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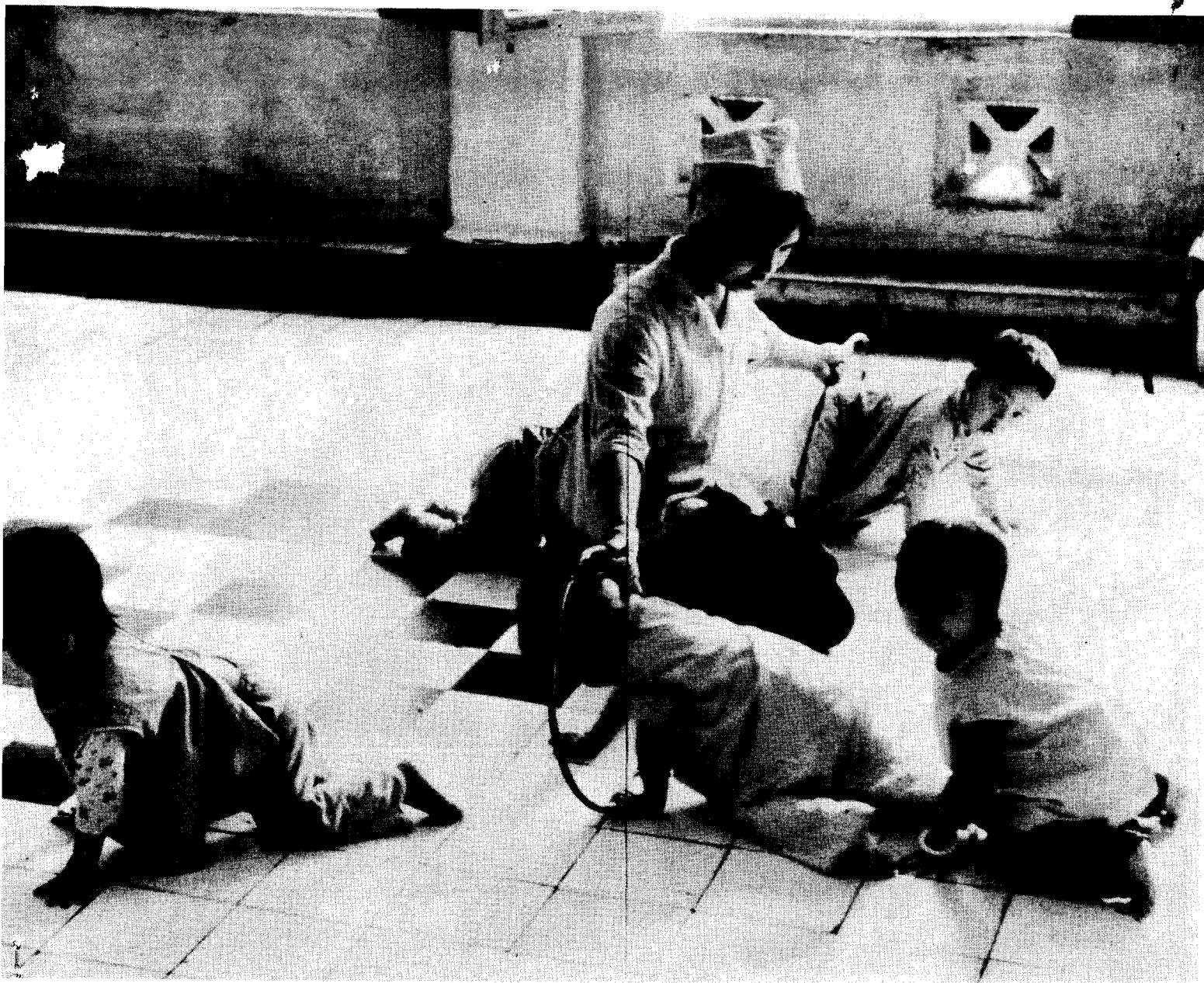
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DAY-CARE CENTRES IN THE SOCIALIST REPUBLIC OF VIET-NAM



A REPORT TO UNICEF ON A UNESCO STAFF MISSION
TO THE SOCIALIST REPUBLIC OF VIET-NAM 7 - 21 AUGUST 1976



UNESCO REGIONAL OFFICE FOR EDUCATION IN ASIA BANGKOK, 1976

DAY-CARE CENTRES
IN THE SOCIALIST REPUBLIC OF VIET-NAM

*A report to UNICEF on a Unesco
Staff Mission to the Socialist Republic
of Viet-Nam, 7-21 August 1976*

This report has been prepared by

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RESUME DU RAPPORT

La mission, entreprise à la demande de l'UNICEF, devait analyser, en collaboration avec les architectes vietnamiens et les représentants du Comité pour la protection de la Mère et de l'Enfant (CME), les implications techniques et financières de la coopération envisagée dans le domaine de la construction de crèches, et parvenir à une formule répondant pleinement aux besoins des Vietnamiens, tout en restant dans le cadre des possibilités financières et des principes généraux de l'UNICEF. Le rôle important joué par le CME et ses objectifs touchant l'extension du réseau existant de crèches est rappelé au para. 2.

Une information très complète sur le fonctionnement et l'organisation générale des crèches au Viet-Nam a été fournie par les responsables du CME (voir para. 3.1 et Annexe 1). La mission a pu visiter 4 crèches à Hanoi et 3 dans les provinces de Quang Ninh et Ha Bac (voir para. 3.2). Les renseignements recueillis à cette occasion (plans, effectifs, personnel, remarques des utilisateurs) sont présentés de manière systématique dans l'Annexe 2.

Le CME a établi un programme détaillé pour un nouveau type de crèche à installer dans chaque capitale provinciale et plus particulièrement dans les provinces industrielles (voir para. 3.3.1-3.3.4). Ce type de crèche doit entre autres assurer la formation pratique des nurses une fois leurs études théoriques terminées. L'effectif de 270 enfants envisagé couvre tous les groupes d'âge de 2 à 72 mois, regroupant ainsi dans un même bâtiment les petits enfants jusqu'à trois ans et les enfants de quatre à six ans en âge de fréquenter les classes maternelles. Les 270 enfants sont répartis en 10 groupes de 25 à 30 enfants auxquels correspondent 10 unités autonomes: 2 unités, chacune pour 30 enfants de 36 à 72 mois (classes maternelles), et 6 unités, chacune pour 25 enfants de 2 à 36 mois.

Les plans élaborés par les architectes vietnamiens sur la base de ce programme (voir para. 3.3.5 et Annexe 3) ont été analysés en détail (voir para. 3.4) et comparés à des modèles appliqués dans d'autres pays socialistes (voir Annexe 8). Ces plans, très bien étudiés et basés sur des techniques de construction locales sont le résultat d'une longue réflexion sur le sujet et d'une étroite collaboration entre architectes et utilisateurs. Les normes de surface, bien qu'assez élevées (9-10 m²/enfant) sont comparables à celles appliquées par les Vietnamiens dans les crèches construites par eux-mêmes avec leurs propres ressources, et apparaissent de ce fait comme l'expression d'une politique générale. Il faut en outre relever que les normes utilisées dans d'autres pays sont sensiblement plus élevées (voir Annexe 8).

Certaines questions générales telles que la taille des centres (est-il préférable qu'ils soient grands ou petits?) ou la stricte indépendance des unités pour chaque groupe d'âge (serait-il possible de mettre en commun certains services pour deux unités?) n'ont été qu'effleurées ou mentionnées au cours des discussions.

Une investigation poussée dans ce sens aurait demandé une étude trop étendue pour pouvoir être entreprise dans le cadre assigné à la présente mission (voir para. 3.4.2 et 3.4.4). D'autre part l'UNICEF n'a pas demandé aux consultants de faire des commentaires ou des propositions touchant une autre politique d'aide telle que l'amélioration d'un grand nombre de crèches déjà existantes.

Le cadre de la mission ainsi défini, les consultants se sont attachés à apporter des améliorations aux plans proposés et à faire des suggestions touchant :

- le fonctionnement général de la crèche en réduisant les surfaces de circulation par le biais d'une modification de la disposition d'ensemble (voir para. 3.4.3 et Annexe 4).
- le fonctionnement et la flexibilité ^{1/} d'usage de l'unité de base pour 25 enfants (voir Annexe 5, plans No. 10 à 13 et Annexe 6, plans No. 16 à 18).
- le fonctionnement du groupe cuisine-buanderie.

Sur ces bases, deux propositions complètes ont été élaborées, la "proposition No. 1" (voir para. 3.5 et Annexe 5, plans No. 8 et 9), et la "proposition No.2" (voir para. 3.5 et Annexe 6, plans No.14 et 15), qui réduisent par ailleurs la surface totale de plancher par enfant de 10,48 m² à 9,20 m² et 8,63 m² respectivement.

Ces propositions ont été très bien accueillies par le CME et les architectes vietnamiens dans la perspective d'un remaniement futur de leurs plans, les contraintes de temps rendant difficile une incorporation immédiate de ces importantes modifications dans la phase actuelle de construction.

Une série d'améliorations plus modestes mais non mineures ont en outre été apportées aux plans de la phase actuelle (voir para. 3.6.2 et Annexe 7).

