



OPERATION
FLOOD

A Saga of
Successful Partnership

EUROPEAN
COMMISSION



NATIONAL DAIRY
DEVELOPMENT BOARD



Every morning and evening, this is a familiar sight in the rural Indian countryside. Men and women line up outside their village dairy cooperatives awaiting their turn to pour milk – a litre or two, or even half. It is these dairy farmers – small landholders with one or two milch animals – who have changed the face of Indian dairying. Singly, they may pour just a few litres of milk, but together they have contributed to make India the world's top milk producer. And all this success did not come overnight – but through more than three decades of persistent toil by the farmers, aided by committed professionals and the vision and expertise of the National Dairy Development Board of India. The European Commission takes pride in being associated with Operation Flood, the programme which resulted in the phenomenal growth of India's dairy sector and a better life for millions of rural poor.



Operation Flood, the world's largest food and development programme, was to a great extent possible due to the generous assistance of the World Bank and the European Commission (EC). The programme implemented in three phases (1970-1996) resulted in India becoming the world's leading milk producer.

Operation Flood was launched to support an ambitious, nationwide programme formulated and implemented by the National Dairy Development Board (NDDB). Its objective was the development of rural milk production through an extensive network of village milk producers' cooperatives based on the successful Anand Model, in order to supply a growing urban demand.

A milk collection centre at a village dairy cooperative society.

Operation Flood

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The National Dairy Development Board



The National Dairy Development Board of India is a multi-sectoral and multi-locational statutory body involved in planning, implementing, financing and supporting farmer-owned, professionally managed agricultural enterprises. Set up in 1965 as a registered society at the instance of the then Prime Minister of India Lal Bahadur Shastri, it was declared a statutory body by an Act of Parliament in 1987. An institution of national importance, NDDDB promotes, develops and finances dairy development programmes through the cooperative structure.

Aided and supported by NDDDB's research, training and professional and management services, fledgling cooperatives have been guided and nurtured and established ones have been assisted to realise their full

potential. NDDDB has been the catalyst of change in India's dairy sector. By successfully replicating the Anand Model that eliminates middlemen and places the dairy farmer in command of her cooperative, NDDDB has transformed the lives of millions of milk producers. The



NDDDB has nurtured and supported the development of dairying in India.

Indian smallholder dairy farmers today are no longer a marginalised lot. Cooperative dairying has secured their future.

Food aid has been a major component of Operation Flood. It played a twofold role in the dairy development programme conceived and managed by NDDB. Firstly, the reconstituted milk powder and butter oil helped the cooperative dairies to capture a dominant share of the market bridging the gap in the short term. Secondly, the proceeds thus obtained funded the establishment of a vast infrastructure required to link millions of farmer producers with the markets. Operation Flood has helped strengthen the cooperative dairy network at multi-tier levels based on the Anand Model.

Innovative Food Aid

**Operation Flood has
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Across India, it is the small dairy farmers who have changed the face of Indian dairying.



The Anand Model

The Anand Model had its origins 56 years ago in Anand, a small town in western India, when the Kaira District Cooperative Milk Producers' Union began with just two village dairy cooperative societies and 247 litres of milk. So spectacular was the success of this Union, better known as Amul, that it ultimately went on to become the role

