

THE INTERNATIONAL DRINKING WATER SUPPLY AND SANITATION DECADE: DOGMATIC MEANS TO A DEBATABLE END

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Abstract - The International Drinking Water Supply and Sanitation Decade (1981-1990), has called for a whole new approach to water sector development. The spotlight is on communities - community participation, community management, community financing - and away from national and local government structures. In this paper it is argued that the Decade rhetoric has not created the capacity and infrastructural networks to achieve and sustain its objective of universal water and sanitation coverage. The result is a contradiction between strategy and structures. It is concluded that community participation and community management may be conducive to achieving the Decades target; but are not sustainable alternatives to strong local and national government institutions in the water sector.

Key words - water, community, Decade, institutions.

I. INTRODUCTION

The International Drinking Water Supply and Sanitation Decade (IDWSSD), 1981-1990, emerged from the 1977 Mar del Plata, United Nations Water Conference, based on previous recommendations arising from the 1976 United Nations Habitat Conference. The stated objective of the Decade was to "provide all people with water of safe quality in adequate quantity and basic sanitation facilities by 1990. If possible, according priority to the poor and less privileged" (UNDP 1980). This statement did not adequately reflect what in retrospect was the real aim of improving health status through improvements in water supply and sanitation. The Decade failed to address water as a single integrated whole. It was only interested in the 7% of fresh water used for domestic purposes, which was believed to have direct health impacts. Water is a vital natural resource, thus access to it and its quantitative allocation will always have strong political and economic repercussions.

The Decade was closely linked to the Primary Health Care (PHC) initiative, with health agencies taking the lead role. "The challenge for them lies in promoting the Decade to implement Primary Health Care and by implementing Primary Health Care to support the Decade further" (WHO 1981). The Decade was to be implemented on the lines of the Primary Health Care model, with health agencies co-ordinating overall activities, health workers motivating and educating communities and auxiliaries maintaining and repairing the equipment in the villages (WHO 1981). This was the original plan, but since it was implemented simultaneously with PHC, the health workers (who previously had very limited involvement in water and sanitation interventions) were already over-stretched and concentrated on the more traditional health interventions, arising from the Selective Primary Health Care package, such as immunization and oral rehydration. Thus from the outset the Decade was faced with serious structural implementation problems. Despite this, a significant expansion in coverage was achieved, but mainly as a result of population growth there were globally more people unserved with adequate water and sanitation by the end of the Decade, than there had been at the start (Warner 1990). The Decade may not have achieved its noble aim, but it has set the foundation for a radical new approach to water and sanitation sector

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development. On closer examination it would appear that the foundation is built on very unstable ground.

In this paper we would like to address some of the major guiding principles on which the so called "Decade Approach" was built, with particular reference to the water sector.

2. DECADE APPROACH

The initial WHO (1981) statement summarized the Decade approach as follows:

"The Decade must contribute to implementing primary health care; water supply and sanitation development should be complementary and they should be jointly associated with other health development; policies and programmes should be focused on rural and urban under-served populations; full coverage should be achieved through reproducible, self-reliant and self-sustaining programmes; the people for whom the services are intended should be associated with all stages of programme and project development; the Decade should be a matter of collaboration between all contributing sectors. It is evident, too, that if they are to be self-reliant and self-sustaining, programmes will require a new approach to the role of community-based manpower; community workers must be provided with information and logistic and operational support from the appropriate government service."

The implementation of the Decade approach concentrated on some aspects of this statement more than others. Sanitation always lagged behind water coverage. Government services did not like the role they were delegated and were not very forthcoming with support for community workers. During the course of the Decade far more emphasis was placed on community self-reliance. The meaning of appropriate technology was also distorted. The major guiding principles which we wish to address are:

- Target Setting
- Community Participation
- Community Management
- Community Financing
- Privatisation
- Appropriate Technology

What follows is a brief critique of these strategies:

2.1 Target Setting

The apparent logic of setting the universal water and sanitation target by 1990 was to create political awareness. Target setting helps large organisations to focus their attention and it is also good for publicity and fund raising. It is debatable as to whether the selection of unrealistic targets is beneficial to the advancement of the objectives. As the WHO sponsored malaria eradication campaign showed, failure to achieve the target can be counter productive and lead to total disillusionment.