^{1/} Cette flexibilité est atteinte principalement en remplaçant la salle de jeu et le dortoir séparé de la proposition originale, par une grande salle "polyvalente" qui peut, soit être divisée en deux parties de dimensions variables au gré des besoins par le moyen de quelques meubles faciles à déplacer, soit être utilisée alternativement comme dortoir et salle de jeu. Cette dernière formule permet d'offrir un espace confortable à chaque activité sans duplication des surfaces. Elle est notamment appliquée en Hongrie avec cette particularité que l'unité (là de 20 enfants) est subdivisée et deux sous-groupes de 10 disposant chacun d'une salle "polyvalente" transformée alternativement en salle de jeu et dortoir en fonction de l'horaire (voir Annexe 8, en particulier plans No. 21,22 et 24). Le sous-groupe de 10 enfants avec une nurse est considéré comme une unité pédagogique de taille convenable permettant de stimuler plus facilement l'intérêt des enfants et assurant un contact personnel plus direct entre la nurse et chaque enfant.

Les listes de matériaux, équipement sanitaire et mobilier préparés par le CME ont été passées en revue de façon détaillée. Les coûts peuvent être estimés comme suit:

| | US\$ par Centre (270 enfants) | US\$ par m ² | US\$ par enfant |
|--|-------------------------------------|----------------------------|--------------------|
| - Matériaux de construction équipement sanitaire et électrique | 80.000 | 28 | 296 |
| - Mobilier | 70.000 | 25 | 259 |
| | <u>150.000</u> | <u>53</u> | <u>555</u> |

On peut considérer que le coût des matériaux représente 25 à 30% du coût total du bâtiment (sans mobilier) qui se situerait donc aux environs de 250.000 à 300.000 US\$. C'est un montant important, mais bien différent des chiffres mentionnés pour d'autres crèche construites avec une aide bilatérale (voir para 2.8).

Au-delà de la phase actuelle, les consultants sont convaincus que les commentaires et suggestions faits au cours de la mission seront sérieusement pris en considération par la délégation vietnamienne dans le cadre du développement ultérieur de leurs études sur les crèches.

S U M M A R Y

The mission was undertaken at the request of UNICEF for analysing, in collaboration with Vietnamese building specialists and representatives of the Committee for the Protection of the Mother and Child (CMC), the technical and budgetary implications of the various formulae for cooperation in the field of day care centre construction, in order to arrive at an approach that fully responds to Vietnamese requirements, whilst remaining within the framework of UNICEF's budgetary possibilities and policy guide lines.

Comprehensive information about the Vietnamese day care centres general functioning and organisation was given by the officials of the CMC (see para. 3.1 and Annex 1) and visits of 4 centres in Hanoi and 3 in Quang Ninh and Ha Bac provinces were organised (see para. 3.2 and Annex 2).

A detailed programme for a new type of day care centre to be established in provincial capitals, more particularly in industrial provinces, as pilot Centres, with the purpose, inter-alia, of training the nurses in their practical work, had been worked out by the CMC (see para. 3.3.1-3.3.4). It provides for an enrolment of 270 children from 2 to 72 months, regrouping thus, in a single building, small children up to 3 years and children of "infant-class age" 4-6 years old. The 270 children are divided into 10 groups of 25-30 children, to which correspond 10 separate self contained units: 4 units each for 30 children of infant class age (36-72 months) and 6 units each for 25 children from 2 to 36 months.

The plans for the day care centres developed by Vietnamese architects on the basis of the above programme (see para. 3.3.5 and Annex 3) were analysed in detail (see para. 3.4) and compared with examples from other countries (see Annex 8). These plans, based on local construction techniques, appeared to be the result of a long reflexion and careful study on the part of both architects and users. The rather high space accommodation standards (9-10 m²/child) would seem to be the general norm as the centres built by the Vietnamese from their own resources are based on similar norms. On the other hand, the space standards in other countries are considerably higher (see Annex 8).

The general aspects of whether the centres should be large or small, or whether there should be separate self contained units for each age group or whether certain services facilities could be shared, were only touched upon as it became very clear from the discussions that it was not an appropriate time for the mission to raise these matters for serious consideration (see para. 3.4.2 and 3.4.4). Nor was the mission required to comment or submit proposals for the upgrading of existing day care centres.

The mission offered a number of suggestions for the improvement of the Vietnamese proposal mainly on :-

- the general functioning of the centre, reducing the circulation area through a suitable general arrangement (see para. 3.4.3 and Annex 4);
- the functioning and flexibility of use of the basic unit for 25 children by replacing the separate bedroom and playroom by a spacious multipurpose room (see Annex 5, drawings No. 10-13 and Annex 6, drawings No. 16-18); see also particular and interesting application of this concept in the Hungarian day care centres (Annex 8);
- the functioning of the central kitchen and laundry.

Through this approach, two complete proposals were developed, "alternative 1" (see para 3.5 and Annex 5, drawings No. 8-9) and "alternative 2" (see para. 3.5 and Annex 6, drawings No. 14-15), reducing the floor area/child from 10.48 m² to 9.20 m² and 8.63 m² respectively.

These proposals were very well received by the CMC and the Vietnamese architects, for a future revision of their plans, time limitation in the present construction phase making it difficult to incorporate immediately important changes. More modest, but still significant improvements were however incorporated into the plans for the present phase (see para. 3.6.2 and Annex 7).

The lists for building materials, sanitary and electrical equipment and furniture prepared by the CMC were reviewed in detail. The costs were estimated as follows:

| (270 children) | US\$ per centre | US\$ per m ² | US\$ per child |
|--|--------------------|----------------------------|-------------------|
| - Building materials, electrical and sanitary equipment | 80,000 | 28 | 296 |
| - Furniture | <u>70,000</u> | <u>25</u> | <u>259</u> |
| | 150,000 | 53 | 555 |

It can be estimated that the cost of supplying materials represents between 25-30% of the total cost of the building (without furniture), which would thus be in the region of US\$250,000 and US\$ 300,000. This is a substantial sum, but very different from the figures quoted for other day care centres built through bilateral aid (see para. 2.8).

Beyond this first phase, the mission is of the opinion that the comments and suggestions made during the discussions will be seriously considered by the Vietnamese delegation in the further development of the day care centres.

THE REPORT

1 - Purpose of the mission - Terms of reference

1.1 In collaboration with Vietnamese building specialists to analyse and evaluate the technical and budgetary implications of the various formulae for cooperation in the field of day-care centre construction in order to arrive at an approach that fully responds to Vietnamese requirements, whilst remaining within the framework of UNICEF's budgetary possibilities and policy guidelines.

1.2 To assist with the preparation of specifications, quantities of building materials to be supplied by UNICEF including a preliminary estimate of costs.

2 - Background

General

2.1 The Committee for the Protection of the Mother and Child functions as a national policy and co-ordinating body and provides a variety of services at the district and village levels, through community participation. When it was formed in 1963, its role was essentially one of coordination between various Ministries. In 1971 according to a decision which was taken at the Assembly, the Committee became a separate organisation, with the same standing as a Ministry, its president being given the rank of Minister. The yearly programme of the Committee is submitted to the Government and to the Assembly. The Committee's main concern is with the pre-school child up to the age of four years. It acts in this field as a centre for study and research, as well as a centre for coordination and action.

It co-operates with the Ministry of Education in respect to the education of the young child, and with the Public Health Services concerning maternal and child care and family planning. At the provincial level, the Committee functions through a district office and, at the village level, through child welfare committees comprising government functionaries and representatives of citizens groups. The village welfare committees concern themselves with parental education, infant care, child nutrition and problems of pregnancy.

2.2 The Committee for the Protection of the Mother and Child has established a network of day-care centres throughout the country. As far as the northern part of the country is concerned, the day-care centre network in the SRVN presently serves approximately 550,000 children distributed into 33,000 centres with a staff of over 70,000. The Government is planning an expansion of the day-care centre network in the heavily populated areas where the needs are greatest and an upgrading of existing centres, where conditions are at present inadequate and not conducive to the normal development of children. The plan also includes initial training and refresher training to increase the professional qualifications of staff.

2.3 UNICEF has been requested to provide building materials for the extension of the day-care centre network along with supplies and equipment. UNICEF would also provide funds for initial training and refresher training as well as funds to cover a supply of raw materials for the production of educational toys and for the production of kitchenware for the centres.

The expansion of the day care centre network

2.4 The extensive network of day care centres operating in the SRVN under the responsibility of the Committee for the Protection of the Mother and Child reflects the high priority placed by the national authorities on :

- the provision of specialised care for the pre-school child, thus assuring his sound physical, mental and cultural development,

- the liberation of the woman from domestic tasks thus enlarging her role in society and enabling her to contribute more effectively to the national development effort.

2.5 The officially stated objectives in the field of day-care are, on the one hand, by constructing new centres to attain an enrolment level of 70% of the eligible age-group, (1975 figure is 28%) and, on the other hand, to upgrade the existing network, mainly through the provision of more equipment and better trained personnel.