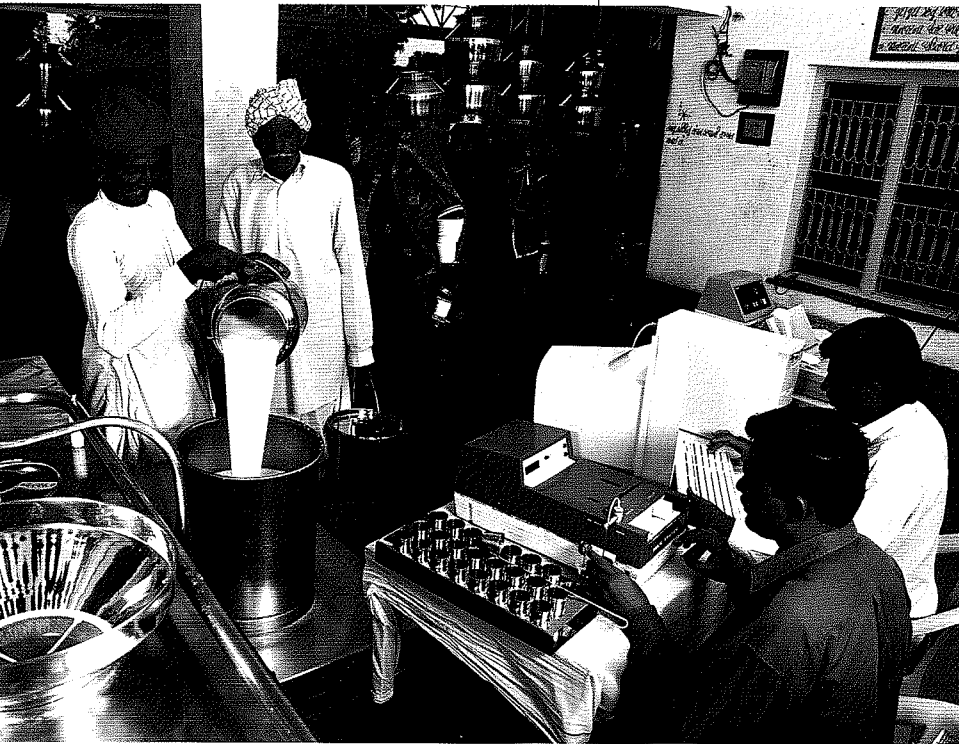
model for India's dairy cooperative movement.

The Anand Model dairy cooperative is a three-tiered structure with the dairy cooperative societies at the village level federated under a milk union at the district level and a federation of member unions at the state level.