The Decade approach may have called for self-reliant and self-sustaining programmes, but the implementation focus was on reaching targets as manifested by coverage statistics. This form of myopic thinking affected the reasoning process and orientation of the Decade. The goal to provide as many people as possible with community water supply and sanitation, was interpreted by most sector agencies as a mandate to construct as many new systems as possible between 1981 and 1990. The major increases in spending were often overlaid upon weak existing programmes which had already reached or exceeded their ability to properly absorb external support for capital expenditure (Feachem 1980). Priority given to works overshadowed the problem of long term operation and maintenance and the reluctance of aid agencies to support recurrent costs.

2.2 Community Participation

The most radical Decade approaches which are continuing unabated into the 1990's are Community Participation and Community Management.

"Members of local communities are to be involved in all aspects of water/sanitation, from planning constructions and financing, to training, operation and maintenance" (UNDP 1980).

In simple terms, community participation refers to the involvement of the people in a community in development projects (Whyte 1986). Rifkin et al., (1988) defined it as a "social process whereby specific groups with shared needs living in a defined geographical area actively pursue identification of their needs, take decisions and establish mechanisms to meet their needs."

The conventional water sector model corresponded for most countries to a continuous extension of service areas, which would be achieved through gradual decentralization of structures and resources, so that coverage would be extended from capital cities to medium size towns and finally to the rural villages (Laugeri 1986). Although logical, this model has proved difficult to apply essentially because it does not adequately account for the constant rehabilitation and improvement needs of existing systems, which result in giving better water to those already served, rather than extending the service to new populations (Laugeri 1986). In essence the Decade proposed community participation as an alternative to the centralised government system. It was seen as an equitable solution whereby communities could identify their own needs in the water and sanitation sector and take incentives to meet these needs in the form of locally appropriate solutions. Thus communities would participate in the building of new facilities, reduce costs, extend coverage and contribute towards achieving the universal target.

The problem with this approach was that many communities had difficulty identifying their needs, as frequently they did not realise they had a problem, especially in the sanitation sector, and when they did were not aware of the options. In the Primary Health Care model community motivators, in this case health workers, are supposed to help communities identify their needs. Under the accelerated development pace of the Decade there was frequently not sufficient time for this; it threatened target achievements and besides was costly and difficult to organise as the health workers were already over burdened. More often than not the solution to the dilemma was to tell the 'poor deprived communities' what water system or latrine they should want if only they knew what was good for them.

As eloquently put by Chambers (1983)... "some will say the rural poor do not know what is in their interests or that with greater awareness (which is liable to mean by agreeing with the outsider) they would have other priorities or that they must be enabled to see what they would want if they knew what they really wanted."

It is now generally recognised that community participation is a very vague and open concept and there is great discrepancy as to what exactly participation or even community means. The all encompassing "catch phrase" is based on the assumption that communities are homogeneous, harmonious units eager to work together in the pursuit and satisfaction of their communally "felt needs". In the culture and tradition of many developing countries, allegiance to family and ethnic group is far stronger than to a community defined by geographical area. Case studies by Land (1987), Feachem (1978) and Midgley et al (1986), reveal the complexity of personal relationships, power struggles, ethnic rivalry and technical hitches that complicate a difficult organisational process. If community participation was the Decades' response to the problem of extending coverage, community management could be seen as the Decades' answer to maintaining the functioning of the system installed.

2.3. Community Management

Community Management aims to "empower and equip communities to own and control their own system" (New Delhi Consultation 1990). It entails decision making not necessarily just the provision of labour. It goes beyond participation to encompass ownership of and responsibility for water supply and sanitation services.

The community management philosophy envisages a "changing role for governments, from that of provider to that of promoter and facilitator, enabling local, public, private and community institutions to deliver services" (New Delhi Consultation 1990). The rationale behind the concept is that the pride of ownership would be an incentive for communities to care for and maintain their system without government help, which was not forthcoming anyway. A collaborative partnership is envisaged between the community and the government "in which neither is dominant and each understands and accepts its role" (New Delhi Consultation 1990).

This ideological approach is far removed from the reality of most developing countries. By the end of the Decade the legal ownership status of the equipment has not been resolved. Water is frequently looked upon by politicians as an important political patronage tool and they are reluctant to give its management and ownership over to communities, where its expression could alienate the present source of political power. The majority of government and aid agencies encourage community organisation only when it results in making a greater contribution to development objectives set by others, not when it results in greater demands. "Participation is applauded; encounter is not" (Chauhan 1983).