2.6 With regard to personnel, it should be noted that during the hostilities it was not possible to pay sufficient attention to the specialised training of day care centre staff, and it is only since 1973 that a comprehensive programme has been launched. Three institutions have been created to provide a three year training for higher level staff, whilst in every provincial capital training courses of a few months to a year's duration are organised for intermediary staff. In both cases recruitment is made amongst candidates having successfully completed secondary education. In addition, refresher training courses are organised regularly at provincial level.

A standard centre for training purposes

2.7 To support this programme it is envisaged to establish in each provincial capital at least one day-centre which will be used for demonstration purposes and for the practical courses related to the training and retraining described above. These same centres will also serve to encourage the administrative committees at provincial and district levels, and perhaps even some local communes, to construct new centres along the same lines, and to improve the existing ones.

2.8 The Committee for the Protection of the Mother and Child originally proposed that UNICEF assist the construction of these model day care centres by providing entirely pre-fabricated buildings as delivered for first phase of the school construction programme. Such an approach would considerably lengthen the time scale, would not necessarily guarantee a durable and low-maintenance construction, and, most important of all, the approximate cost would be US \$ 800,000, or roughly US \$ 2,700 per child and between US \$ 300 and US \$ 400 per square metre. Evidently, this could not be envisaged by UNICEF and the Committee has been informed accordingly.

2.9 It has been proposed therefore that an in-depth analysis of these various possibilities be undertaken jointly by UNICEF and Vietnamese construction specialists in order to arrive at a model of construction that satisfies the three classic criteria: quality, economy, rapidity. On this basis, a detailed plan of execution, including a preliminary costing will be prepared which will in turn enable the Vietnamese authorities and UNICEF to fix the exact number of centres to be built.

2.10 UNICEF's previous experience of construction projects in Vietnam would seem to indicate that it is essential the type of structure to be built corresponds as closely as possible to existing Vietnamese architectural models, thus guaranteeing that:

- the building will be adapted to the local context, and will be designed to meet the standards of comfort and weather-resistance that are so difficult to achieve in these harsh climatic conditions,
- the construction pattern will be familiar to the local work-force.

2.11 Another important factor is that the type of construction, the use of space and the choice of materials be such that it will be possible for other provinces and districts to emulate this model.

3 - The Mission

3.1 Functioning of the day care centres

A comprehensive information about the day care centres general functioning and organisation was given by the officials responsible of the Mother and Child Committee.

3.1.1 Types and size

They range from very small day care centres of 10 to 20 children to large centres of up to 300 children according to the location.

- The "normal" day care centres located in the housing centres receive the children from 6.30 a.m. until 5.30 - 6.00 p.m.. In these day care centres the children generally do not stay overnight.

- The day-care centres attached to factories take the children according to the factory time-schedule (including very often 3 shifts). In these centres, some children stay overnight. Provision is also made to board full time, for a period of one week or possibly one month, those children of parents whose work takes them away from the locality.

3.1.2 Age groups

In all day care centres big enough to allow it, the children are distributed into age groups according to the various activity time schedules and types of meals. The distribution of principle is as follows:

- 2-6 months / about 20 children per group / 4 periods of sleep in day time
- 6-10 months/ " " " " / 3 " " " "
- 10-18 months/ " " " " / 2 " " " "
- 18-24 months/ " 25 " " " / 1 " " " "
- 24-36 months/ " " " " / 1 " " " "

The detailed activity time schedule is given in Annex 1.

The proportion of children of the various age groups depends on local enrolment characteristics. As an indication, one can consider the following:

- 2 to 18 months : 1/3 of the total number of children
- 24 to 36 months : 2/3 " " " " "

3.1.3 Staff

- Nurses: The regulation set up by the Mother and Child Committee provides for 3 nurses for each group of about 25 children, that is a ratio of about 1 nurse per 8 children; in the centres we visited, the ratio ranged from 1:8 to 1:10. (see Annex 2)

- Total staff including cooks, cleaners, etc: The average ratio set up by the Committee is of 1 person per 6 children; in the centres we visited, it ranged from 1:5 to 1:9.

- Training: Almost all the provinces have one school for the basic training of the nurses (see also para. 2.6 above)

3.2 Existing day care centres

The mission had the opportunity to visit various day care centre built by the Vietnamese construction services, both in Hanoi and in the Provinces. They are described in Annex 2, in a systematic way including plans, data on enrolment, staff ratios and users' observations, and in the following order:

- Nguyen Cong Tru, Hanoi (built in 1960), Present enrolment : 284 children

- Kim Lien, Hanoi (built in 1961), present enrolment 250-300 children
- Truong Dinh, Hanoi (" " 1975)" " 230-300 "
- Cat Linh, Hanoi (" " 1975-76)" 95-120 "
- Ha Tu, Quang Ninh Province " 115 "
- Uông Bĩ, Quang Ninh Province
- Bac Giang, Quang Ninh Province

From this survey it appeared:

- That all the centres are very well staffed even if the staff/children ratio is in some of them a little lower than the target ratio set up by the Committee (see 3.1.3 above),

- that enrolments up to 300 children are common practice for the centres located in the middle of large housing centres,

- that all the day care centres are built with local construction techniques, using local bricks, locally prefabricated concrete floor slabs, sometimes concrete columns, cast in-site, and generally flat roofs,

- that most of them are two storeys buildings, which seems to be justified considering the urban environment of 4-5 storeys dwelling where they are located,

- that the accommodation standards are rather high, ranging from 7 to 13 m² per child if we consider the envisaged enrolment at the time of the construction, and from 5 to 8 m² per child if we consider the present enrolment (real attendance).

But the main point is our view is the development of the day care centres from 1960 (Nguyen Cong Tru day care centre) to 1976 (Cat Linh day care centre) which shows a considerable improvement from a simple plan with an unsatisfactory central distribution to a very functional layout based on the activities of each organic group of 25 children (see in Annex 2 drawings No 1 and 2). The plan of Cat Linh is obviously the result of a long reflection and effective collaboration between architects and users.

3.3 The standard day care centre proposed by the Committee for for the protection of the Mother and Child

The Vietnamese proposal is described in detail in Annex 3. Main features are as follows:

3.3.1 Training

- This type of day care centre is envisaged to be established in each provincial capital as pilot centre with - interalia - the purpose of training the nurses in their practical work (see 2.6 and 2.7 above).

3.3.2 Age groups

It has, as a particular feature an envisaged enrolment which includes not only the normal age groups from 2 to 36 months but in addition age groups from 36 to 72 months. It must be noted that children from 48 to 72 months are in the "infants class" age according to the Vietnamese curriculum, and thus, under the jurisdiction of the Ministry of Education. It was not very clear if this is intended to become a general feature where child care and pre-school education are linked in a single institution or a temporary measure as long as pre-school education has not yet specific buildings at its disposal. Whatever may be the case it is very clear that both child care and pre-school education are envisaged by the Vietnamese Government as two aspects of the same problem as indicated by Le Duan, First Secretary of the Party at the occasion of the 4th Congress of the Vietnamese Women, March 1974:

"Along with the organisation of day care centres and infant classes under forms suitable to the work of the mothers in various production plants the development of pre-school classes for all children of the corresponding age, poses practical questions to be solved. It is by receiving every year in the pre-school classes all children of the required age that we can realise the enrolment of the children in primary school at the right age, eradicate illiteracy, and reduce the courses of complementary education. Statistics indicate that only 76.2% of the children of the corresponding age group have been enrolled at primary level during 1972-73 (some delta provinces reach percentages in-between 90 and 95%). But, the enrolments reach higher percentages (even up to 100%) where infant and pre-school classes function well."

3.3.3 "Boarders"

Out of the ten groups of children for which the pilot day care has been designed, there are four groups of "boarders" that is, children staying overnight. This particular feature stems from the fact that these day care are to be built in industrial provinces (see also 3.1.1 above: centres attached to factories).

The centre is designed for a total enrolment of 270 children, which can be increased to 300 with a staff of 50 persons (for details, see Annex 3). This enrolment is not higher than in many of the existing day care centres (see 3.2 above).

3.3.4 Space accommodation schedule

It is described in Annex 3 (see the "space analysis" table). In short, it includes :

- 10 basic units for 25 to 30 children divided into 4 types:
- (a) 4 units for 25 children of age groups 2-10/10-18/18-24/24-36 months
- (b) 2 units for 30 children of infant class age :48-60/60-72 months

- (c) 2 units for 25 boarders of 18-24 and 24-36 months,
- (d) 2 units for 30 children of infant class age (boarders) of 36-48 and 48-60 months.

- rooms for the administration and infirmary with quarantine room;
- central kitchen and laundry;
- common rooms (practical work of the teachers, music, gymnastics).

3.3.5 Architectural layout

The above architectural programme has been arranged under the form of individualised units for 25 to 30 children and general services grouped around a central courtyard, in a two storey building (see plans in Annex 3). It should be noted that a particular requirement of the Mother and Child Committee is that each age group should be "isolated" to reduce the chance of sickness spreading from one group to another.

All units are oriented towards the outside, the service rooms of each unit (entrance, isolation, etc.) being grouped along the corridor of the central courtyard. The layout allows each unit to receive the refreshing summer wind from the south-east. The central services closing the composition on the northern side protect the children units from the cold winter wind from the north-west.

