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# JPRS Report

# Epidemiology

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# Epidemiology

*JPRS-TEP-90-017* CONTENTS *20 November 1990*

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## ANGOLA

### UNITA on Deteriorating Health Standards Under MPLA

*MB2910201090 (Clandestine) KUP in English to Southern and Central Africa 1905 GMT 29 Oct 90*

[Text] Jamba—The MPLA [Popular Movement for the Liberation of Angola] government's policy to force thousands of rural populations out of their home areas and dump them in urban areas is believed to be the main contributing factor to the increased spread of contagious diseases.

Recurrent outbreaks of cholera, measles, anaemia, TB and other contagious diseases is the direct result of the MPLA government's policy of removing people by force from their villages where they have plenty of food and live reasonably well, into overcrowded and filthy settlements where food is scanty and health facilities poor, or in some cases, even non-existent.

Last week's reports that an undetermined large number of men, women and children have died of cholera in Ndalatando, the provincial capital of Kwanza Norte, is one such example.

According to sources, the deaths have occurred as a result of uncollected rotting refuse lying all over the city.

The MPLA government has failed to provide adequate health facilities for the people in urban areas, including thousands who are often forced to stay in the cities because of the MPLA's fear that they may come under UNITA [National Union for the Total Independence of Angola] control. Early this year a team of medical doctors met MPLA President Eduardo dos Santos to complain about the frequent critical shortages of drugs which they said considerably hampers their efforts to render effective medical attention to the public.

The doctors even threatened to go on strike if conditions were not improved. Reports of chronic drug shortages and the swindling of medicines on arrival at the ports of entry into the country are rampant. Apparently, however, nothing has been done to improve the situation.

There are persistent reports of ill-trained medical staff and theft of medicines by workers at hospitals and medical centres throughout the country.

Overcrowding caused by the MPLA government's forced settlement and lack of general health campaigns on immunisation, refuse disposal and personal hygiene and government failure to provide adequate health facilities, all go a long way to show that the nightmare of epidemics claiming more lives is far from over.

## ETHIOPIA

### Meningitis Epidemic Resurfaces

*90WE0359 Addis Ababa THE ETHIOPIAN HERALD in English 19 Aug 90 p 6*

[Text] Several persons were reported killed by the fast killer disease-meningitis epidemic in two awrajas of North Wollo Administrative Region where health centers were demolished as a result of the war and devastation being waged by the Woyane group.

The epidemic which was once to be put under control through vaccination, is now killing several people in Raya Kobo and Mekit Wadla awraja of North Wollo where Woyane groups are busy destroying all development infrastructures.

One eyewitness, who came from the area said that 5 to 10 persons died during the month of April in Raya Kobo awraja owing to the epidemic. He also stated that seven persons are dying every day in Mekit Wadla awraja nowadays.

The eyewitness pointed out that the Woyane group who were asked to give vaccination or any other treatment for that matter, refused to do so, arguing that they keep medicine for members of their army and not for them.

## KENYA

### Plague Outbreak Kills 3, Hospitalizes 17 in Nairobi

*91WE0018A Nairobi THE WEEKLY REVIEW in English 7 Sep 90 pp 13-14, 16*

[Excerpts] The Kabansora Flour Mills, situated in the Embakasi area of Nairobi, lay deserted after it was ordered closed indefinitely by medical authorities last week following an outbreak of plague that affected a number of its employees. The outbreak, which was announced by the director of medical services, Prof. Joseph Oliech, had claimed three lives and, by early this week, 17 other people were reported hospitalised with the disease, 15 of them at the Infectious Diseases Hospital, which is an adjunct of the Kenyatta National Hospital, and one each at the Mater Misericordiae and Nairobi hospitals. For the time being at least, the outbreak appeared confined largely to the Kabansora facility. The three dead, who were identified as Messrs. Edward Wekesa, Charles Musire and Charles Nyabuto, and 16 of the 17 hospitalised cases were all reported to be Kabansora employees. The patient admitted to the Nairobi hospital was understood to be a former student at the Starehe Boys Centre awaiting entry to university. [passage omitted]