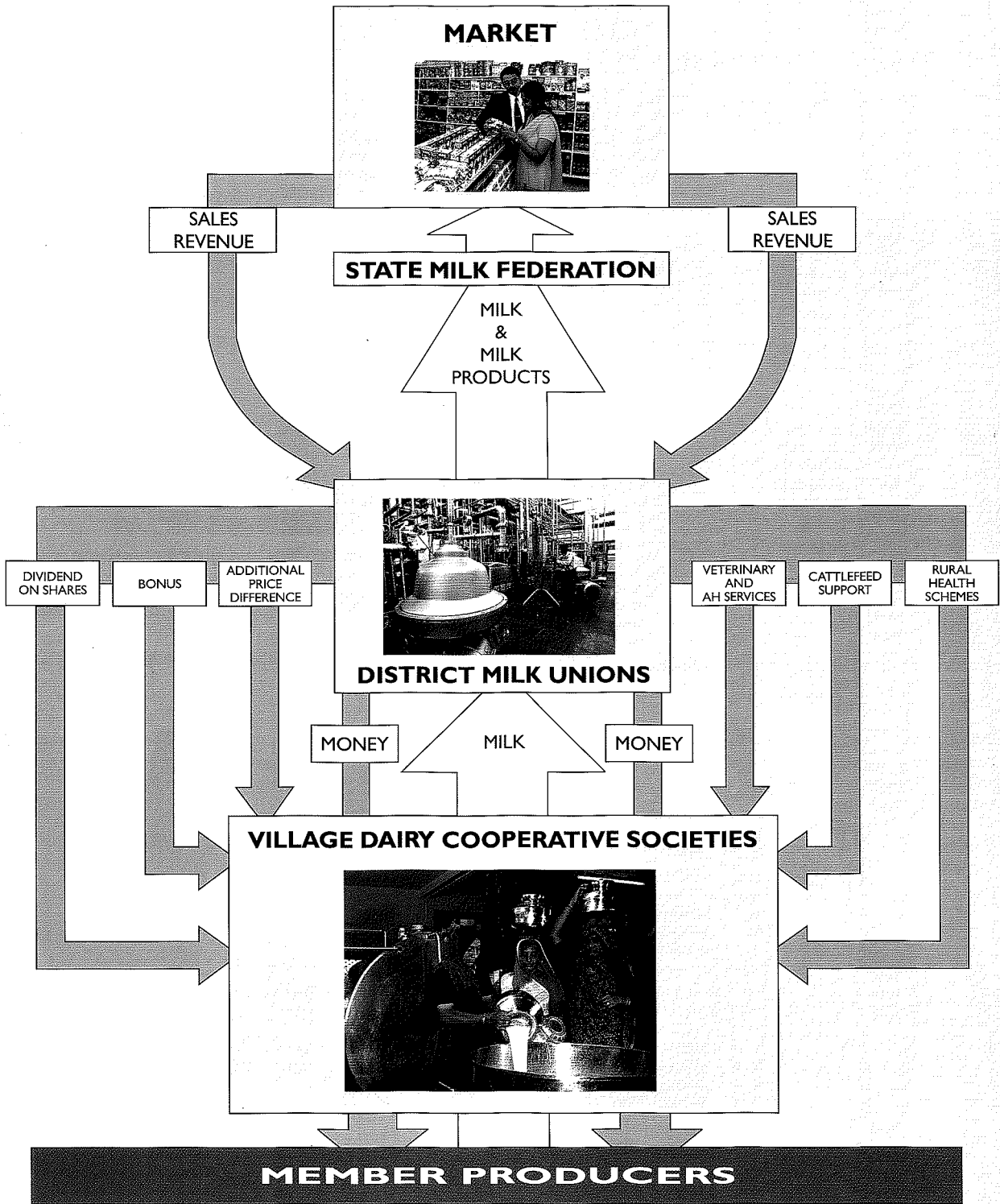
Collecting milk twice a day, making regular payments to milk supplier members and providing cattle feed, fodder and animal breeding and health care services to members at their doorstep are the major functions of the **village dairy cooperative societies**. Procuring,