3.3.6 Integration in the environment

General plans of urban extension were shown where it could be seen that the location of the day care centre has always been envisaged in the framework of a comprehensive study including other public services (schools, etc ...) As to the reservation of land, the vietnamese norms are as follows:

$$\frac{\text{child place (2-36 months)}}{\text{population}} \quad \text{ratio} = \frac{30 \text{ pl.}}{1000 \text{ persons}}$$

the standard 270-300 places day care centre will thus serve a population ranging from 9,000 to 10,000.

- land : for children up to 48 months: 30 m² per child
- " " above 48 " 35 m² " "

the required size of land for the envisaged centre is thus of 8,000 to 10,000 m²; in the general plan of principle we had the opportunity to see, the use of the land outside the building was well studied (outside play grounds for the various groups of children, public and service entrances, etc...).

3.4 Analysis of the project

3.4.1 General

The project which was developed is the result of a careful study based on the critical assessment of the previous experiences in the field of day care centre construction (see 3.2 above and Annex 2). It is the outcome of a strict collaboration between the architects and the Committee for the Protection of Mother and Child, and it takes into account the various criticisms formulated by the users of the day care centres already built.

3.4.2 Size, number of storeys

As we mentioned above, the total enrolment of 270 to 300 children is not higher than in many of the existing day care centres. However, with such enrolments, it is obviously more difficult to realise the quality of "privacy" of family life which can be found in smaller centres such as Cat Linh (75 children). On the other hand, this sort of big centre makes it easier to pool in an economical way the central services required, inter alia, the specialised rooms for infant class age. In conclusion, we considered that, even if the debate concerning the most suitable size remains open and subject to experiences to be made in running the centres, the big centre formula has its rationale and appeared to be necessary in a certain number of cases. The problem is thus one of layout in order to realise to the fullest extent possible the privacy for each children's unit, and to break down the institutional appearance of the large centre.

Considering the urban environment of the envisaged location, the two storeys formula appeared us to be justified. Of course, single storey buildings would present the advantage of easy access to the play grounds and, to some extent, cheaper construction, but for enrolments of about 300 children, this formula would lead to an extension of the horizontal connections particularly between the kitchen and the various units for the distribution of food.

3.4.3 Per place area - Circulation space - Common rooms

In terms of per place area, the comparison with other day care centres we visited is as shown in the table below from which it can be seen that the per place area of the proposed centre is not out of scale compared with other day care centres. In comparing these figures two points must be kept in mind: (1) the new centre offers more common facilities than the older types; (2) the central services cater for a larger number of children. But a more detailed study (see in Annex 3 space analysis and plans), reveals that the circulation space is quite high : 29.40% (20.43 % for Cat Linh). This, not only adds to the floor area and thus to the cost, but, more important means longer routes for the distribution of food. This can be improved giving thus a more functional and more economical layout (see 3.5 below).

| Centres | Projected attendance | | Present attendance | |
|--|----------------------|-----------------------|--------------------|-----------------------|
| | No. of children | m ² /place | No. of children | m ² /place |
| <u>Proposed standard centre for 270 children</u> (could reach an enrolment of 300) | 270 | <u>10.48</u> | 300 | <u>9.43</u> |
| Nguyen Cong Tru , Hanoi (built in 1960) | 100 | 13.44 | 284 | 4.73 |
| Kim Lien, Hanoi (built in 1961) | 150 | 9.33 | 244 | 5.73 |
| Truong Dinh, Hanoi (built in 1975) | 250 | 7.00 | 225 | 7.77 |
| Cat Linh, Hanoi (built in 1975-76) | 75 | 10.31 | 94 | 8.22 |

A second point is the location of the kitchen service courtyard in the middle of the kitchen-laundry wing which leads to a not very functional nor economical solution. This also can be improved (see 3.5 below).

It would be possible to replace the music room and the gymnastic room by one single multi-purpose room whose utilisation rate would be higher.

3.4.4 Basic unit for 25 children (type a)

The standard unit (see Annex 3, drawing no 5) is based on the Cat Linh type unit (see Annex 2 drawing no 2) which itself is the result of a long study and of various experiences.

In itself, the concept of independant units linked to their own service rooms (reception room, isolation room for undisposed children, distribution of food, toilets) is very functional. A possible alternative approach could be based on the sharing of the service rooms for two units in an attempt to reduce the area without disturbing the activities, but we only mention it here as a possible field open to future investigation, as this would require a more detailed study before drawing any conclusion.

On the basis of the concept of independant units, four comments can be made:

(a) the size of the service rooms is dictated by the position of the load bearing brick walls at regular 3m spacing; by replacing

some of these walls by concrete beams resting upon brick-pillars, it would be possible to tailor the rooms exactly to the area required by their functions, which would open the door to various economical possibilities;

(b) as a separate room, the bedroom is too small and needs to be enlarged;

(c) the concept of two separate rooms, one bedroom and one play-room could be replaced as far as "non-boarders" groups are concerned by a general multi-purpose room matching alternatively both functions. This approach would in our view be more "flexible" and two factors facilitate this approach: the light, easy to move furniture already in use in the more recent centres, and the precise time-schedule of activities (see Annex 1) from which it can be seen that the children in a group are all sleeping, or all playing at much the same time.

A particular and interesting application of this concept exists in Hungary where the standard unit for 20 children is divided into two multipurpose rooms each one for 10 children. In these rooms, each group of ten alternatively eat, rest and plays (see Annex 8)

(d) an attempt could be made to increase the range of educational activities by providing suitable multipurpose furniture (i.e. mobile divider units with chalkboards between play room and sleeping room) and perhaps one sink in the play room which would constitute a sort of "wet area" for modelling, painting, etc.

3.5 Alternative proposals

The research developed on the basis of the considerations given above (see 3.4.3 and 3.4.4) is described in detail under the form of plans and space analysis tables in Annexes 4,5 and 6.

Annex 4 describes at scale 1/500 various alternative layout as an attempt to reduce the circulation space.

- Drawing No 6 compares the project designed by the Vietnamese architects to a proposed alternative which has been developed into two versions. It will be seen immediately from the sketch drawing that the length of the corridors have been considerably reduced, thus improving the functioning of the building.

- Drawing no 7 shows alternative layouts without a central courtyard, the advantage being a more open plan and a somewhat more direct circulation scheme, the disadvantages being the less central position of the kitchen and the loss of protection against the cold north-west winter wind.

Annex 5 develops the scheme of annex 4 into a detailed proposal based on the 3m structural span of the original Vietnamese project (alternative proposal no 1)

Annex 6 develops the same scheme, but on the basis of a 3.6m structural span which gives a slightly reduced standard unit for 25 children, and with a reduction of the corridors from 2.4 m to 1.8 m (alternative proposal no 2)

In both cases, various layouts for the basic 25 children unit are proposed.

Beside the functional improvement which is the most important aspect, there is considerable gain in terms of floor area (thus in terms of cost) as shown below:

| | Vietnamese Proposal | | | Alternative proposal No 1 | | | Alternative Proposal No 2 | | |
|---------------------------------|---------------------|---------------------------|---------------|---------------------------|---------------------------|---------------|---------------------------|---------------------------|---------------|
| | m ² | m ² / child | % | m ² | m ² / child | % | m ² | m ² / child | % |
| A) Children units | 1468.80 | 5.44 | 51.90 | 1368.00 | 5.06 | 55.06 | 1313.28 | 4.86 | 56.37 |
| B) Administration and infirmary | 108.00 | 0.40 | 3.82 | 108.00 | 0.40 | 4.35 | 108.00 | 0.40 | 4.64 |
| C) Kitchen and laundry | 244.80 | 0.91 | 8.65 | 201.60 | 0.75 | 8.11 | 195.84 | 0.73 | 8.41 |
| D) Common rooms | 176.40 | 0.65 | 6.23 | 126.00 | 0.47 | 5.07 | 115.92 | 0.43 | 4.98 |
| CIRCULATION SPACE | 831.80 | 3.08 | 29.40 | 681.10 | 2.52 | 27.41 | 596.52 | 2.21 | 25.60 |
| Total | <u>2829.80</u> | <u>10.48</u> | <u>100.00</u> | <u>2484.70</u> | <u>9.20</u> | <u>100.00</u> | <u>2329.56</u> | <u>8.63</u> | <u>100.00</u> |

Comparing the Vietnamese proposal with the alternative proposal No 2 it can be seen that a saving in total floor area of 500 m² (18%) has been effected. The saving in space has been made, principally, in two sectors - children units and circulation area. The only room which has been suppressed is one of the two specialised rooms (music and gymnastics) as we proposed to replace them by a single multipurpose room with suitable utilisation rate. In this connection it has been proposed to use the central courtyard as a sort of "open theatre" by arranging a podium and possibly some steps. Following this idea, both alternative proposals 1 and 2 could be still further improved by installing the administration at the first floor leaving thus the ground floor free for receiving the multipurpose room in relation with the open theatre.

3.6 Final discussions

3.6.1 Improvements in the future

The above suggestions have been extremely well received by the Vietnamese technical team (architects from the Institute of Construction and Housing) and by the representatives of the Mother and Child Committee.

