars, workshops, conferences, rallies, etc on the issue of Water as a Human Right.
- Media campaign, reaching out to youths and students through various schools and colleges at a national level in creating awareness.
- Publication of Resource Materials, Background study materials, etc.
- A website link of CASA, dedicated to this issue
- Releasing of posters, handbills books, Music Cassettes, videos, etc.
- Organising Musical concerts, exhibitions, etc to promote the cause of water
- Make Mementoes, souvenirs, etc. in tune with the water related themes to generate interest and create awareness among the reference groups.

XI. Conclusion:

This **Water Consultation** intends to develop a consensus on the importance of Water among the church leaders. This consultation might help us to combine the collective work done by developmental wings of the churches in India in the issues of water in different regions and build a network of economic and political actors that able to define and influence public policies for the control of this essential resource for life on Earth. We need to work hard in making the country believe that **water** is one of the main "**concrete, urgent, global**" challenges and Sustainable Development is not possible without this realisation that "Water is Life" and that everyone has the right to water!!

♦ The process of strategy and methodology needs to be further discussed with Water Taskforce of CASA and Participants of the consultation on Water and to be sharpened further.

NATIONAL WATER POLICY OF INDIA-2002
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The Need for a National Water Policy

- 1.1 Water is a prime natural resource, a basic human need and a precious national asset. Planning and development of water resources need to be governed by national perspectives.
- 1.2 It has been estimated that out of the total precipitation of around 400 million hectare meters in the country, the surface water availability is about 178 million hectare metres. Out of this about 50 % can be put to beneficial use because of topographical and other constraints. In addition there is a ground water potential of about 42 million hectare metres. The availability of water is highly uneven in both space and time. Precipitation is confined to only about three of four months in the year and varies from 10 cm in the western parts of Rajasthan to over 1000 cm. At Cherrapunji in Meghalaya. Further, water does not respect state boundaries. Not merely rivers but even underground aquifers often cut across state boundaries. Water as a resources in one and indivisible : rainfall, river waters,

- surface ponds and lakes and ground water are all part of one system, water is also a part of larger ecological system.
- 1.3 Floods and drought affected vast areas of the country, transcending state boundaries. A third of the country is drought prone. Floods affect an average area of around 9 million hectares per year. According to the National Commission on floods, the area susceptible to floods is around 40 million hectares. The approach to the management of drought and floods has to be coordinated and guided at the national level.
 - 1.4 Even the planning and implementation of individual irrigation or multi purpose projects, though done at the state level, involve a number of aspects and issues such as environmental protection, rehabilitation of project- affected people and livestock, public health consequences of water impoundment, dam safety, etc. On these matter common approaches and weaknesses have affected a large number of projects all over the country.. There have been substantial time and cost overruns on projects. In some irrigation commands, problems of water -logging and soil salinity have emerged, leading to the degradation of good agricultural land. There are also complex problems of equity and social justice in regard to water distribution. The development and exploitation of the country's groundwater resources also give rise to questions of judicious and scientific resource management and conservation. All these questions need to be tackled on the basis of common policies and strategies.
 - 1.5 The growth process and the expansion of economic activities inevitably lead to increasing demands for water for diverse purpose: domestic, industrial, agricultural, hydro-power, navigation, recreation, etc. So far, the principal consumptive use of water has been for irrigation. While the irrigation potential is estimated to have increased from 19.5 million hectares at the time of Independence to about 68 million hectares at the end of Sixth plan, further development of a substantial order is necessary if the food and fiber needs of a growing population are to be met. The country's population which is over 750 million at present is expected to reach a level of around 1000 million by the turn of the century.
 - 1.6 The production of foodgrains has increased from around 50 million tonnes in the fifties to about 150 million tonnes at present, but this will have to be raised to around 240 million tonnes by the year 200 A.D. The drinking water needs of people and livestock have also to be met. In keeping with the objective of the International Drinking Water Supply and Sanitation Decade Programme (1981-1991), adequate drinking water facilities have to be provided to the entire population in both urban and rural areas and sanitation facilities to 80 % of the urban population and 25% of the rural population by the end of the decade. Domestic and industrial water needs have largely been concentrated in or near the

principal cities, but the demand from rural society is expected to increase sharply as the development programme improves economic conditions in the rural areas. The demand for water for hydro and thermal power generation and for other industrial uses is also likely to increase substantially. As a result, water which is already a scarce resource will become even scarcer in the future. This underscores the need for the utmost efficiency in water utilization and a public awareness of the importance of its conservation.

- 1.7 Another important aspect is water quality. Improvements in existing strategies and the innovation of new techniques resting on a strong science and technology base will be needed to eliminate the pollution of surface and ground water resources, to improve water quality and to step up the recycling and re-use of water. Science and technology and training have also important roles to play in water resources development in general.
- 1.8 Water is one of the most crucial elements in developmental planning. As the country prepares itself to enter the 21st century, efforts to develop, conserve, utilize and manage this important resource have to be guided by national perspectives. The need for a national water policy is thus abundantly clear: water is a scarce and precious national resource to be planned, developed and conserved as such, and on an integrated and environmentally sound basis, keeping in view the needs of the State concerned.