processing and marketing milk and managing macro-level inputs like veterinary health clinics, semen banks and cattle feed distribution to village dairy cooperative societies are the tasks of the **district milk unions**. The unions also own and operate dairy plants, chilling centres and cattle feed plants. The major function of the **state milk federations** is marketing the milk and milk products of member unions.

Policy decisions at all three levels are taken by elected representatives of member milk producers and implemented by professional managers and skilled personnel employed by the milk producers and hence accountable to them. Forming a direct link between the producer and the consumer; this model eliminates all middlemen. By placing the producer member in command, as the owner of her dairy cooperative, it involves her in the process of development.



The multi-tiered dairy cooperative structure begins with millions of producer members.



Operation Flood (1970-1996)

The EC has been closely associated with OF-I as it donated much of the food aid to the World Food Programme.

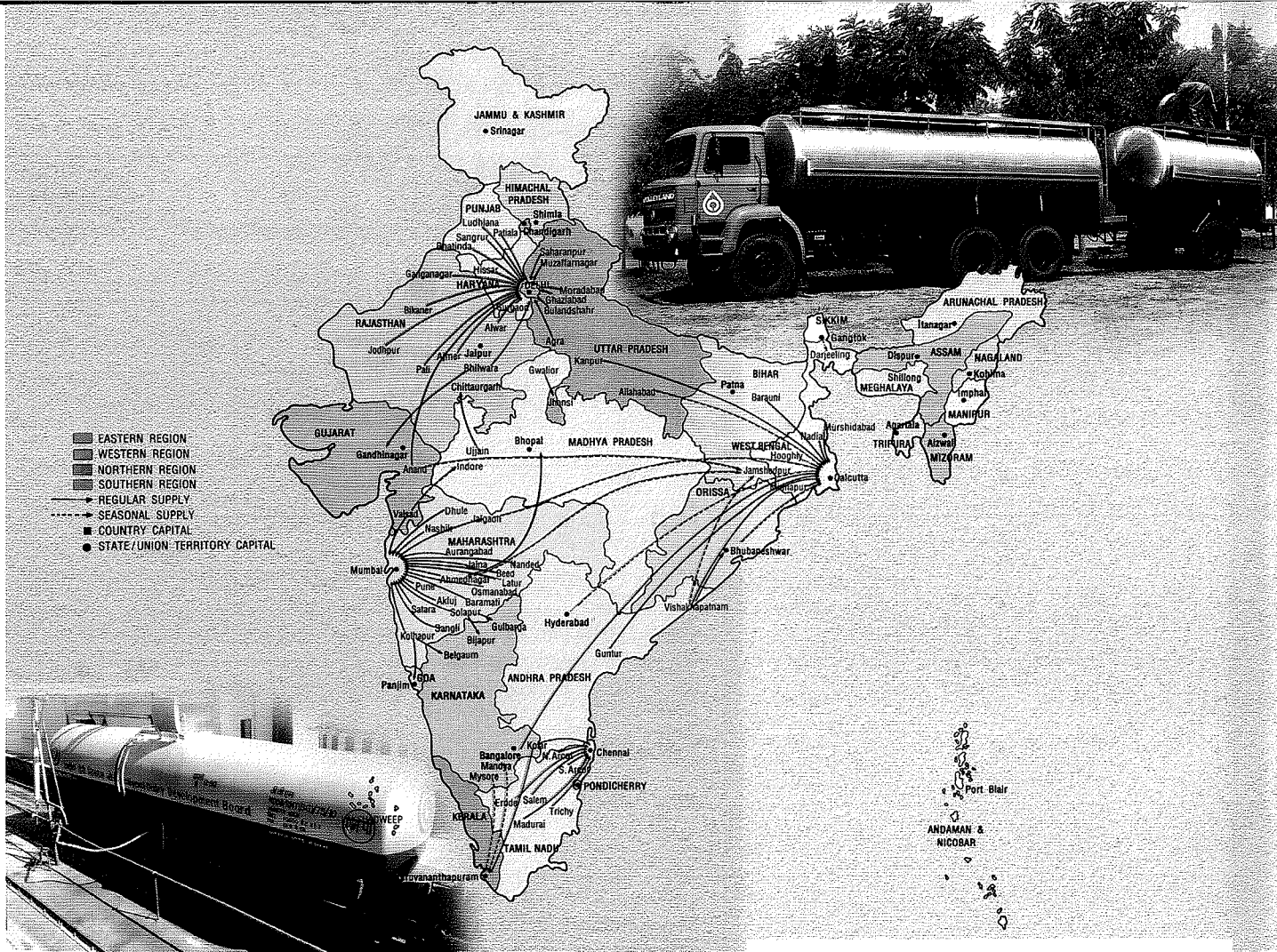
Operation Flood-I focused on building the dairy cooperative infrastructure, involving millions of small farmers.

Phase-I

Operation Flood-I aimed to capture a commanding share of the milk market in the four metro cities – Mumbai, Delhi, Calcutta and Chennai – by stimulating production in the hinterland areas of these metros. The infrastructure for procurement of rurally produced milk, its processing and marketing was developed. The EC has been closely associated with OF-I as it donated much of the food aid to the World Food Programme. The gifted commodities – 127,000 tonnes of skimmed milk powder and 40,000 tonnes of butter oil – were recombined as liquid milk and sold in the four metros at prevailing market prices, generating Rs 1,154 million.

With these funds, NDDDB built new dairies and enlarged existing ones. Infrastructure was established for handling and storing conserved milk products and long distance transportation of milk. The dairy cooperatives were also assisted in activities aimed at improved breeding, feeding and health care of milk animals.





Phase-II

Building on the foundation of OF-I, the prime objective of OF-II was to establish a modern, viable and self-sustaining dairy industry to meet the nation's needs of milk and milk products. Besides the overall development of milch animals, facilities for effective disease control, indigenous equipment manufacture and applied R&D were created. There was also emphasis on manpower training and development. A National Milk Grid to transport surplus milk from rural milksheds to urban consumption centres was set up.

Much of the funds, Rs 3,182 million, to implement OF-II came through EC-donated commodities – about 242,000 tonnes of skimmed milk powder, 68,000 tonnes of butter oil and 23,000 tonnes of butter. Impressed by the results of OF-I, the World Bank extended a soft loan of Rs 1,536 million. Part of the funding came from NDDB's internal resources.