They declared they would take advantage of these suggestions for a revised version of their plans but that it was difficult to take them into account for the present phase due to a time limitation (they are thinking of starting construction in October this year) and because of the procedure involved for approving new plans. Considering the amount of work already done on the project in the preparation of the working drawings, this stand was understandable and the UNICEF representatives did not raise any objection. The UNICEF consultants on the other hand had made it very clear in presenting their suggestions, that they were left to their evaluation for the present phase or for the future.

3.6.2 Improvements for the present phase

It was further agreed to incorporate into the present phase some more modest but still significant improvements to the kitchen wing, to the standard unit for 25 children and to the equipment of the toilets (see Annex 7).

3.6.3 Costs - Materials to be supplied by UNICEF

The Vietnamese request to UNICEF for assistance is for the supply of certain building materials, sanitary equipment, materials for the electrical installation, furniture and similar equipment. The request for building materials is for cement, reinforcing steel, timber, glass, glazed ceramic tiles and plumbing pipes and fittings.

A check on the provisional request for building material showed that the quantities were about right for this class of building and were in no way exaggerated.

The cost of supplying the building materials and sanitary equipment based on the Vietnamese proposal and list of material was estimated to be in the region of US \$80,000 and the furniture and equipment cost was estimated at US \$70,000. This would give a figure of approximately US \$28 per m² and \$296 per place for the building and a total cost of approximately \$555 per place for building and furniture.

It is estimated that the cost of supplying materials represents between 25% - 30% of the total cost of the building which thus would be in the region of \$300,000 and \$250,000. This is a substantial sum but very different from the figures quoted for other day care centres built through bi-lateral aid.

However, it would be an oversimplification to compare the cost of the UNICEF input per m² for the day care centre of \$28 as against \$114 per m² for the second phase of the school building programme for the north. The two buildings are of a very different character and really cannot be compared with each other.

So far as the Vietnamese proposal is concerned at first glance it would seem that the proposal is an ambitious one but having reviewed the gradual development of the day care centres, what is now being proposed is well within the capacity of the country and makes full use of the local resources. Moreover a review of areas per child place of day care centres of many countries shows that the area per place of the Vietnamese proposal are comparable. The plain fact of the matter is that the day care centres buildings are expensive when compared with elementary school buildings.

3.6.4 Conclusions

The alternative proposals submitted by the mission demonstrated that costs could be reduced and at the same time the functional layout could be improved. But the broader aspects, of whether the centres should be large or small, or whether there should be separate self-contained units for each age group or whether certain service facilities could be shared, were only touched upon as it became very clear from the discussions that it was not an appropriate time for the mission to raise these matters for serious consideration. Nor was the mission required to comment or submit proposals for the upgrading of existing day care centres.

The mission is of the opinion that the comments and suggestions made during the discussions will be seriously considered by the Vietnamese delegations in the further development of the day care centres.

Schedule of meetings and visits

Saturday 7 August a.m. Depart Vientiane
Arrive Hanoi
p.m. Preliminary meeting with UNICEF, Dr Tu
(Vietnamese Red Cross) and Mrs Hien (Mother
and Child Committee)

Sunday 8 August a.m./ Prepare comparative analysis on day care
p.m. centres

Monday 9 August a.m. Meeting with the Mother and Child Committee
(MCC) : general brief on day care centres
organisation by Dr. Hahn
p.m. Meeting with the MCC : general brief on
the standard plans by architects of the MCC
and from the Institute of Construction and
Housing

Tuesday 10 August a.m. Visit Nguyen Cong Tru day care centre, Hanoi
" Truong Dinh " " " "
p.m. Meeting with the MCC : brief on electrical
and sanitary by the architects

Wednesday 11 August a.m. Visit Kim Lien day care centre, Hanoi
" Cat Linh " " " "
p.m. Prepare analysis and suggestions (sketch plans)

Thursday 12 August a.m./ " " " " "
p.m.

Friday 13 August p.m. Depart Hanoi, Arrive Ha Long Bay

Saturday 14 August a.m. Visit Ha Tu day care centre (Quang Ninh
Province)
p.m. Meeting with provincial representatives of
the MCC and technicians
Evening: dinner offered by the Committee

Sunday 15 August a.m./ Prepare suggestions (sketch plans)
p.m.

Monday 16 August a.m. Visit Uong Bi and meet MCC of the town
(Quang Ninh Province)
p.m. Visit Bac Gian and meet MCC of the town
(Ha Bac Province). Return Hanoi

Tuesday 17 August a.m. Meeting with the MCC: additional information on construction techniques given by the architects.
p.m. Present analysis and suggestions to the MCC

Wednesday 18 August a.m./ Discussion with the MCC and the architects
p.m. on proposed suggestions.

Thursday 19 August a.m. Review of electrical and sanitary equipments
p.m. Discussion on revised kitchen layout

Friday 20 August a.m. Review of time schedule, transportation problems, etc.
p.m. Final discussions with UNICEF
EveningL dinner offered by the MCC

Saturday 21 August a.m. Depart Hanoi
Arrive Vientiane

Vietnamese delegation

Dr Pan - Vice President of the MCC

Dr Tu - Vietnamese Red Cross representative (coordinator for UNICEF activities in Vietnam)

Mr. Tuan - MCC

Dr Hahn - MCC

Mrs Hien - MCC

Mr Thi - Architect of the MCC

Mr. Hung - Architect (project team leader). Institute of Construction and Housing

Mrs Tuat - Quantity surveyor. Institute of construction and Housing.

Mr Duc - Engineer " " " " "

Mr Lecong - Architect " " " " "

Mr Kha - Translator (UNICEF)

(N.B.: the above list is not complete)

ANNEX 1
DAY CARE CENTRE
STANDARD TIME SCHEDULE

DAY CARE CENTRE - STANDARD TIME SCHEDULE (8 continuous hours working day)

1) Babies from 2 to 5-6 months

(a) Characteristics and needs of this age group :

Feeding : milk 6 times then 5 times at 3 to 3½ hour intervals.

Sleeping : 15-16 hours day and night. (night 10 to 11 hours)

Sleep 4 times in day-time, then reduced to 3,
each sleep lasting from 1½ to 2 hours.

• Waking : Waking and playing for periods of 1-1½ hours.

(b) Day Care Centre - Model Time Schedule

05.30 - 06.30 : Suckling at home

07.00 : Arrival at the Centre

07.00 - 09.00 : Sleeping (in the verandah)

09.00 - 09.30 : Suckling

09.30 - 10.30 : Waking and educational play

10.30 - 12.30 : Sleeping

12.30 - 13.00 : Suckling

13.00 - 14.00 : Waking and educational play

14.00 - 16.00 : Sleeping in open space (verandah)

16.00 - 16.30 : Suckling at the centre or at home in case
the mother takes back the baby (one hour
each day for the mothers to suckle their
babies)

2) Babies from 6 to 10 months

(a) Characteristics and needs of this age group

Feeding : milk and rice flour, 5 times then reduced to
4 times a day, at intervals of 3½ to 4 hours.

Sleeping: 14 to 15 hours day and night, (night 10 to 11 hours)
(Day: 3 sleeps each lasting 1½ to 2 hours).

Waking : 2 to 2½ hours each period.

(b) Time Schedule Model

06.00 : Suckling or fed with milk at home.
07.00 : Arrival at the centre.
07.00 - 08.00 : Educational play in-doors or out-doors -
sun bathing in the open
08.00 - 09.30 : Sleeping in verandah (open space)
09.30 - 10.30 : Feeding
10.30 - 11.30 : Educational play
11.30 - 13.30 : Sleeping in verandah
13.30 - 14.30 : Feeding with rice flour or milk
14.30 - 15.30 : Playing
15.30 - 16.30 : Sleeping
16.30 : Brought home by mother

3) Babies from 10 to 18 months

(a) Characteristics and needs of this age group

Feeding : Vegetable soup, meat soup, fruits, 4 times a day
at interval of 3½ to 4 hours.

Sleeping: Day and night : 13 to 14 hours
Night : 10 to 11 hours
Day : 2 sleeps each lasting 1½ to 2 hours

Waking : 3 times, each period 3 to 4 hours.

(b) Time Schedule Model

06.00 : Feeding at home
07.00 : Arrival at the centre
07.00 - 08.00 : Playing educational play, in-doors or in the yard.
08.00 - 09.30 : Sleeping in verandah (open space)
09.30 - 10.30 : Lunch
10.30 - 12.30 : Waking and educational play.
12.30 - 14.30 : Sleeping in verandah.
14.30 - 15.30 : Dinner
15.30 - 16.30 : Waking and playing.
16.30 : Brought home by mother.