Information System

2. The prime requisite for resources planning is a well-developed information system. A standardised national information system should be established with a network of data banks and data bases, integrating and strengthening the existing Central and State level agencies and improving the quality of data and the processing capabilities. There should be free exchange of data among the various agencies and duplication in data collection should be avoided. Apart from the data regarding water availability and actual water use, the system should also include comprehensive and reasonably reliable projections and reasonably reliable projections of future demands for water for diverse purposes.

Maximising availability

- 3.1 The water resource available to the country should be brought within the category of utilizable resources to the maximum possible extent. The resources should be conserved and the availability augmented by measures for maximizing retention and minimizing losses.
- 3.2 Resource planning in the case of water has to be done for a hydrological basin as a whole, or for a sub-basin. All individual developmental projects and proposals should be formulated by the States and considered within the

framework of such an overall plan for a basin or sub-basin, so that the best possible combination of options can be made.

- 3.3 Appropriate organizations should be established for the planned development and management of a river basin as a whole. Special multi-disciplinary units should be set up in each state to prepare comprehensive plans taking into account not only the needs of irrigation but also harmonising various other water uses, so that the available water resources are determined and put to optimum use having regard to subsisting agreements or awards of tribunals under the relevant laws.
- 3.4 Water should be made available to water short areas by transfers from other areas including transfers from one river basin to another, based on a national perspective, after taking into account the requirements of the areas/basins.
- 3.5 Recycling and re-use of water should be an integral part of water resource development.

Project Planning

- 4.1 Water resource development projects should be far as possible be planned and develop as multipurpose projects. Provision for drinking water should be a primary consideration. The projects should provide for irrigation, flood mitigation, hydro-electric power generation, navigation, pisciculture and recreation wherever possible.
- 4.2 The study of the impact of a project during construction and later on human lives, settlement, occupations, economic and other aspects should be an essential component of project planning.
- 4.3 In the Planning implementation and operation of projects, the preservation of the quality of environment and the ecological balance should be a primary consideration. The adverse impact, if any, on the environment should be minimised and should be off-set by adequate compensatory measures.
- 4.4 There should be an integrated and multi-disciplinary approach to the planning, formulation, clearance and implementation of projects, including Catchment treatment and management, environmental and ecological aspects, the rehabilitation of affected people and command area development.
- 4.5 Special efforts should be made to investigate and formulate projects either in, or for the benefit of, area inhabited by tribal or other specially disadvantaged groups such as Scheduled Castes and Scheduled Tribes. In other areas also, project planning should pay special attention to the needs of Scheduled Castes and Scheduled Tribes and other weaker sections of society.

- 4.6 The planning of projects in hilly area should take into account the need to provide assured drinking water, possibilities of hydro power development and the proper approach to irrigation in such area, in the context of physical features and constraints such as steep slopes, rapid run-off and the incidence of soil erosion. The economic evaluation of projects in such areas should also take these factors into account.
- 4.7 Time and cost overruns and deficient realization of benefits characterising most irrigation projects should be obviated by an optimal allocation of resources, having regard to the early completion of on-going projects as well as the need to reduce regional imbalances.

Maintenance and modernisation

- 5.1 Structures and systems created through massive investments should be properly maintained in good health. Appropriate annual provisions should be made for this purpose in the budgets.
- 5.2 There should be a regular monitoring of structures and systems and necessary rehabilitation and modernisation programmes should be undertaken.

Safety of structures

6. There should be proper organisational arrangements at the national and state levels for ensuring the safety of storage dams and other water-related structures. The central guidelines on the subject should be kept under constant review and periodically updated and reformulated. There should be a system of continuous surveillance and regular visits by experts.

Ground water development

- 7.1 There should be a periodical reassessment on a scientific basis of the ground water potential, taking into consideration the quality of the water available and economic viability.
- 7.2 Exploitation of ground water resources should be so regulated as not to exceed the recharging possibilities, as also to ensure social equity. Ground water recharge projects should be developed and implemented for augmenting the available supplies.
- 7.3 Integrated and coordinated development of surface water and ground water and their conjunctive use, should be envisaged right from the project planning stage and should form an essential part of the project.
- 7.4 Over exploitation of ground water should be avoided near the coast prevent ingress of sea water into sweet water aquifers.

Water allocation Priorities

- 8 In the planning and operation of systems, water allocation priorities should be broadly as follows :-

- * Drinking water
- * Irrigation
- * Hydro-Power
- * Navigation
- * Industrial and other uses.

However, these priorities might be modified if necessary in particular regions with reference to area specific considerations

Drinking water

- 9 Adequate drinking water facilities should be provided to the entire population both in urban and in rural areas by 1991. Irrigation and multipurpose projects should invariably include a drinking water component. Wherever there is no alternative source of drinking water. Drinking water needs of human beings and animals should be the first charge on any available water.

