

China, PR: Reconstruction Aid in Inner Mongolia

Ex-post Evaluation

OECD sector	43010 – Multisector aid	
BMZ project number	2001 65 746	
Programme executing agency	Government of Inner Mongolia Autonomous Region (IMAR), Finance Department	
Consultant	URF - architects	
Year of ex-post evaluation	2006	
	Programme appraisal (planned)	Ex-post evaluation (ac- tual)
Start of implementation	October 2001	October 2001
Period of implementation	27 months	33 months
Investment costs	EUR 4.93 million	EUR 5.04 million
Counterpart contribution	EUR 0.84 million	EUR 0.95 million
Finance, of which FC funds	EUR 4.09 million	EUR 4.09 million
Other institutions/donors involved	None	None
Performance rating	2	
Significance/Relevance	3	
Effectiveness	2	
Efficiency	2	

Brief Description, Overall Objective and Programme Objectives with Indicators

According to the programme appraisal report, a severe snow blizzard and cold spell combined with a sandstorm in the winter of 2000/2001 caused considerable damage to the social and economic infrastructure of Inner Mongolia. Large expanses of the country were cut off from the outside world for weeks; many houses, hospitals and livestock stables were unusable; 23,000 people were injured, infectious diseases spread due to poor medical care and about a million head of livestock (the target group's source of livelihood) died.

The programme aimed at mitigating the adverse effects of the snowstorm and freezing temperatures on the economic and social development of Inner Mongolia and return the affected population to their normal life. The intention was also to make a contribution to disaster prevention (overall objectives). The programme was supposed to rapidly restore a sustainable, sufficient basic level of medical care, primary schooling and drinking water supply. Housing for herders and livestock quarters were to be rehabilitated as well (project objectives).

The programme area encompassed the districts of Hulunbeier, Xingan, Xilingoule as well as Tongliao and Chifeng City in northeastern China. The target group was largely made up of poor herdsman families or people living in poorer districts most heavily affected by the winter disaster.

The following indicators were set for measuring project objectives achievement: commissioning and use of the rehabilitated or reconstructed buildings and related equipment as well as com-

missioning and use of pump systems.

Altogether, the overall objectives were appropriate, but no indicators were defined. The project objectives for housing the herders and for livestock quarters only rate as outputs under the log-frame logic. Restoring the conditions for basic livelihood should have been the programme objective here. No quantitative or qualitative targets were set for programme objectives at appraisal, which was impossible in any case at that time (a feasibility study was not carried out as the programme entailed emergency aid). But the indicators could have been adapted in the course of the detailed planning and programme implementation, however, particularly as relevant information was available to the programme executing agency.

For ex-post evaluation, the following programme objective indicators have therefore been ad-duced to assess programme performance:

a) Use of the reconstructed buildings in the health sector

Straight after the winter disaster, the Chinese government provided emergency medical care for the target group affected even before it requested assistance from the international donor community. That is why the programme under evaluation here was tasked with rehabilitating the health facilities primarily for child vaccination and prenatal care, which were already dilapidated beforehand. Owing to the following set of facts in the consultant's final report, the programme will be rated applying the standards for a normal project, not for an emergency project:

- The operations of the health stations were only partly disrupted by the winter disaster.
- Impairments to the buildings were only partly attributable to the winter disaster.
- The measures conducted also comprised repairs and refurbishments but frequently also or solely the extension or construction of health facilities and fitting them out with technical equipment.

The programme objective indicators applied for ex-post evaluation are therefore as follows:

- The basic health services have been extensively used for child vaccination and prenatal care. As the project executing agency cited a vaccination rate at programme appraisal of 84%, the programme objective indicator specifies a rise in the vaccination rate for children in the area served by the health stations of at least 90%.
- As prior to programme start 72% of pregnant women availed themselves of prenatal care measures, the project objective indicator is set at at least 90%.

b) Use of reconstructed buildings in the education sector

Reportedly, the schools were already defective before the winter disaster due to inadequate statics and lack of foundations and were additionally impaired by damage caused by frost and heavy snowfall. According to the consultant's final report, for the most part hostels or dormitories were built and fitted out to obviate having to transport the pupils to school, which in part posed a very difficult problem, and to guarantee that the children received schooling, or because several children had to share a bed prior to programme start. As the refurbishment of school buildings or classrooms was accorded subordinate status only in the programme, we may assume ex-post that the damage caused by the winter disaster was only marginal. At least, it hardly disrupted operations at all. This is why conventional standards will also be chosen as project objective indicators in this segment.