Due to the lack of real national government commitment to the community participation initiative, the Decade supporters turned to Non Government Organisations (NGO's) for support. The New Delhi Consultation (1990), called for the role of NGO's to be "reconfirmed and strengthened as they have the flexibility and credibility necessary to replicate what has become known as the Decade approach". Are they capable of providing a sustainable, vital national infrastructural service?

The support structures necessary for the functioning of the community participation and management approach in the water sector are not present in most places. The intersectoral approach has generally failed. The result is a contradiction between Decade strategy and National structures. Thus communities, aided simply by western ideology and sometimes transient western aid, are left with the ominous task of becoming masters and guardians of their universe.

Community participation and community management have rarely been a component of water and sanitation systems in the West (Feachem 1980). Then why are western donor agencies so enthusiastically imposing it on other cultures and societies, without sound research or proof that it is a viable option? What are extolled as success stories are generally externally supported pilot demonstration projects. The two most frequently quoted community water success stories are the externally supported Malawi gravity feed water system and the Kwale District Handpump project in Kenya. For instance, the Malawi "self help" project has had financial and technical support from several donors including the governments of Canada, West Germany, Sweden, the UK and the US; the World Bank, WHO, UNICEF, UNDP, the United Nations Capital Development Fund, the World Meteorological Organisation, the European Development Fund, the African Development Fund, the African Development Bank and the Christian Service Committee (Chauhan 1983). Using donor resources almost any programme can be made to succeed. The difficulty lies in replicability and permanence. The move from pilot project to regional or national programmes has been fraught with difficulties. Large scale implementation requires that the structural and systems-wide issues from which small scale projects are effectively protected have to be faced (Pyle 1982).

Community involvement in the water sector may be desirable, perhaps even indispensable in rural systems; but it is time we left the rhetoric aside and concentrate on defining what exactly is the realistic community input to the sector. The role of the community, national government, local government, and the private sector need to be clearly defined within a country specific viable legal

framework. In the final analysis it is the 'poor deprived communities', about whom so much has been written, that will suffer most from simplistic and unsound 'doctrinaire' donor theories.

2.4 Community Financing

When it was recognised that community management was impossible without access to resources, and given the reluctance of donors to provide for recurrent costs and the inability of governments to do so, again the onus was placed on communities to raise the necessary funds.

The feasibility of 'free' water in developing countries, as elsewhere, is questionable. Water supplied free of charge to some consumers, limits the extension of services to others who should have equal rights to it (Laugeri 1990). Obviously this is not equitable and tends to favour the urban consumer. Only rarely does the consumer of water and sanitation services pay more than a fraction of their cost; it is taxation and public borrowing that largely supports them (Ridgley 1991). As such funds are limited relative to the myriad needs of developing countries and under the pressure of structural readjustment policies the case for more effective cost-recovery is strong. Community financing in theory guarantees the maintenance, renewability and thus sustainability of the water and sanitation system installed. It also allows government funds to be used for capital investment. It has become a major component of the Decade approach with the World Bank in the vanguard.

Cost-recovery is closely linked to the technology choice. There appears to be scope for greater cost recovery especially in urban areas, where at present the poorest segment of the population in peri-urban and shanty town areas, are possibly the only people who pay water vendors the real cost price. But is there political will to increase the water charges of the urban elite, on whose support many governments depend? The powerful have greater access and consumption needs than the less fortunate (Pickford 1990). Alternatively the emphasis on cost-recovery orients new investments towards places where there are people with cash money to cope with the requirements. Thus it reinforces the preference given to urban areas or more generally to the developed and modernizing portions of the country, further neglecting the traditional and poor segment of the population which are rural and peri-urban (Prost 1989). Consideration of equity issues would tend to reorient programmes towards rural and peri-urban areas (which have been the focus of IDWSSD); where as cost-recovery and the challenge of urban demographic growth have caused a swingback in favour of urban interventions in the water and sanitation sector. Technical solutions may help contain the urban problem but they will not solve it, as basically the root problem is social not technical.