National Milk Grid

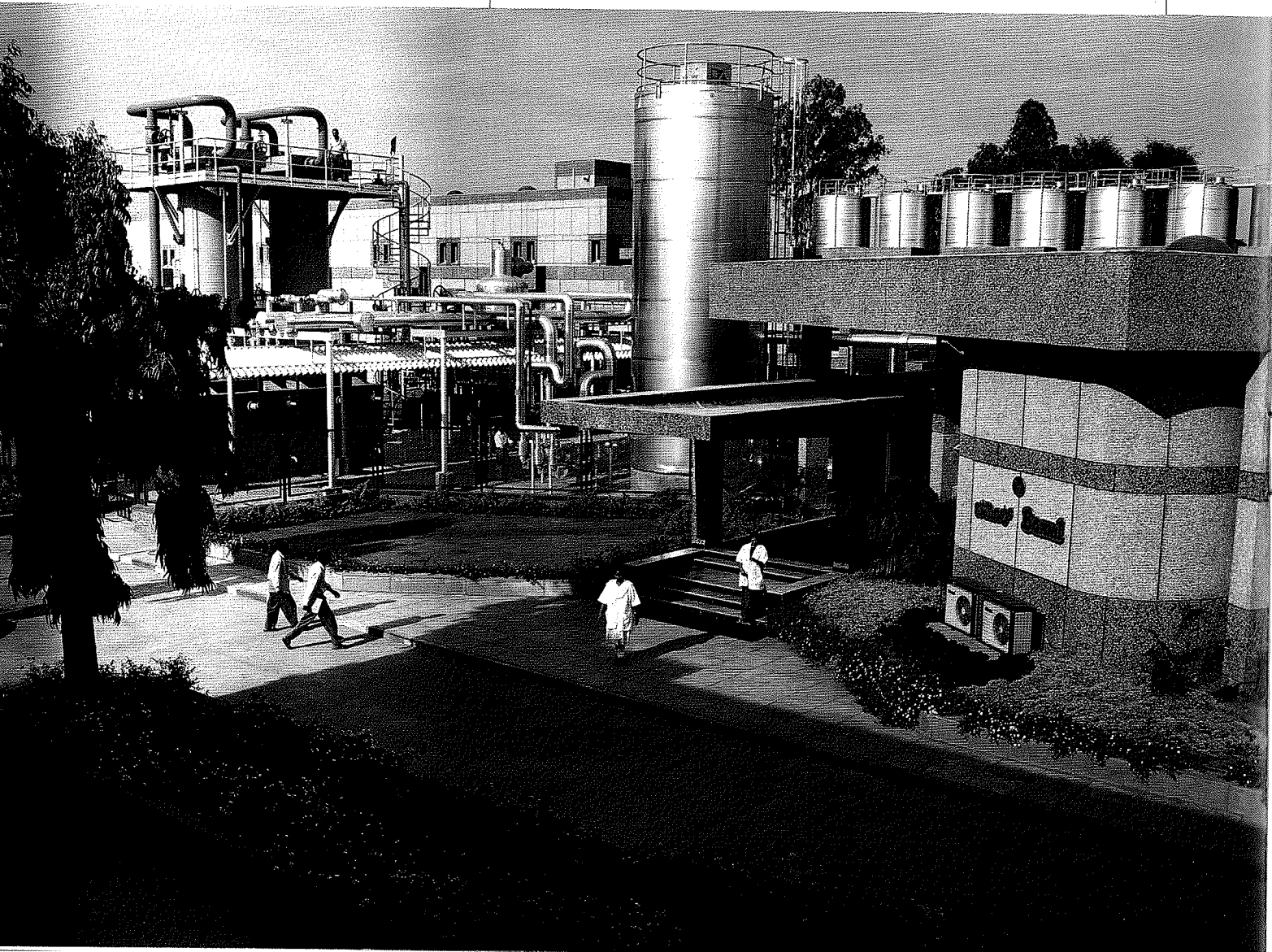
To connect the rural milksheds and the four metropolitan cities – Mumbai, Delhi, Calcutta and Chennai – and stabilise the milk price in these major markets, Regional Milk Grids were established during the first phase of Operation Flood. Under the second phase, these Regional Milk Grids were merged into a National Milk Grid to reach out to a wider urban market. The Grid eliminated regional and seasonal imbalances as well as narrowed down price disparities, while ensuring a convenient and sustained year-round milk supply to consumers across the country. The National Milk Grid was backed by storage and long distance transport facilities with a fleet of rail and road tankers.