- Constructing dormitories was to have a beneficial effect on the enrolment rate. Already good at 90% before programme start, average enrolment will therefore be raised to at least 95%.
- The ratio of pupils per classroom before programme start averaged 32 and should amount to no more than 40 (based on common experience in the education sector) in 90% of schools.
- The ratio of pupils receiving teaching material free of charge has been increased to at least 8% (4% before project start) to ease access to education for the poorer population.
- The teacher-pupil ratio keeps to the high standard of 1:12.

c) Use of pump systems (water supply)

For water supply, individual wells were to be built on the one hand and on the other communal wells for villages with a high population density. In two of the 5 regions, only new water supply facilities were generally installed, one region received new and rehabilitated water supply systems, in another region the existing systems were rehabilitated only and the last region received no water supply facilities at all. A local survey found the disaster area was generally underserved with water supply facilities (wells) and that the situation had deteriorated further as a result of the winter disaster. Here the emergency aid component overlaps with a normal programme in the programme rationale so that the standard cannot be set as high:

- Water supply has been provisionally restored at the programme locations.
- Water quality is hygienically safe.
- Per capita consumption amounts to at least 5 l/cd to meet immediate drinking water needs.

d) Source of livelihood for herders

- The survival rate of livestock (ratio of live births to total number of births in winter) has increased by at least 5%.¹

For reasons of sustainability, the programme objectives are deemed to have been achieved when the related indicators have still been met 2 years after startup.

Programme Design/Major Deviations from Original Planning and Main Causes

As compared with planning at programme appraisal, the following measures were carried out:

- Refurbishment and construction of buildings and improvement of basic medical-technical equipment (X-ray machines, medical instruments, etc.) of 22 (planned: 25) rural health stations as well as training measures for clinical personnel in disaster management
- Refurbishment and improvement of buildings and outfitting with basic technical equipment of 38 (planned: 37) rural schools, including school hostels
- Erection of 432 (planned: 250) covered livestock stables and outdoor stables (incl. fencing)
- Reconstruction of 23 (planned: up to 100) dwellings for herders
- Well drillings (up to 15 m deep) and installation of 84 (planned: 150) hand pumps for single homesteads as well as 16 (planned: 10-15) basic wells (up to 30 m deep) equipped with diesel pumps for small settlements
- Consultancy services for advice and support of the executing institution in preparing and implementing the programme

The programme was largely implemented as planned. Significant quantitative deviations occurred in the livestock stables and herders' dwellings. Housing for the herders had already been rebuilt by the population on their own initiative before programme implementation began. This is why the target group's demand for cattle stables was greater. The target number for well drillings could not be met, either, due to higher costs than expected. The training measures for clinical personnel focused largely on operating medical-technical equipment and methods of medical treatment. According to the latest data of the project executing agency, however, personnel were trained in preventive medicine at only half of the health centres.

¹ This indicator is equivalent to the one used by the World Bank in a similar programme also aimed at mitigating the economic impacts of the winter disaster in the same region, but considering the measures selected it is rather modest because beneficial impacts can be achieved very fast by stabling and feeding the animals.

According to the consultant's report, the construction layout was up to the usual national standard, although at programme appraisal the plan was to adapt the technical standard to make the infrastructure facilities more weatherproof. The technical design was also supposed to reduce maintenance costs although relevant aspects of upkeep could hardly be taken into account, as reported by the consultant. The layout of the cattle stables was, however, altered with great success (see project impacts) in line with the World Bank project mentioned in Footnote 1 (greenhouse). This project was carried out in the same 5 of the 8 districts worst affected by the snowstorm where KfW was engaged. Significantly, unlike the World Bank project, which granted loans for constructing the livestock stables, the FC programme design provided for subsidies. Considering the private-sector promotion of herders and to pre-empt possible clientist selection mechanisms, the question is whether the World Bank approach of granting loans for constructing the livestock stables would not have been more to the purpose and more appropriate for allocative reasons. It would have been better if the donors had coordinated their projects in this respect.

