

Report of the Rapid Assessment on Salt Situation in the Democratic Republic of Timor-Leste undertaken on 18-25 June 2002.

(Sunawang)

I. BACKGROUND

The total population of the Democratic Republic of Timor-Leste, previously called East Timor is about 850.000 capita living sparsely in the 13 districts. More than 70% of the land is rocky mountainous areas with a prolonged dry season.

Almost all districts in this new Republic are categorized as iodine deficient areas. With the exception of Aileu district, all 12 districts have prevalence of TGR (Total Goitre Rate) among primary school children exceeding 5%, the WHO/UNICEF/ICC-IDD¹ epidemiological criteria for a mild IDD area. However, 7 out of these 13 districts have TGR prevalence of 20% or above², hence this country is classified as having moderate and severe IDD areas.

Before the independence in 1999, the coverage of iodized salt consumption is 70% with a wide range from 6% in Liquica and 100% in Manufahi³. There were three major threat identified in that period that had prevented the achievement of Universal Salt of Iodation including local small cottage industry that produce salt by boiling sea water; salt produced by natural precipitation in a salt lake in Baucau and import of sub-standard iodized salt either from the neighboring province as well as from Surabaya.

As requested by the UNICEF –Dili Office, the aim of this trip was to rapidly assess the current situation of the salt and salt iodation supply in view of accelerating the achievement of USI in this new republic.

The method of this assessment was a direct observation to the field with particular focus on importers cum grocers, market places, kiosks and household kitchens. Official visits were done to government offices like trade and custom. The field observation also included border trading at two junctions in Salele, Suai and Mota-ain in Bobonaro. Total 9 out of 13 districts were covered during this rapid assessment.

II. The findings

1. Government administration.

Rightly after the referendum in 1999, UNTAET took over the administration of this new nation and just handed it over to the people of Timor-Leste last month when this nation

¹ WHO,1994. Indicators for assessing Iodine Deficiency Disorders and their control through salt iodation. Report of a joint WHO/UNICEF/ICC-IDD consultation. WHO/NUT/94.6

² University of Udayana 1998. Final Report on Goitre Prevalence Survey and Mapping in Provinces Bali, Nusa Tenggara Barat and East Timor. Ministry of Health Republic of Indonesia. Jakarta.

³ Central Bureau of Statistics.1999. Report on the survey of iodized salt consumption at household level. CBS and the Department of Health. Jakarta.

officially proclaimed its independence. The administrative structure is being developed. Trade, Custom, Health and Justice that are related to salt trading have been established but have not yet been functioning particularly for providing data as well as action on enforcing any kind of control. Under such circumstances no official figures on the importation of salt could be obtained.

2. Salt produced by Lake Laga, Baucau.

The sea water intrudes into a ponds located about 500 m from the sea shore and dried up during dry season to produce dirty salt crystal. Only people living in this sub-district have the right to collect the salt from the lake. Salt harvest is mainly done by digging the salt with manual tool and then sell it directly to the market in a palm leave basket . Every year salt harvest takes place for 6 weeks during August and September. A cultural ceremony by slaughtering a buffalo ends the harvest time.

It is estimated this 4 HA lake produces about 300 - 400 MT rock salt every year. The observation on the marketing route of this salt up to the household kitchen found out that almost certain all people in the whole district of Baucau consumes this un-iodized rock salt. The selling price at retail level is \$0.20 per kg.

Before the independence, the Government of Indonesia ever organized a cooperative and assisted salt processing equipment to iodize all rock salt produced in this lake but did not succeed .

3. Salt produced by boiling sea water.

This old traditional way of making salt prevails in 5 districts : Manatuto, Liquica, Bobonaro , Covalima and Oecussi/Ambeno. The method of this salt production is simply boils either pure sea water taken directly from the sea or preparing brine from washing the sand or soil rich of salt collected from the sea shore. Wood collected from the surrounding forest or sometime bought from the neighbor is used as the fuel to boil the brine At certain degree of brine concentration, the salt starts to crystallize and scooped and rinsed in a basket. Filtered brine from washing the salty soil as done by salt boilers from Liquica produces brownish salt but brine taken directly from the sea produces a clean and white salt. . Depending on the type of brine used, the daily production of a stove is about 25-50 kg. Both types of salt relatively have porous crystals with high water content and become watery at the kitchen.

Marketing of this salt is mainly limited to the neighboring sub-districts either directly sold by the producers to the markets or collected by special salt traders. The retail price is vary from \$ 0.10 to \$ 0.20 per kg although it is sold by volume in a tin or plastic mug. At the market this porous salt gives impression that this salt is much cheaper than the labeled salt produced by industries.

Based on the estimated number of stoves in each site, the local salt production from this boiling system is as follows:

* Manatuto	: 300 MT
*Liquica	: 200 MT
*Bobonaro	: 200 MT
*Covalima	: 200 MT.
*Ambeno/Oecussi	: 200 MT
Total	:1100 MT

4. Imported salt.

There are two brands of imported salt found in the markets through out the country, KAPAL (ship) and KUDA (horse). Both are produced by salt industry in Surabaya.

This salt is imported together with other commodities from Surabaya by different importers in Dili. This imported salt is packed in 20 kg corrugated carton consists of 80 small plastic pack of 250 gram. At the grocers in Dili this salt is sold for \$4.75 per carton or \$0.06 per small pack of 250 gram. At the retail level mothers buy it for \$0.10. Both brands have a good product quality: adequate iodine content, white clean fine table salt mixed with caking agent that prevents salt become watery.

Without a special agent for importing this salt, it was difficult to obtain the quantity of the total salt imported to this country.