The rise in milk production during the first two phases led to a significant drop in commodity aid.

Phase-III

The third phase of Operation Flood promoted measures to consolidate the achievements of OF-I and OF-II. The rise in milk production during the first two phases led to a significant drop in commodity aid. About 60,000 tonnes skimmed milk powder and 11,000 tonnes butter, donated by EC, were used to generate Rs 1,893 million. The World Bank also funded OF-III with a soft loan loan of Rs 7,550 million. This was supplemented by the internal resources of NDDB obtained by recycling and reinvesting the initial commodity aid.

Today, millions of litres of milk per day are processed at the cooperatives' modern dairies.





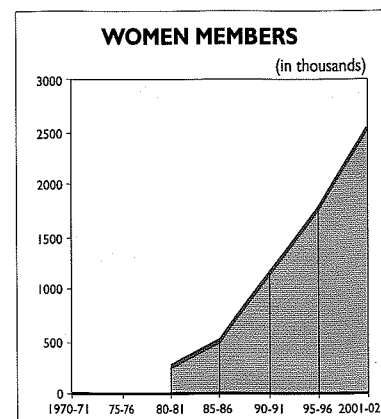
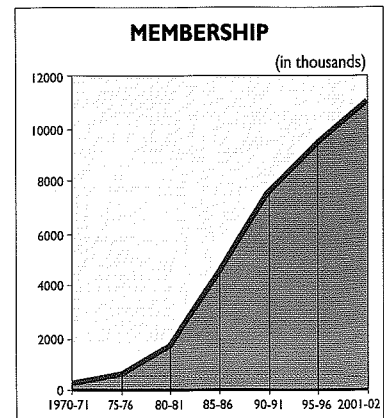
The Operation Flood programme has impacted positively on the livelihoods of rural householders.

In the two-and-a-half decades of the Operation Flood programme – from 1970 to 1996 – 73,000 village milk producers' cooperatives were set up in 170 milksheds in more than 250 districts in 22 States/Union Territories; nine million milk producing households came under this fold. From 21.2 million tonnes in 1968-69, the total milk production more than tripled to 69.1 million tonnes by the end of 1996-97. During this period per capita milk availability also increased – from 112 gm per day to 202 gm per day, despite a substantial increase in population.

The Operation Flood programme at its completion in 1996, had created 19.2 million litres per day rural milk processing capacity, raised the volume of milk marketing in major cities to 7.2 million litres per day, and contributed to an increase in national milk production to a level 43 million tonnes higher than what would have been achieved had pre-OF trends continued. It has made India self-sufficient in milk and milk products.

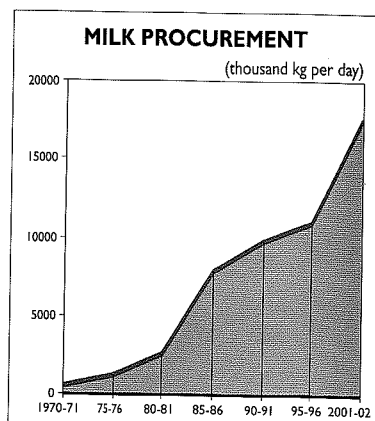
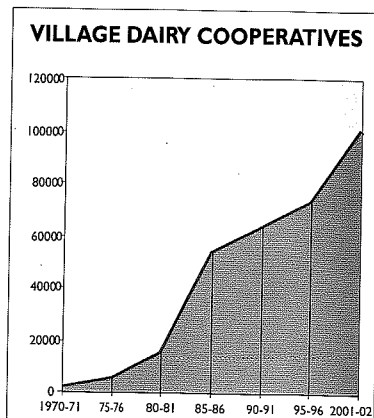
There can be little doubt that Operation Flood introduced modernity in liquid milk processing, transport, packaging and marketing, apart from product innovations in numerous traditional and western milk products.