As Inner Mongolia has already been frequently afflicted by severe natural disasters in the past (1996 earthquake, 1998 floods, 1999 and 2000 drought) disaster management plays an especially important role in this region. For this reason, the programme was also intended to make a contribution to disaster prevention (equal part of overall objective besides contributing to improving the social and economic situation or rapid normalization of everyday life). Constructing cattle stables makes a substantial contribution to reducing livestock losses in winter disasters but the high herd losses cited in the programme appraisal report were also a result of animal malnutrition, which could have been mitigated through measures to prevent overgrazing. The study on the problem of overgrazing recommended at programme appraisal was carried out under the parallel World Bank project; no information is, however, available on the implementation of the relevant findings, although this might have made a more significant contribution to disaster prevention. The component for improving health care also originally envisaged training health personnel in disaster management, but the project executing agency reported that this was only carried out in half of the health centres. Other measures in disaster management would also have made sense, particularly in view of the periodic recurrence of natural disasters and the prior absence of a protective infrastructure (e.g. for the evacuation of houses/identification and management of suitable emergency shelters, which would have had to be designed or retrofitted to enhance their technical weather resistance).

The implementation of the programme started 10 months after the winter disaster and only 6 months after BMZ commissioned the appraisal. Despite the very fast response, the measures could not start for a year after the disaster. This highlights that FC lacks the tools to secure urgent emergency relief. The political will for reconstruction assistance cannot generally be implemented promptly with FC so that time usually remains during implementation to adapt the programme to normal programme standards. Implementation was delayed by about 1 year due to the SARS epidemic.

Altogether, the education component accounted for 34% of total costs, the health component for 28%, the rehabilitation of livestock infrastructure for 11%, the improvement of drinking water supply for 8%, project management (transaction costs for application appraisal, travelling expenses, etc.) for 11%, consultancy services for 6% and training of health personnel in disaster management for 2%. The rough budgeting for the individual investment sectors was done by the Chinese government at central level with account then given to individual applications from herders, health facilities, etc. The actual needs of the target group lay primarily in the (re)construction of cattle stables, which is why budget reallocations were made in the livestock stables and herders' housing components. If the needs of the target group had been based on demand, that is without rough budgeting by central government, greater weight would presumably have been attached to the component for (re)building livestock stables. This would have

made a distinct contribution to raising incomes, which had declined considerably due to the winter disaster, as heavily stressed in the programme appraisal report, and thus to improving the self-help capabilities of the target group in the disaster situation. The need for improving school infrastructure was comparatively low, particularly since the operations of many establishments had not been seriously impaired by the winter disaster, contrary to the assumptions of the programme appraisal report, and the situation in the education sector was comparatively good despite periodic natural disasters according to major relevant indicators at the time. Summarizing, the programme measures contributed to repairing damage to buildings but the contribution to remedying the lack of disaster management and restoring the target group's means of livelihood ascertained at programme appraisal was less than it could have been.

Key Results of Impact Analysis and Performance Rating

Thanks to refurbishment and equipment, the diagnosis and treatment capacities have improved in the health centres. As a rule, the number of staff is sufficient for the adequate operation of the health stations. They have heating, electricity and water supply as well as sanitary facilities at their disposal. Operating costs are fully recovered by income from fees in 75% of the centres, but budget surpluses earned have to be remitted to central government for general use and are not available to the individual centre for reinvestment or larger-scale extensions. The building fabric and the equipment can therefore be expected to deteriorate over time without the health centres receiving state budget appropriations for replacements. So there is a long-term danger that services will get worse. The risk of disruptions or impaired operations at the facilities in the event of future winter disasters has been reduced somewhat by the new buildings, but persists for lack of organizational and financial preparations. For example, no disaster plans have been drawn up yet to make sure that health personnel can maintain health care in similar natural disasters. Altogether, the health stations are used more than before the beginning of the programme measures. The number of patients has risen from 421,000 to about 464,000 annually (+10%) and occupied beds from 38% to 55%. The child vaccination rate has increased markedly to 98%, surpassing the target of 90%. The ratio of pregnant women seeking prenatal care has also improved significantly to 89% (programme objective indicator: 90%). The average referral rate (ratio of inpatients referred to special clinics) amounts to merely 4%, although it is unclear whether this is due to an inadequate referral system or whether the illnesses can actually be treated by the basic health facilities. In summary, based on the information presented to us by the programme executing agency we may assume that the health status of the patients has improved, particularly due to improvements in obstetrics and support in family planning since over half of the care provided in these areas is carried out in the health stations.