4) Children from 18 to 36 months

(a) Characteristics and needs of the age group

Feeding : 4 times a day at intervals of 3½ to 4 hours

Sleeping : Day and night from 12 to 13 hours

Night : 10 to 11 hours

Day : one sleep of 2 to 2½ hours

Waking : Twice daily for 5½ to 6 hour periods

(b) Time Schedule Model

06.00 : Breakfast at home

07.00 : Arrival at the centre

07.00 - 10.00 : Educational play in the open

10.00 - 11.00 : Lunch

11.00 - 13.00 : Sleeping

13.30 - 14.00 : Fruit when available (bananas, lemonade, etc)

14.00 - 15.30 : Educational play

15.30 - 16.30 : Dinner

16.30 : Brought home by mother

NOTE

- The children have to drink many times a day: after meals, sleeping, etc. especially in summer;
- They should play in the open in the morning and afternoon, when it is too sunny and hot, babies may sleep in their beds beneath the shades of the trees or in verandahs;
- As it is hot in summer and the children have to remain continuously in-doors, it is advisable that they should have one bath in the afternoon each day.

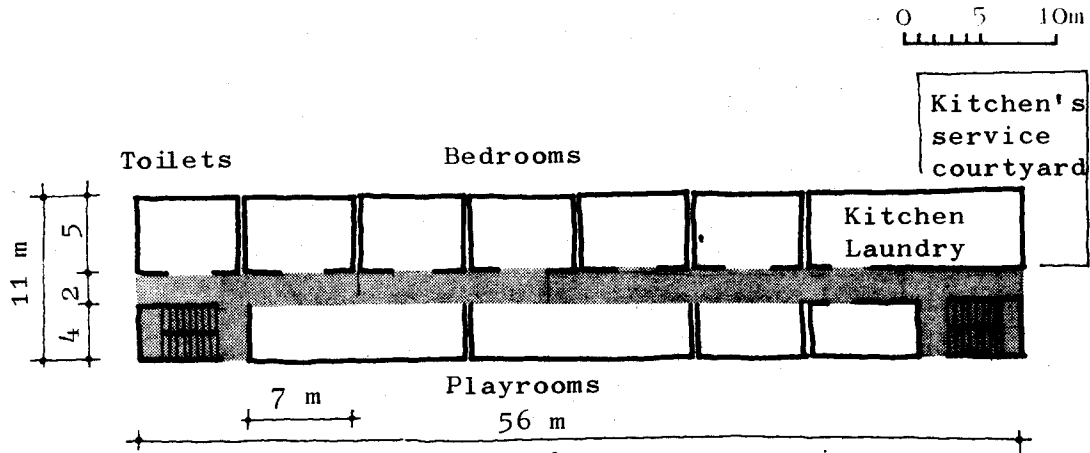
ANNEX 2
EXISTING DAY CARE CENTRES
DATA SHEETS AND PLANS

| <u>Contents</u> | | <u>Page</u> |
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| Data sheet | 1 - Nguyen Cong Tru, Hanoi (built in 1960) | 27 |
| " " | 2 - Kim Lien, Hanoi (built in 1961) | 31 |
| " " | 3 - Truong Dinh, Hanoi (built in 1975) | 37 |
| " " | 4 - Cat Linh, Hanoi (built in 1975-76) (with drawings No. 1,2 and space analysis) | 41 |
| " " | 5 - Ha Tu, Quang Ninh Province | 49 |
| " " | 6 - Vông Bĩ, Quang Ninh Province | 53 |
| " " | 7 - Bac Giang, Ha Bac Province | 55 |

DATA SHEET 1

1 - Building

1.1 Diagrammatic and approximate ground floor plan (scale 1/500)



1.2 First floor plan : similar to the ground floor plan (kitchen and laundry replaced by a meeting room).

1.3 Approximate total floor area (two storeys) : 1,344 m²

2 - Enrolment

2.1 The centre was initially designed for 10 groups of 10 children = 100 children

2.2 It receives at present 284 children divided into 10 groups as follows:

| | | Number of children groups | No. of children per group | No of children Total |
|-----|--------------|---------------------------|---------------------------|----------------------|
| (a) | 2 - 6 months | 1 | 12 | 12 |
| (b) | 6 - 10 " | 1 | 30 | 30 |
| (c) | 10 - 18 " | 2 | 16 | 32 |
| (d) | 18 - 24 " | 2 | 35 | 70 |
| (e) | 24 - 30 " | 2 | 35 | 70 |
| (f) | 30 - 36 " | 2 | 35 | 70 |
| | | 10 groups | | 284 |

Nguyen Cong Tru Day Care Centre
(continued)

2.3 There are no "boarders" (i.e. children staying overnight).

3 - Staff

| | |
|--|-------|
| Nurses (incl. doctor and assistant doctor) : | 37 |
| Cooks (and food preparation) | 9 |
| Cleaner (the nurses also use to clean) | 1 |
| | <hr/> |
| total | 47 |

4 - Ratios

4.1 Total floor area (m²)/child :

Envisaged initially : $\frac{1344 \text{ m}^2}{100 \text{ children}} = 13.44 \text{ m}^2/\text{child}$

At present : $\frac{1344 \text{ m}^2}{284 \text{ children}} = 4.73 \text{ m}^2/\text{child}$

4.2 Nurse/children ratio: $\frac{37 \text{ nurses}}{284 \text{ children}} = 1:7 \text{ to } 1:8$

4.3 Staff/children ratio: $\frac{47 \text{ persons}}{284 \text{ children}} = 1:6$

5 - Working hours

From 06.30 to 17.30 hour (some mothers who are working far from their home collect their babies a little later than 17.30 h).

6 - Users' observations

- The Centre planned for 100 children is overcrowded with 284 children (there is a lack of dormitories which have to be used as play rooms).
- The toilets (2 groups) are insufficient and too far from the children
- The 2 staircases are insufficient to cope with mothers bringing their children to the Centre.
- The central corridor does not allow for any contamination control.
- The kitchen is too small (it has to distribute 350 rations twice a day : total 700 rations a day).
- The ratio of 1 person per 6 children should be raised to 1 person per 5 children (there should be a cleaner for 2 groups of children).

Nguyen Cong Tru Day-Care Centre
(continued)



Plate 1. The two-storey building.

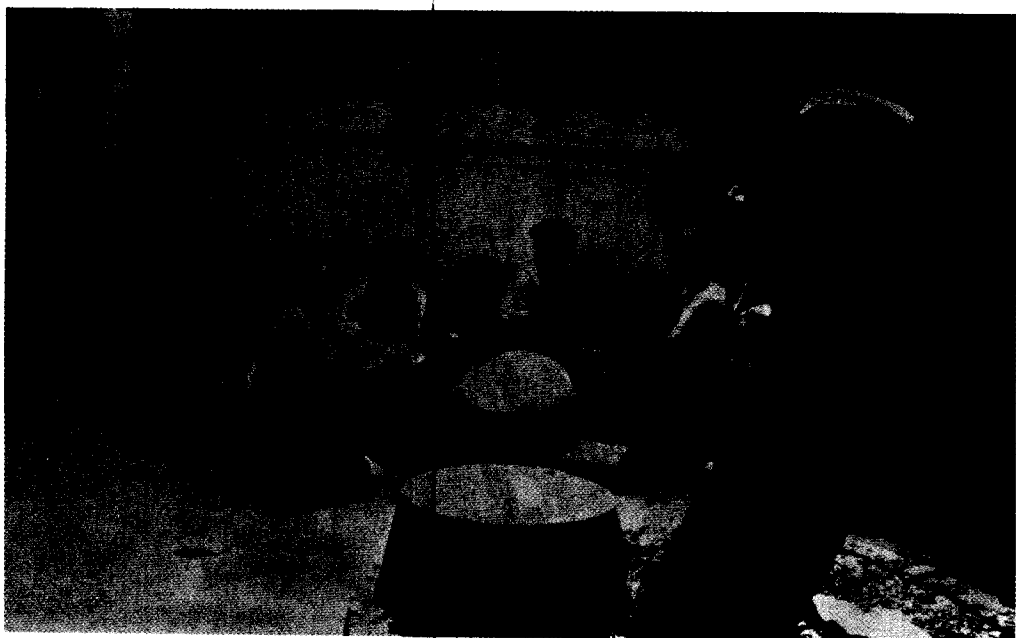


Plate 2. Preparation of vegetables in the open courtyard attached to the kitchen.

Nguyen Cong Tru Day-Care Centre
(continued)

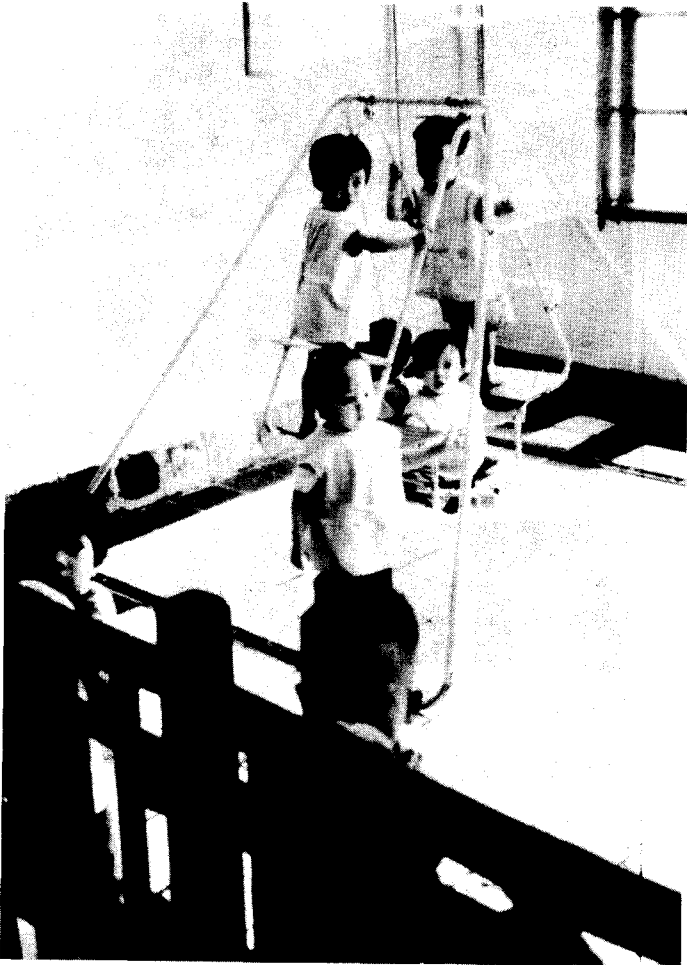


Plate 3. Children playing.