A Drop Becomes A Flood





The small producers are in command as owners of their cooperatives.



Most important, Operation Flood made dairying a remunerative occupation for millions of India's rural poor. It would be no exaggeration to say that it has proven to be India's largest rural employment programme.

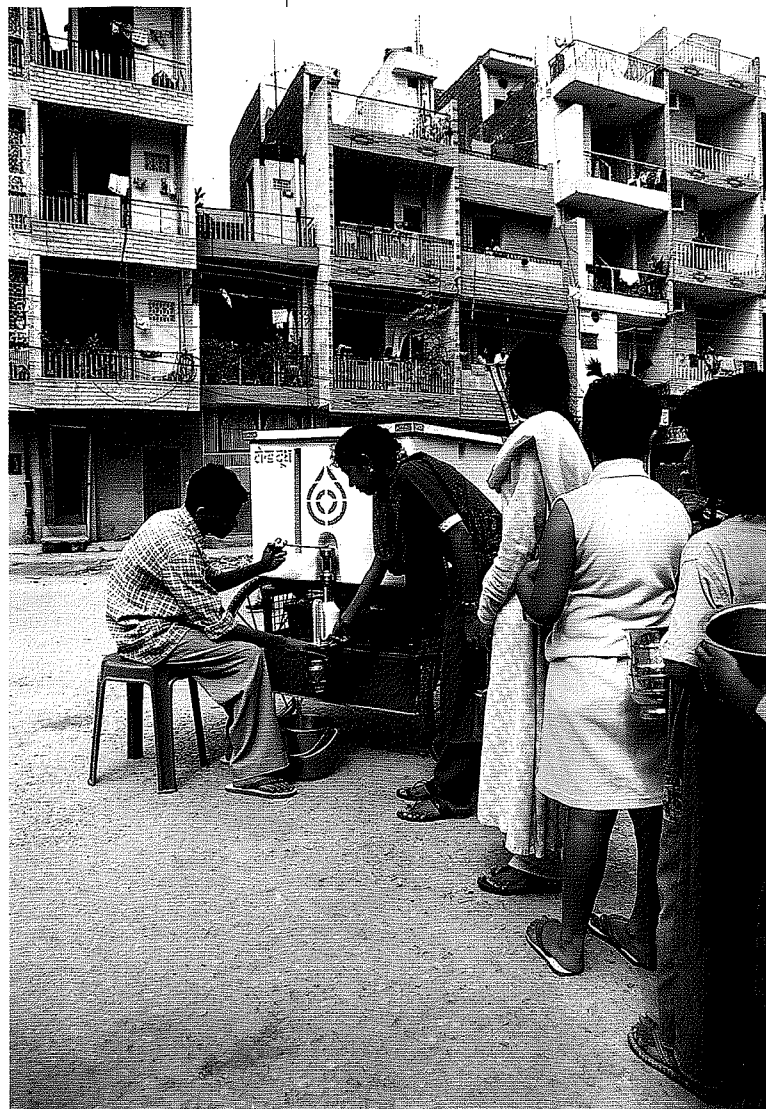
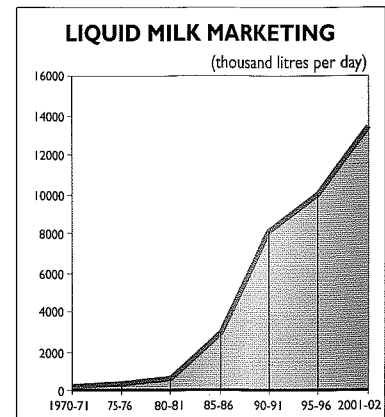
The programme uniquely utilised food aid for development, using the proceeds of monetisation to finance a milk production, procurement, processing and marketing infrastructure. One of the major factors being the market, pricing donated commodities in line with locally available milk ensured that domestic prices were not depressed. Rather than increasing dependence on imports, a foundation was built for self-reliance.