The refurbishment and outfitting of the schools has contributed to providing regular teaching all year for about 18,000 pupils (14,000 pupils before the start of programme measures). The buildings are fitted out with dormitories, a kitchen, sanitary facilities and heating; the hygienic and technical standards are adequate. Education opportunities for children and youth have improved in the programme region as evidenced by the additional 30% or 4,600 children and young people attending lessons at the schools, one reason being the new dormitories. Varying between 69% and 100%, the enrolment rate exceeds the target indicator of 95% in 84% of all schools. The dropout rate in 92% of all schools amounts to 0, according to information from the programme executing agency. The pupil-teacher ratio has shifted slightly on average since programme start from 12 to 14, but it is still adequate to ensure proper supervision. In 58% of the schools, class size comprises more than 40 pupils, in an extreme case as many as 68, with teaching taking place in two shifts so that in fact the average drops to 35. While 4% of the pupils received schoolbooks free of charge prior to project start, the figure is 11% (project objective indicator 8%) after programme implementation. The public funds provided for running and maintaining the schools are not sufficient for proper upkeep and necessary replacement investments so that school operations are subject to medium-term sustainability risks.

Altogether, 1,700 people in the programme area are supplied with regular drinking water from wells. Water consumption amounts to 15-60 litres per capita and day or 5-100 per head of cattle and day, exceeding the target set of 5 litres per capita and day. The project executing agency rates water quality as good to very good, although no measurements to WHO standards are available. People are tasked with running the wells and collecting water fees in the scattered settlements. In most regions, local systems of tariffs have been developed by the population, applying criteria such as family and herd size. Spare parts and hand pumps can be obtained locally. Ad-hoc collections amongst users and state subsidies are needed to finance larger-scale repairs and replacement investments, but these are not assured. Thanks to satisfactory water quality and the hygienic treatment of drinking water, the hazard of water-transmitted diseases for the target group has been reduced.

The refurbishment or construction of cattle stables has contributed to reducing herd losses. The livestock is protected better in winter and against future winter disasters. The survival rate of young animals born in winter has increased by 80% (project objective indicator: at least 5%). Moreover, 95% of the animals now overwinter in stables as compared with only 50% prior to project implementation. The average weight of the animals has increased through stabling. The construction of the new livestock stables is robust and they are more weatherproof than before programme start. Due to the changed layout (greenhouse), the costs of maintenance for the stables is low. The herders have a strong incentive to maintain the livestock stables and the other infrastructure as herding is the only source of livelihood or income for most of them. Involving the target group in building the livestock stables has strengthened their self-help capabilities for coping with future crises by securing their basic source of livelihood through improved animal protection.

Thanks to improved livestock protection, the programme has safeguarded the economic conditions of life for the predominantly poor sections of the population (herders and settled nomads), thus contributing directly to poverty alleviation. The same sections of the population also benefit from the provision of social infrastructure in the health, education and water sectors. We therefore assign the designation ODP to the programme.

The programme afforded scope for contributing to gender equality. By improving obstetrics and advice for family planning, it had beneficial health impacts on women and imparted know-how for free choice in family planning. The programme is therefore allotted the new designation of G 1.

The programme was not aligned with participatory development/good governance. Except for the construction of the livestock stables, the target group was hardly involved in planning and implementation, so the programme is classified as PD/GG 0.

As the programme was not geared to environmental protection and did not cause any adverse environmental impacts, it merits the designation ER 0. Wastewater disposal in rural clinics and schools is acceptable. Solid waste is disposed through sterilization (health stations), incineration and landfills (health stations and schools) and public refuse collection (at four schools). After construction of the cattle stables and fencing, more of the livestock is fed with stored feedstuff so that the grassland can recover better in wintertime. The long-term availability of groundwater is not endangered by offtake from the newly installed wells.

Performance rating

Altogether, we assess the programme as follows:

Effectiveness: The (revised) programme objectives have been met and in part exceeded, particularly as far as the herders' means of livelihood is concerned. For a programme planned as

an emergency aid measure with criteria applied for a normal project at ex-post evaluation, this is a considerable accomplishment. However, there is a risk that the health facilities and schools will not be able to make larger-scale replacement investments for lack of funds and operations could be impaired in the medium term. Owing to dependence on central government funding, this is a common problem for programmes in the education and health sector. A positive aspect in the present programme is that the sustainability risk for current operations in the health facilities has been reduced in the short term by introducing cost-effective fees. Owing to the good programme objectives achievement, we rate **effectiveness** as satisfactory (**Subrating: 2**).