2.5 Privatisation

As a result of structural readjustment and in order to receive loans from international bodies such as, the International Monetary Fund and the World Bank, developing country governments are succumbing to pressure for greater privatisation in the public sector. The major argument for privatisation of the water sector is that it would alleviate some of the problems inherent in government bureaucratic systems and thus increase efficiency, services and lower cost (Lewis & Miller 1987). It is based on the principle that competitive environments create strong efficiency incentives. If this is so why, as pointed out by Cairncross (1987), have so few industrialised countries seen it fit to privatise their water services? A distinction needs to be made between the privatisation of national infrastructural services in developed and developing countries. The governments of developed countries can draw up legally binding contracts with the private sector, and have the capacity to enforce them. The national 'watchdog' service can verify that water quantity and quality standards are adhered to. This system is very weak or non-existent in most developing countries, and thus places the consumer at the mercy of the private entrepreneur.

The competitive efficiency argument ignores the fact that in developing countries the economics of scale of most municipal piped water supplies give rise to natural monopolies.

Additionally interest rates and rates of profit are usually high, reflecting economic risks. This erodes some of the efficiency gains that might occur. Neither is it certain that any gains in efficiency would be passed on to the consumer (Cairncross 1987).

In the final analysis the *raison d'être* of the private sector is financial profit, which tends to ignore equity concerns. Some forms of privatisation may well be beneficial, for instance the setting up of local well drilling companies or the fabrication of locally needed water and sanitation technologies, like pumps, pipes, fittings and latrine coverslabs. There may also be scope for the sub-contracting of government services, like meter reading, collecting funds etc. Whether total monopoly of a vital national service should be placed in the hands of the private sector needs careful consideration and research.

2.6. *Appropriate Technology*

Appropriate technology can be defined as "that process or technique which provides a socially or environmentally acceptable level of service or quality of product at the least social cost" (Gunnerson 1978).

The Decade statement acknowledged an initial lower standard of service as necessary in order to improve coverage. The aim of appropriate technology was not only to reduce costs; "but installations should be simple to operate and maintain using the knowledge available in the villages and small town concerned. Technologies should be chosen that economise on foreign exchange and encourage local employment" (WHO 1981). Unfortunately this thinking did not carry through into the implementation stage.

Black (1990) stated that... "in a very real way the IDWSSD has been the Decade of the handpump with UNICEF in the vanguard, with the India Mark II model." She goes on to describe that "in communities all over the developing world the familiar clank-clank of the pump handle and the soft rattle of the piston and coupling rod have become as familiar on the morning and evening air as the birds waking or the frogs complaining before going off to bed."

This romanticised view from one of the major multilaterals in the water sector, appears to be a serious case of 'rural development tourism'. There have been problems in the operation and maintenance of handpumps with up to 80% out of order at any one time (Walters 1989). Contrary to the original definition, handpumps cannot always be maintained using local knowledge and foreign exchange is needed to buy spare parts. The technology necessary for drilling bore holes, was far more conducive to reaching Decade targets, and easier for donors to organise, than alternatives such as hand dug wells or rainwater catchment tanks. In Decade terms, community participation almost never means choosing and developing the technology. If communities in Africa were given a choice, would they choose a handpump whose spare parts they had to send to India for, and pay for with hard currency? Instead the Decade strategy was to educate the 'target population' that this is the best technology for them, and thus they must use it, care for it and finally pay for it. The approach savours of arrogance, while simultaneously creating the illusion that communities are in charge of their own destiny.

We need to take a closer look at what exactly Appropriate Technology means. What is appropriate in one developing country or in one village is not necessarily appropriate in the next. Perhaps in many circumstances the truly appropriate technology is the existing one. Open hand dug wells, ameliorated with simple pulleys, protection covers and drainage aprons may be a far more appropriate and sustainable technology choice than imported hand pumps (Howard 1990). The suitability of hand dug wells depends on the depth to the water table and is thus not feasible in all situations. The health orientation of the Decade also affected technology choice. It was generally assumed that the microbiological quality of water from handpumps to be better than that from open wells and thus safer to drink, but put into context this detail may not be so important. Firstly, research suggests that access to water in sufficient quantity is more important for health than microbiological quality (Gorter et al. 1991, White et al. 1972, Cairncross, 1988). What are

the health impacts of out of order handpumps? Secondly, even if water is crystal clear and in abundant quantity when it flows from the handpump, it may not be in that condition when it is consumed. The Decade's answer to this dilemma is better health education. Health education is important, but the ability to practice what it advocates depends very much on the socio-economic condition of the recipients.