This was possible to a large extent due to the policies put in place by the Government of India at the commencement of the Operation Flood programme wherein dairying could only be encouraged through cooperatives. By ensuring that all imports were routed through NDDB, the smooth and speedy implementation of the programme was facilitated.

Due to its proven professional expertise, the technical aspects were operated through NDDDB which was responsible for the development of dairying in totality. The initiatives taken by NDDDB like setting up a dairy machinery unit, a veterinary biologicals unit and developing and installing bulk vending machines, further gave a boost to the Operation Flood programme.

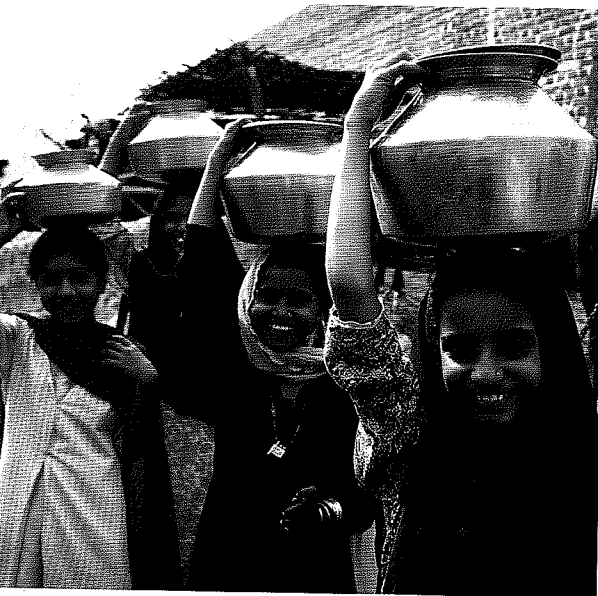
Though Operation Flood was a programme designed to increase milk production through cooperatives, dairying has been used as an instrument of social and economic change. It has resulted in the empowerment of women, through their participation in the management of the cooperative in their villages. More girl children started going to school; they received better health care.

Operation Flood is a rare example of food aid being used to attain self-sufficiency and integrate millions of marginal farmers into the economic mainstream. Even after the conclusion of the programme in 1996, the impetus given to cooperative dairy development continues across the country. Today, there are over 100,000 village dairy cooperative societies with a membership of more than 11 million. The average milk procurement by the dairy cooperatives reached close to 18 million kilogram per day during 2001-2002.



Operation Flood raised the volume of milk marketing in major cities to 7.2 million litres per day.

EC Special Programmes (1997-2002)



Today, a significant number of women are involved in dairy cooperative activities.

The partnership between NDDDB and EC continues. The funds remaining from the Operation Flood programme are being employed for the EC special programmes – Strengthening of Dairy Cooperatives to Meet the Competitive Challenges of the Next Decade and Women Dairy Cooperative Leadership Development.

While the first programme endeavours to assist dairy cooperatives to become self-reliant and self-sustaining enterprises through a multi-pronged approach, the Women Dairy Cooperative Leadership Development Programme recognises the role of women in dairying. It focuses on increasing their participation as members and leaders in dairy cooperatives. The programme also helps rural women to organise and run thrift and credit groups and other income generating activities. So far, one million women from more than 2,000 dairy cooperative societies linked to 50 district milk unions have become part of the Women Dairy Cooperative Leadership Development Programme.

This programme has given the women confidence and skills to successfully assume leadership roles in dairy cooperatives and prepares them for governance. Today, a significant number of women are involved in dairy cooperative activities not only as members, but as management committee members or even board members.

The Women Dairy Cooperative Leadership Development Programme has given the women skills to assume leadership roles.



The NDDDB-EC partnership in dairy development during Operation Flood and after, has demonstrated how meaningful aid combined with professional management and a strong commitment can change the lives of millions for the better. Dairying is not an end in itself. It has been used as an instrument for social and economic change. It is a means to create more opportunities for sustained employment, more incomes for the rural people and more equitable growth. The partnership between NDDDB and EC, over three decades strong, reaffirms the strength of international cooperation as the driving force for the growth and prosperity of a nation's greatest asset – her people.