Relevance and significance: The two overall objectives, alleviation of the adverse impacts of the winter disaster on economic and social development and a contribution to rapid normalization of everyday life have in part been achieved. The subcomponent in education was not directly aimed at mitigating the emergency due to the disaster and was not therefore relevant to remedying the initial problem but it was of general developmental value, as was the subcomponent in the health sector. In both sectors the consequent concern was not to normalize but to improve the conditions of life, which was also achieved. As evident from the very small budgeting and demand, water supply was not heavily impaired by the winter disaster. Where new water supply systems have been implemented, drinking water supply is assured for people and animals. If we interpret the high demand for livestock stables, more of which was met than planned through rebudgeting at the expense of housing for the herders, relevance is particularly pronounced in this area. Due to rough budgeting by central government, however, the programme was not responsive enough to these needs so that significance fell short of potential here. The contribution to disaster prevention has been small and could have been far greater considering the above-mentioned measures, which would also have been desirable in view of the periodically recurring natural disasters. For lack of organizational preparations, the villages may well suffer similar damage again to that described at programme appraisal in the event of future natural disasters. Accounting for this, we assess the **relevance and significance** of the programme as **sufficient (Subrating 3)**.

Efficiency: The specific investment costs for the single measures are reasonable; the costs of building classrooms for example amounted to EUR 50-100 per m² and the costs of constructing health centres to EUR 70-100 per m². Greater regional and sectoral concentration would, however, have raised production efficiency, as shown by the high costs of project management (11% of total costs, leaving consultancy costs aside). We therefore assess production efficiency overall as sufficient only. Most of the health facilities recover operating costs through tariff or fee income, which can be rated as very good, although they must remit budget surpluses to central government. This poses sustainability risks for both the health and education sector in financing larger-scale replacement and extension investments. No information is available on operating cost recovery for the water supply systems. In the long run, we assess capacity utilization in the health stations and schools as good. Being able to sell heavier livestock thanks to stabling will probably increase income for the herders. It would, however, have been better to finance the private goods (livestock stables) via loans instead of subsidies for allocative reasons. Since this component is relatively small in terms of financial volume and the outcomes in income generation and operating cost recovery in the health facilities are extremely good we assess allocative efficiency as satisfactory overall and attaching greater weight to allocative efficiency than production efficiency, we rate the **efficiency** of the programme overall as **satisfactory (Subrating: 2)**.

Overall rating: Altogether, we judge the **developmental efficacy** of the programme to be **satisfactory (Rating 2)**.

General Conclusions

For the sake of efficiency, limited funds should be invested in specific sectors or regions, depending on the needs of the target group.

If FC projects are carried out parallel to projects by other donors in the same project area, coordination with the donor organizations involved is indispensable to match up the project designs and maximize their efficiency. For example, consideration could be given to allocating the measures by sector or region and assistance criteria (selection criteria, conditions) should be streamlined.

Even if indicators on project objectives achievement cannot be quantified at appraisal for lack of available data, which is usually the case in emergency aid projects, this should be done on the basis of a baseline study during implementation.

Greater account should be taken of disaster prevention measures in countries in need of emergency aid projects due to more frequent natural disasters.

Assessment criteria

Developmentally successful: Ratings 1 to 3	
Rating 1:	Very high or high degree of developmental efficacy
Rating 2:	Satisfactory developmental efficacy
Rating 3:	Overall sufficient degree of developmental efficacy
Developmental failures: Ratings 4 to 6	
Rating 4:	Overall slightly insufficient degree of developmental efficacy
Rating 5:	Clearly insufficient developmental efficacy
Rating 6:	The project is a total failure.

Performance evaluation criteria

The evaluation of the "developmental effectiveness" of a project and its classification during the ex-post evaluation into one of the various levels of success described in more detail below concentrate on the following fundamental questions:

- Have the **project objectives** been achieved to a sufficient degree (project **effectiveness**)?
- Does the programme generate sufficient significant **developmental effects** (project **relevance** and **significance** measured in terms of the achievement of the overall developmental policy objective defined beforehand and its effects in political, institutional, socio-economic and socio-cultural as well as ecological terms)?
- Are the **funds/expenses that were and are being employed/incurred appropriate** with a view to achieving the objectives and how can the programme's microeconomic and macroeconomic impact be measured (**efficiency** of the programme design)?
- To the extent that undesired (**side**) **effects** occur, can these be tolerated?

We do not treat **sustainability**, a key aspect to consider when a project is evaluated, as a separate evaluation category, but rather as an element common to all four fundamental questions on project success. A programme is sustainable if the programme executing agency and/or the target group are able to continue to use the programme facilities that have been built for a period of time that is, overall, adequate in economic terms, or to carry on with the project activities on their own and generate positive results after the financial, organizational and/or technical support has come to an end.