Marketing of this imported salt follows the general consumer goods and penetrates well to all districts. This direct field observation revealed that places where local salt is produced, the demand for this imported salt is much less. In these areas although we still could found most kiosks selling this imported salt but they did not sell much everyday. Spot check to the kitchens supported that conclusion.

There are other salt imported from Australia packed in a plastic bottle for table salt with brand name SAXA. Unfortunately this salt is not iodized. However, this Australian salt has limited marketing coverage, sold only in supermarket in Dili and found in some restaurants in the districts.

5. Cattle feed.

Most cattle is given salt every day or twice a week. Each cattle consumes 20-50 gram daily. Both types of salt either locally produced or imported salt are given to the cattle. The purpose is to tame the animals. Since the number of cattle population could be obtained, it is roughly estimated about 30% of the total salt demand given to cattle

6. Knowledge and Attitude toward Iodized salt.

During this rapid assessment, interviews with people at different places and level of education strongly indicated that knowledge about iodized salt is quite limited. Those ever heard about iodine in the salt could not explain further the purpose of putting iodine.

III Discussion and conclusion

The production of local salt during this transition time has doubled to about 40% of the total salt demand in the country. The scarcity of imported salt at the beginning of this independence era had pushed up the production of local salt.

Local salt is marketed only to the surrounding sub-districts and considered cheaper as compared to imported table salt. In places far from the local salt producers, people did not recognize local salt. Both local and imported salt are given to cattle. Demand for cattle is estimated about 30% of the total demand for salt in the country.

The majority of salt supply or 60% of the total salt is imported from Surabaya under two brand names: KAPAL and KUDA. There is limited amount of salt imported from Australia (SAXA) which is un-iodized and consumed mostly by foreigners in Dili.

The total salt demand for 850.000 population with 3 kg per capita and 30% allocation for cattle is about 3500 MT annually.

Knowledge on iodized salt is still limited. The coverage of iodized salt at household level is estimated at about 50% at the moment.

IV. Recommendation

The recommended strategy is to focus on three major activities:

[1] Development of legislation to prevent the importation of non-iodized salt and the control system to enforce it.

The activity for this strategy is to help the related government sector to establish a coordination forum for drafting the law. UNICEF role is to help in preparing the draft that suitable to the local situation.

Once the law is issued, a control system is established through the existing structure in the country. At the current stage this control system is suggested to be integrated with the local police. For such purpose the coordination forum for iodized salt is supposed to develop a Standard Operating Procedure for field implementation. UNICEF is to help for this development activities and sponsor the implementation trial in some selected districts.

OUTPUT: A law in Salt Control is issued and the enforcement system is in place with a clear SOP in all 13 districts.

[2] To iodize all local salt production.

A. Lake Laga :

A new method of iodation will be introduced: put iodine to the lake before salt crystallized. This iodation process have to be done evenly to the salty water at the right time in order to get homogenous distribution of the iodine. This iodation scheme and cost implication has to be born by the local government after this project ended.

Being a new idea, a year long exploration and approach to the people in Laga will be needed before implementation started. A specialist related with this work will be consulted or hired as necessary.

OUTPUT: An agreement from the Laga community is obtained on how best to organize the iodation scheme and registered the number of person directly involved in the salt harvest. A technical data are documented on the characteristic of the salt precipitation in the lake; the quantity of the yield and factor influencing it. A method is formulated on how much iodine is to be sprayed to the lake and what kind of method to apply it in order to get homogeneous distribution of the iodine. The end product of this activity will be all rock salt taken from Lake Laga will be iodized with adequate level of iodine and a system to monitor the content is well installed.

B. Salt Boilers

The recommended activity covers the development of a support system that ensure salt boilers iodate their produce before selling to consumers.

This support system is supposed to include approach to create the group dynamic and solicit the agreement among all boilers to participate in the project. This community approach includes registration of boilers and collection of other baseline data.

This project is supposed provide free simple/manual iodation tools such as plastic hand sprayers, wooden tray for mixing iodine and potasium iodate solution. A special on-the job training on how to iodate boiled salt is to be organized. Free plastic pack for packing 250 gram salt is recommended also be freely provided in order to easily identified which member of the group has not participated in the project.

To implement these activities, the project is recommended to hire a community development specialist to train the field workers cum project managers in the field.

The control of this iodation scheme is to be linked up with the activity No.1 on Law Enforcement. The local police should routinely undertakes direct checking of salt sold in the market and hold all non-iodized salt from selling until it is iodized by the producers.

OUTPUT: A support system to iodize boiled salt established and enforcement by police taken place in all 5 mentioned districts.

3. Communication campaign to promote iodized salt .

A locally specific campaign strategy is strongly recommended to be developed aimed at educating people to use only iodized salt. The Campaign should be prioritized in 8 districts where people tend to consume non-iodized salt: Lautem, Viqueque, Baucau, Liquica, Bobonaro, Covalime and Ambeno.

The agreed campaign strategy should be followed by material development, production and placement. A technical resource person is needed to undertake this activity.

A monitoring and evaluation of the campaign should be integrated in the activity plan.

ANNEX 1.

TABLE 1. Total Goiter Rate (TGR) among primary school children and Pregnant Women representing district level in East Timor, 1998.

No.	District	TGR(%)	
		Primary School Children	Pregnant Women
1	Covalima	28	16
2	Ainaro	10	8
3	Manufahi/Same	39	33
4	Viqueque	8	11
5	Lautem	12	15
6	Baucau	34	39
7	Manatuto	27	29
8	Dili	10	1
9	Aileu	3	4
10	Liquica	19	26
11	Ermera	30	48
12	Bobonaro	13	23
13	Ambeno	33	48

Source: University of Udayana 1998. Final Report on Goitre Prevalence Survey and Mapping in Provinces Bali, Nusa Tenggara Barat and East Timor. Ministry of Health Republic of Indonesia. Jakarta.