Irrigation

- 10.1 Irrigation planning either in an individual project or in a basin as a whole should take into account the irrigability of land cost-effective irrigation options possible from all available sources of water and appropriate irrigation techniques. The irrigation intensity should be such as to extend the benefits of irrigation to as large a number of farm families as possible, keeping in view the need to maximize production.
- 10.2 There should be a close integration of water use and land use policies.
- 10.3 Water allocation in an irrigation system should be done with due regard to equity and social justice. Disparities in the availability of water between head-reach and tail-end farms and between large and small farms should be obviated by adoption of a rotational water distribution system and supply of water on a volumetric basis subject to certain ceilings.
- 10.4 Concerted efforts should be made to ensure that the irrigation potential created is fully utilised and the gap between the potential created and its utilization is removed. For this purpose, the command area development approach should be adopted in all irrigation projects.

Water rates

11. Water rates should be such as to convey the scarcity value or the resource to the users and to foster the motivation for economy in water-use. They should be adequate to cover the annual maintenance and operation charges and a part of the fixed costs. Efforts should be made to reach this ideal over a period, while ensuring the assured and timely supplies of irrigation water. The water rates for surface water and ground water should be rationalised with due regard to the interests of small and marginal farmers.

Participation of farmers and voluntary agencies

12. Efforts should be made to involve farmers progressively in various aspects of management of irrigation systems, particularly in water distribution and collection of water rates. Assistance of voluntary agencies should be enlisted in educating the farmers in efficient water use and water management

Water Quality

13. Both surface water and ground water should be regularly monitored for quality. A phased programme should be undertaken for improvements in water quality

Water zoning

14. Economic development and activities including agricultural, industrial and urban development, should be planned with due regard to the constraints imposed by the configuration of water availability. There should be water zoning of the country and the economic activities should be guided and regulated in accordance with such zoning.

Conservation of water

15. The efficiency of utilisation in all the diverse uses of water should be improved and an awareness of water as a scarce resource should be fostered. Conservation consciousness should be promoted through education. Regulation, incentives and disincentives.

Flood Control and Management

16. There should be a master plan for flood control and management for each flood prone basin. Sound watershed management through extensive soil conservation, catchment area treatment, preservation of check-dams should be promoted to reduce the intensity of floods. Adequate flood-cushion should be provided in water storage projects wherever feasible to facilitate better flood management. An extensive network for flood forecasting should be established for timely warning to the settlements in the flood plains, along with the regulation of settlements and economic activity in the flood plain zones, to minimise the loss of life and property on account of floods while physical flood protection works like embankments and dykes will continue to be necessary the emphasis should be on non-structural measures for the minimization of losses, such as flood forecasting and warning and flood plain zoning, so as to reduce the recurring expenditure on flood relief.

Land erosion by sea or river

17. The erosion of land, whether by the sea in coastal areas or by river waters inland, should be minimised by suitable cost-effective measures. The States and Union territories should also undertake all requisite steps to ensure that indiscriminate occupation and exploitation of coastal strips of land are discouraged and that the location of economic activities in area adjacent to the sea is regulated

Drought Management

- 18.1 Drought prone area should be made less vulnerable to drought associated problems through soil moisture conservation measures, water harvesting practices, the minimisation of evaporation losses, the development of the ground water potential and the transfer of surface water from surplus areas where feasible and appropriate. Pastures, forestry, or other modes of development, which are relatively less water - demanding should be encouraged. In planning water resource development projects, the needs of drought-prone area should be given priority.
- 18.2 Relief works undertaken for providing employment to drought-stricken populations should preferably be for drought proofing.

Science and Technology

19 For effective and economical management of our water resources, the frontiers of knowledge need to be pushed forward in several directions by intensifying research efforts in various area, including the following:-

- * Hydrometeorology
- * Assessment of water resources;
- * Snow and lake hydrology;
- * Ground water hydrology and recharge;
- * Prevention of salinity ingress;
- * Water- harvesting;
- * Evaporation and seepage losses;
- * Economical designs for water resource projects;
- * Crops and cropping systems;
- * Sedimentation of reservoirs;
- * The safety and longevity of water related structures;
- * Rivermorphology and hydraulics;
- * Soil and materials research;
- * Better water management practices and improvements in operational technology
- * Recycling and re-use;
- * Use of sea water resources;

Training

20 A perspective plan for standardised training should be an integral part of water resources development.. it should cover training in information systems, sectoral planning, projects planning and formulation, project management , operation of projects and their physical structures and systems and the management of the water distribution systems. The training should extend to all the categories of personnel involved in these activities as also the farmers.

Conclusion

- 21 In view of the vital importance of water for human and animal life, for maintaining ecological balance and for economic and development activities of all kinds, and considering its increasing scarcity, the planning and management of this resource and its optimal, economical and equitable use has become a matter of the utmost urgency. The success of the national water policy will depend entirely on the development and maintenance of a national consensus and commitments to its underlying principles and objectives.