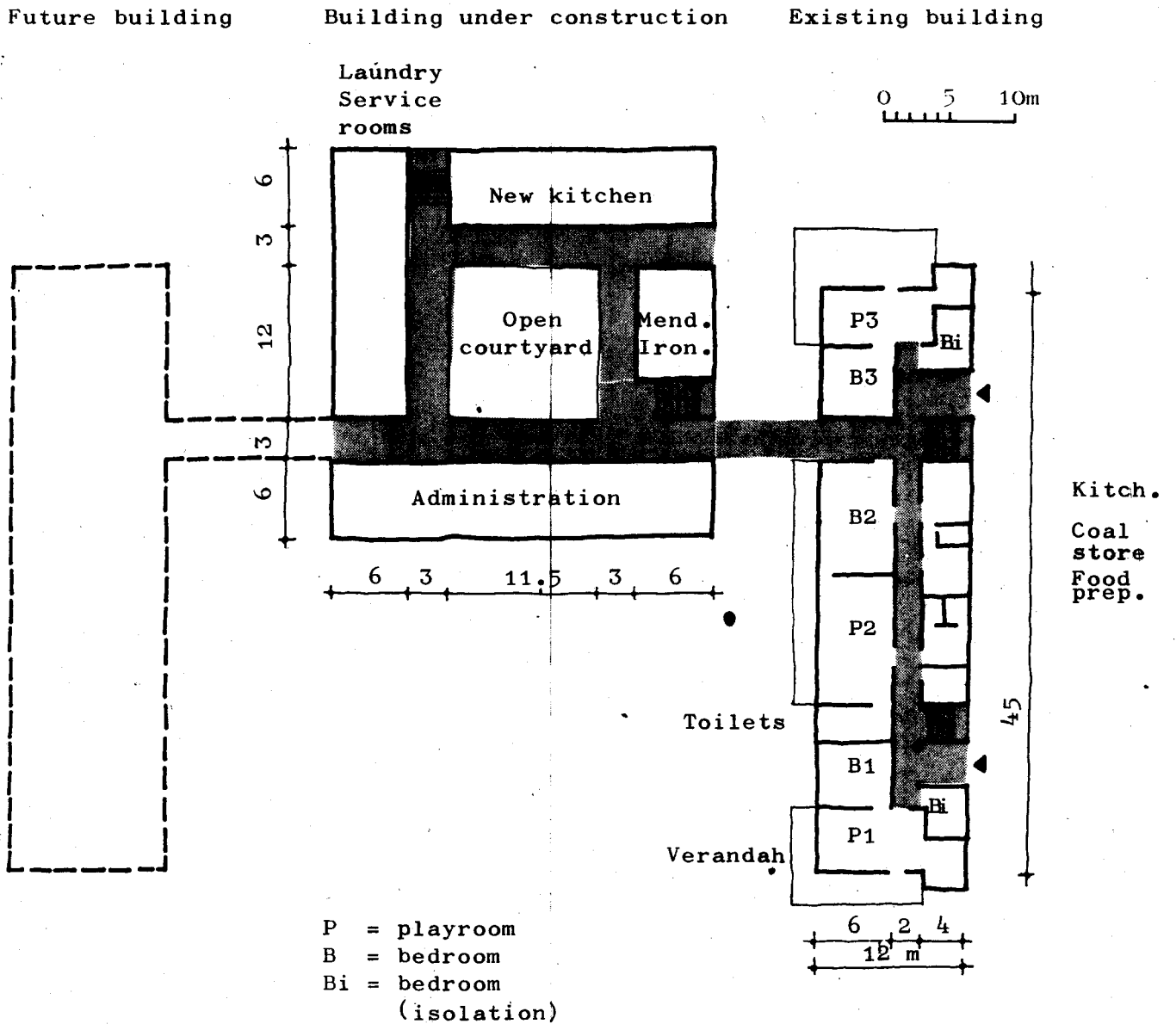
Plate 4. Care of infants.

Kim Lien Day Care Centre
Hanoi
Existing building built
in 1961 (New building
under construction in 1976)

DATA SHEET 2

1 - Building

1.1 Diagrammatic and approximate ground floor plan (scale 1/500)



Kim Lien Day Care Centre
(continued)

1.2 First floor plan : existing building : similar to the ground floor plan;

: building under construction : bedrooms and playrooms for "boarders" (children staying overnight) with one gymnastics room.

1.3 Approximate total floor area of the existing building (including verandahs) for the two storeys : about 1,400 m²

1.4 According to the enrolment originally planned, each group of 25 children had at its disposal:

- 1 play room : 8 x 5 = 40 m²
- 1 bed room : 6 x 5.5 = 33 m²
- 1 toilet : 4 x 4 = 16 m²
- 1 verandah : 10 x 3 = 30 m²
- 2 isolation rooms of 2(3x5) = 10 m²
3 x 5 m for 3 groups: 3 gr.

Total per group 129 m²

2 - Enrolment

2.1 The centre was initially designed for 6 groups of 25 children = 150 children

2.2 It receives at present 300 children divided into 7 groups (average 42 to 43 children per group). It should be added that 300 children is the present full enrolment, but that (due to parents' vacation periods, etc...) the attendance was, the day we visited the day care centre of about 81%. The enrolment was thus of 244 children distributed as follows:

| Age group | Number of groups | Number of children per group | No. of children Total |
|--------------------|------------------|------------------------------|-----------------------|
| (a) 2 - 6 months | 1 | 9 | 9 |
| (b) 7 - 10 months | 1 | 20 | 20 |
| (c) 11 - 18 months | 1 | 37 | 37 |
| (d) 15 - 18 months | 1 | 33 | 33 |
| (e) 18 - 42 months | 3 | 46 -46 -53 | 145 |
| | 7 | | 244 |

2.3 Some children stay overnight when their mothers are working on the night shift

3 - Staff

| | |
|--|----------|
| - Assistant doctor | 1 |
| - Nurses having received three years training (after completion of 10 years of schooling): | 3 |
| - Nurses having received 9 months training | 22 |
| - Infant classes teachers (trained by the Min. of Education) | 3 |
| - Cooks (and food preparation) | 5 |
| - Cleaners | 7 |
| - Administration staff and Director | <u>8</u> |
| .Total | 49 |

4 - Ratios (for the existing building)

4.1 Total floor area (m²/child)

- Envisaged initially $\frac{1400 \text{ m}^2}{150 \text{ children}} = 9.33 \text{ m}^2/\text{child}$
- At present (full enrolment) $\frac{1400 \text{ m}^2}{300 \text{ children}} = 4.66 \text{ m}^2/\text{child}$
- Considering real actual attendance : $\frac{1400 \text{ m}^2}{244 \text{ children}} = 5.73 \text{ m}^2/\text{child}$

4.2 Nurses per children ratio :

- theoretical : $\frac{25 \text{ nurses}}{300 \text{ children}} = 1:12$
- real : $\frac{25 \text{ nurses}}{244 \text{ children}} = 1:10$

4.3 Staff/children ratio :

- theoretical : $\frac{49 \text{ persons}}{300 \text{ children}} = 1:6$
- real : $\frac{49 \text{ persons}}{244 \text{ children}} = 1:5$

5 - Working hours

From early in the morning (06.30) until 18.00 h. in principle (but some children stay overnight).

Kim Lien Day Care Centre
(continued)

6 - Users observations

- The present area of the toilets is insufficient and their arrangement not very convenient. For the small children there should be a space for bathing and for the older children, there should be separate toilets for boys and girls.

- The kitchen (approx. 40 m² with service-rooms) is too small and the location inside the building not convenient. The new kitchen (building under construction) will improve the situation.

- The central corridor is noisy and not very pleasant.

Kim Lien Day-Care Centre
(continued)



Plate 5. The extension under construction.



Plate 6. The existing two-storey building.

Kim Lien Day-Care Centre
(continued)



Plate 7. Nurse preparing milk for the babies.