As stated by Agarwal (1981) .. "ill-health is created and sustained within a complex ecology of rural and urban poverty". Clean water and sanitation by itself will not bring health. Perhaps we need to be less concerned with targeting water and sanitation interventions simply for their statistically defined health impacts and acknowledge them as basic human needs - a human right.

3. THE WAY FORWARD

3.1 Learning From Experience

"The process of learning is for the most part a revision of our disappointed expectations" says philosopher Karl Popper.

If the decade approach to water sector development has so many inconsistencies and obvious pitfalls, then why has this not been acted upon in over ten years of project evaluation? Why are we invited to continue with the same strategies into the next Decade without thorough and critical assessment of the preceding one?

It would appear that the system the Decade has set in motion is untouchable. The onus is on the recipient developing countries to organise themselves around its 'guiding principles'; rather than the approach acknowledging the constraints and reality of each individual situation. When the 'target population' (communities) reject its doctrine, the solution is to send in the motivators to better educate them. When national and local government infrastructure cannot accommodate it; bypass them. NGO's are considered more suitable for spreading the 'gospel'.

Research by Hulme (1989) explored the fundamental weakness in conventional approaches to project evaluation. Such approaches treat the lessons of experience as neutral technical knowledge, without taking into account the partisan way in which domestic and international planning and implementation agencies handle experience. Certain lessons are highlighted whilst others avoided or even suppressed. He concluded that "actively not learning from experience is as much a part of organisational process as learning from experience". It follows that the evaluation of Decade projects needs to concentrate less on technique and procedure and more on the informal personal advocacy, bureaucratic politics and organisational process. An examination of the organisational process and 'world view' of the mentors of the Decade approach is thus very important, but beyond the scope of this paper. Suffice it to say that.. "the selection of criteria is based on implicit value judgement that may distort insidiously the apparent rationality of choice" (Prost 1989).

3.2 Alternative Approaches

Case for Institutional Development:

Inadequacy of institutions and the insufficiency of trained professional staff are still ranked by Governments as two of the most important constraints to programme implementation (UN Economic and Social Council 1990). The new international consensus is that governments of developing countries are not capable of delivering services and should adopt an 'enabling' role, in order to allow the private sector, non-government organisations and communities to deliver services. This system poses serious equity and sustainability problems, especially where there are no regulatory mechanisms in place. Neither has it been established that it would necessarily be more efficient in the water sector than public bodies. An alternative is a more serious attempt at

institutional capacity building, which could accommodate realistic inputs from communities and the private sector, but would maintain overall accountability for the sector. The Decade chose to ignore this topic and instead concentrated on "rapid coverage" at the expense of sustainability. Community management was little more than a convenient 'scape goat'. "The Decade plan is not intended to analyze the existing institutional framework for water supply and sanitation and propose solutions that generally aim at increasing efficiency; rather it aims to remove underlying weaknesses. The plan would set long term goals with respect to coverage, and would support programmes to remove the constraints on rapid coverage" (WHO 1981).

National Governments are frequently plagued by highly centralised, fragmented and inefficient institutions in the water sector. Overstaffing, use of poorly trained managers and staff, tolerance of excessive losses of production (half of all water produced is unaccounted for), inadequate metering, billing and collection, corruption, indebtedness, low wages and low morale are endemic in the sector. If the overriding purpose of sustainable development is "to build up capacity in the recipient countries so that it can solve its problems with its own resources and become less dependent on outside support" (Schultzberg 1988); then surely there is a vital need for more careful assessment of the role of a strong national and autonomous local government institutions in the water sector. Developing countries need to adapt the heavy civil service bureaucracy they inherited from colonial times to present day needs and reality. Responsibility for rural water services should be decentralised to the lowest possible level, within a national policy framework. Greater institutional efficiency, better trained and motivated staff with a progressive career structure, more effective cost recovery and clearly defined roles for communities and the private sector could help finance this process.