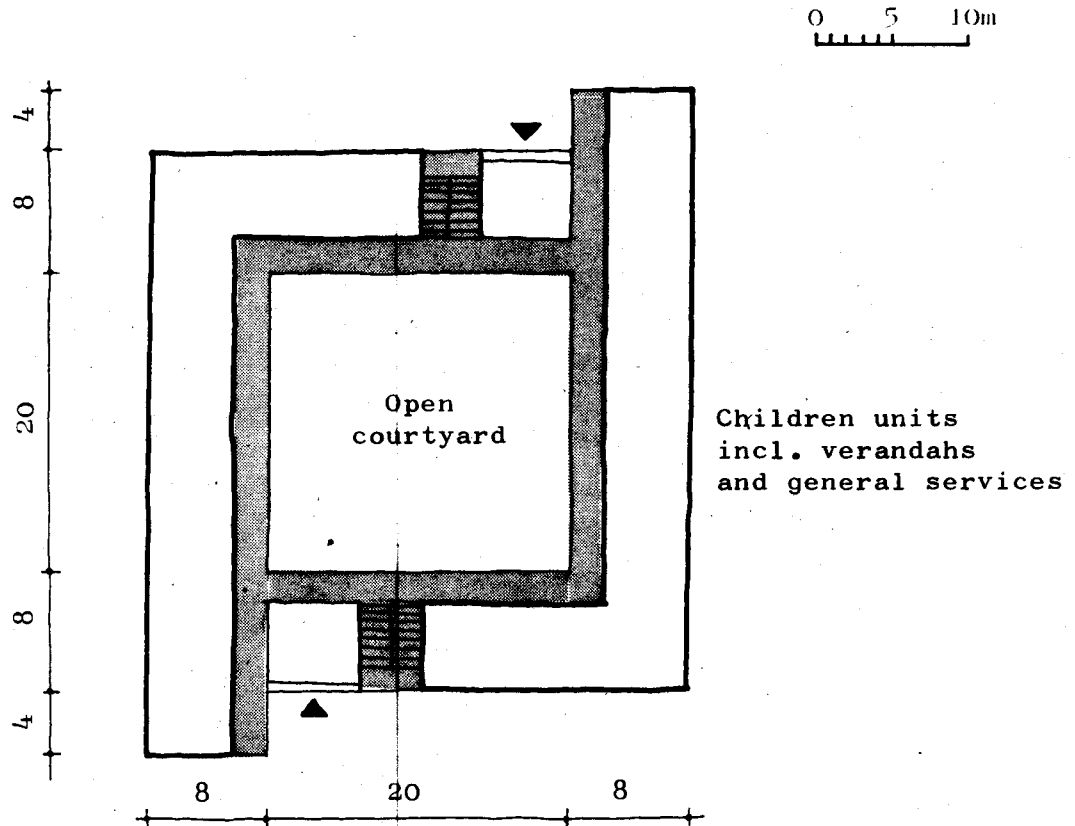
Plate 8. Children playing with their nurses.

Truong Dinh Day Care Centre
Hanoi - Built in 1975
(Project 1966-68)

DATA SHEET 3

1 - Building

1.1 Diagrammatic and approximate ground floor plan (scale: 1/500)



1.2 First floor plan: similar to the ground floor plan.

1.3 Approximate total floor area (including sheltered circulation and verandahs) of the two storeys : 1750 m²

Truong Dinh Day Care Centre
(continued)

1.4 Each group of 31 children to 37 children has at its disposal:

| | |
|--|------------------------------------|
| - 1 general room (dormitory and play room) | : approx. 8.5x6 =50 m ² |
| 1 toilet | 3x4 =12 m ² |
| 1 verandah | 6x4 =24 m ² |
| 1 isolation room | 10 m ² |

Total approx. 96 m²

The plans were established in 1966-68 as an attempt to define model and standard plans. After the erection of 2 such centres, it was decided to revise the plans on the basis of users' requirements.

2 - Enrolment

2.1 The Centre was initially designed for 8 groups of about 31 children = about 250 children

2.2 It receives at present 300 children divided into 8 groups (average 37 to 38 children per group) as follows:

| Age groups | No of groups | |
|--------------------|-----------------|------------------|
| (a) 2 - 11 months | 1 | } infant classes |
| (b) 11 - 17 months | 1 | |
| (c) 17 - 24 months | 1 | |
| (d) 24 - 30 months | 1 | |
| (e) 30 - 36 months | 1 | |
| (f) 36 - 48 months | 1 | |
| (g) 48 - 60 months | 1 | |
| (h) 60 - 72 months | 1 | |
| | <u>8 groups</u> | |

It should be added that 300 children is the present full enrolment, but that (due to parents' vacation periods, etc.) the average attendance is of about 75%, approximately 225 children.

2.3 There are no "boarders".

3 - Staff

The Staff was for the two day care centres of the area (the one described above and a smaller one very close) with a total enrolment of 406 children, as follows:

| | |
|-------------------------------------|----|
| Nurses | 38 |
| Cooks (and food preparation) | 8 |
| Cleaners, janitors, bookeepers etc. | 11 |

Total 57 persons

Truong Dinh Day Care Centre
(continued)

4 - Ratios

4.1 Total floor area (m²)/child

- Envisaged initially : $\frac{1750 \text{ m}^2}{250 \text{ children}} = 7.00 \text{ m}^2/\text{child}$
- At present (full enrolment) $\frac{1750 \text{ m}^2}{300 \text{ children}} = 5.83 \text{ m}^2/\text{child}$
- Considering real attendance $\frac{1750 \text{ m}^2}{225 \text{ children}} = 7.77 \text{ m}^2/\text{child}$

4.2 Nurse/children ratio : $\frac{38 \text{ nurses}}{406 \text{ children}} = 1.10$

4.3 Staff/children ratio : $\frac{57 \text{ persons}}{406 \text{ children}} = 1:7$

5 - Users' observations

(a) Recognized qualities of the building:

- 1 verandah for each group of children
- 1 isolation room for each group of children (indisposed children)

(b) Defects:

- for the infant classes at least, there should be two separate rooms: 1 bedroom and 1 classroom/playroom;
- for each group there should be one room for the distribution of food and milk preparation;
- the central infirmary should have at least one isolation room (if possible two): 1 for lung diseases, 1 for stomach diseases;
- the kitchen (approx. 33 m² incl. service rooms) is too small and there is no coal store;
- there is no laundry - drying room;
- the playrooms opening (inter-alia) on the courtyard, this central space is noisy and the groups disturb each other.
- the uncovered circulation space near the two main stairs is not practical when it rains.

6 - Miscellaneous

In the climate of Viet-Nam one tries to avoid the cold wind from the north-west, and to take advantage of the wind from the south-east in summer for ventilation purposes.

The distribution of food from the kitchen to the various units around the central courtyard does not pose any problem.

Truong Dinh Day-Care Centre
(continued)

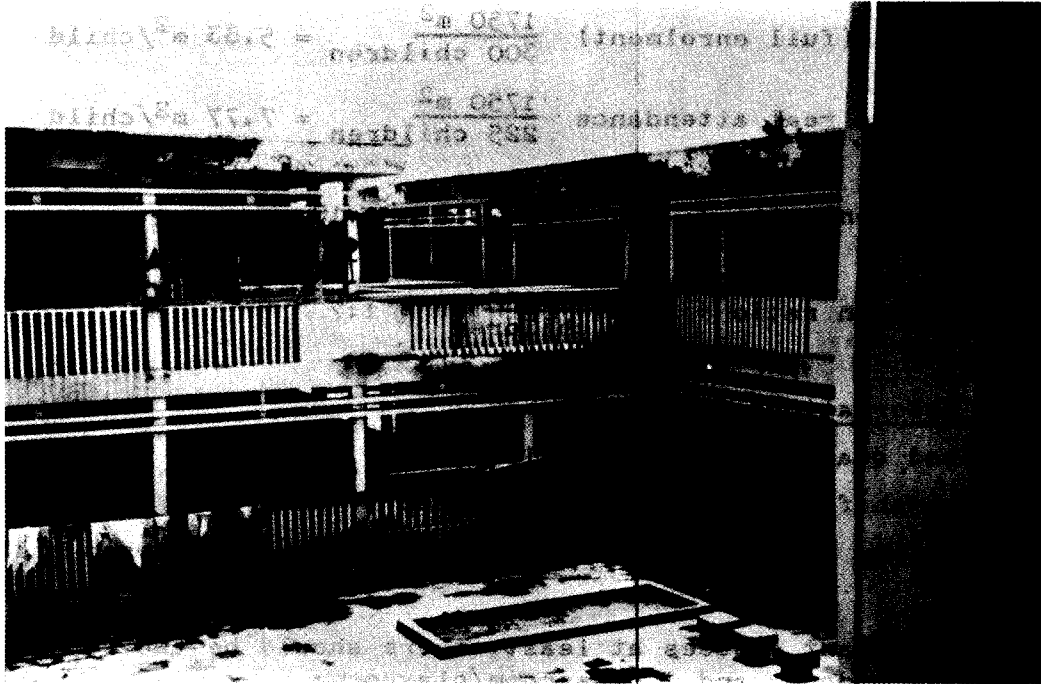


Plate 9. The central open courtyard.



Plate 10. Children eating in the open air on the veranda.