As the limitations of community management have become more obvious it could be argued that a more sensible approach would be for donors to direct their funds into local government, tagging them for water and sanitation interventions. This would necessitate the development of plans at district or regional level which could consider the issues of equity, appropriate technology, cost recovery, and effectiveness, rather than the present system of performing once-off projects which never develop the management skills or institutional structures necessary for long term maintenance, planning and sustainability. Neither is the private sector capable of filling this gap. Some of the Decade solutions have proved effective in the short term, but require continued 'propping up' by external inputs to sustain the results. Institutional capacity building is a slow and gradual process, frequently lacking visible results, but is essential for the long term continuity of self reliant systems.

Planning

Generally prevailing institutional arrangements, where water sector responsibilities are fragmented and divided among several ministries, are not favourable to achieving positive co-ordinated results in the sector. Current sectoral planning is often carried out in isolation of each ministry or international development agency and only serves the needs of that particular institution (French Ministry of Co-operation and Development 1989). This inevitably leads to duplication and competition which is detrimental to the rational objectives of water supply and sanitation. Moreover the fragmented organization of departments hinders constitution of the multidisciplinary teams now required for the technical, economic, social, health, financial and educational organisation of projects. Planning is an indispensable instrument for the management of water resources. But hydrogeological planning on its own, often done by outside consultants in the form of "Master Plans", is not enough. These plans are frequently not implemented. This is probably related to the fact that master plans concentrate on technical issues without reference to the prevailing economic, social and political environment which have a major impact on implementation feasibility. Therefore the capacity to critically analyze the context in which change is planned emerges as a key element in programme design (Cassels & Janovsky 1990). In order to overcome the present unco-ordinated haphazard approach to water sector development, each country needs to draw up a comprehensive sector development policy, setting out the overall realistic objectives and priorities. It should include the identification of responsibilities of all

national and external agencies active in the sector and the role to be played by communities and the private sector.

Potable water is an integral part of the broader water resource management field. Agricultural irrigation accounts for 70% of global freshwater usage, 23% goes to industry and 7% for domestic use (New Delhi Consultation 1990). The target orientated, and health dominated Decade was not prepared to acknowledge water resource planning restrictions. "Concern with environmental issues involves water resources planning in many countries, especially in arid and semi-arid areas, but the lengthy procedure and the number of other issues and priorities involved are such that it is questionable whether these plans offer a practical framework for Decade planning" (WHO 1981).

Co-ordination

Unless the recipient government has a firm grasp of the aid process co-ordination will not take place or will at best reflect only the donor's priorities (Cassen 1986). This appears to be what is happening at the moment. Donor co-ordination in the form of the External Support Agencies (ESA) Collaborative Council, for which WHO provides the secretariat, could result in unbearable pressure on recipient countries, especially in the area of policy reform. The practical exclusion of developing countries from the council has obvious limitations. The weakness of national institutions to master co-ordination of the multiple water issues and projects during the Decade was overwhelmed by the profusion of outside funding and the multiplication of agents of all sorts, each with their own special procedure, technical standards, conditions and requirements (French Ministry of Co-operation and Development 1989).

CONCLUSION:

The IDWSSD suffered from an identity crisis. Its stated objective of universal access to clean water and sanitation, and its real goal of contributing to the 'health for all' target by the year 2000, gave rise to confusion. There is still considerable uncertainty as to which type of service improvement leads to the greatest health benefit in any given situation. The Decade called for intersectoral co-operation, but it was firmly entrenched in the health sector, was not prepared to adapt its approach, or acknowledge the broader issues of politics, economics, natural resource restrictions and institutional capacity. It concentrated on the symptoms and chose to ignore the underlying causes. It oversimplified the reality in order to achieve the target. The result is a contradiction between strategy and structure and is thus not sustainable. "Small may be beautiful"; but over simplification is the enemy of understanding. Perhaps the most important lesson to emerge from the Decade is the realisation that there are no simple and general 'package deal' solutions appropriate for the water and sanitation requirements of all developing countries; rather the solutions must be country specific. Water resources management and allocation is a national responsibility, necessitating greater political commitment to the sector. The policies, legislation, institutional capacity and decentralisation ability of the national government sector responsible for water development is vital. Given the financial constraints in the public sector of developing countries, communities and the private sector certainly have a role to play in the overall process, but they are not an alternative to it and neither are outside donors equipped with 'international consensus' resulting from their myriad conferences.

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