Medical authorities, in this case the ministry of health in conjunction with the Nairobi City Commission's health officials, moved swiftly to contain the outbreak. The main focus was on the Kabansora factory, which was

ordered closed immediately. Plans were also set in motion for the inspection of the entire facility by health workers, an exercise that a city commission official said had been going on "constantly" since the closure was ordered. The facility was also to be sprayed with chemicals to kill all rats and other rodents, which are the main carriers of plague, a disease that is passed on to humans after they are bitten by fleas that attach themselves to infected rats. A milling factory, with its abundance of grain, affords an ideal breeding ground for rats. The spraying was also to be applied to all the vehicles at the facility.

In a clear indication of the gravity with which the authorities viewed the outbreak, the chairman of the Nairobi city commission, Mr. Fred Gumo, called the press for a briefing at City Hall on Monday, when he outlined further measures the commission would take to check the disease. Accompanying Gumo were the town clerk, Mr. Njuguna Thairu, the city medical officer of health, Dr. Pius Achola, and other departmental heads. Gumo disclosed at the briefing that the current stock of grain at Kabansora, estimated to be worth over shs. 3 million, would be completely destroyed as it was likely to be contaminated. In any case, he said, the chemicals to be sprayed could contaminate the grain.

The Kabansora factory has a full milling capacity of about 100 tonnes of wheat and maizemeal per day. Lately, it has been operating at 40 percent capacity. The main markets for its products are Kitui and Machakos districts, as well as some parts of Central Province. According to city commission officials, the factory was to remain closed until the rats and fleas were destroyed and the plant deemed safe for the workers. This, they said, might take about a week. Meanwhile, the city officials were full of praise for what they said was the "co-operation" of the factory's management. On Sunday, they arranged a meeting with Nyachae, during which the chairman was briefed of the preventive measures being taken at the plant, whose work-force of about 150 had received priority attention from the health authorities. All of them were reported to have been examined in hospitals and those that were not hospitalised were inoculated against the disease. "Luckily, the problem seems confined to the factory," a senior city commission doctor, who requested anonymity, told the *The Weekly Review* this week. "It hasn't spread yet, so preventive emphasis is on the factory," he said.

All the same, health authorities appeared to be taking no chances. According to Gumo, his commission, together with the ministry of health, decided to conduct joint preventive campaigns targetted at residential zones near the affected factory. A prime target was the Quarry Village along Embakasi Road, where most of Kabansora's junior workers reside. The campaigns involved inoculation and the supply of preventive drugs, as well as advice on health and hygiene. Constant surveying and monitoring of any further outbreak of the plague was understood to be going on. Such surveys, according to the city commission, could be extended to other low-income slum areas like Kibera and Mathare, where such diseases are prone to spread quickly and even turn into epidemics. In the meantime, the families of the Kabansora workers have all reportedly been given the necessary preventive drugs.

One crucial area that needed to be addressed concerned the piling-up of rubbish and rotting waste all over Nairobi estates, especially in the low-income areas, where such infectious diseases are a constant threat. Rats multiply quickly where such rubbish is abundant, and with last week's outbreak of plague, this question of uncollected rubbish can no longer be ignored. According to Gumo, the commission will intensify its efforts in refuse collection and disposal in the wake of the outbreak. However, such promises have been heard often before from the commission when it is faced with complaints from city residents, and to little avail. The main problem would seem to be an acute shortage of refuse collection vehicles. At present, the commission has about 28 trucks available at any given time for refuse collection. This is an improvement on the situation last year, when only about half that number could be deployed. But for a city with nearly two million people, such a fleet is clearly inadequate.

Oliech warned the commission about the danger presented by uncollected rubbish when he announced the plague outbreak and also outlined many of the preventive measures that the commission and the ministry soon after initiated. He directed all health centres and hospitals in the city to be on the lookout for patients with plague symptoms, and asked city residents with coughs to consult doctors to ascertain the coughing was not linked to the disease. He also appealed to anyone who had been to the plague's "focal point" and travelled elsewhere, "especially to the rural areas," to report to a health facility for treatment. Another appeal was directed to the National Cereals and Produce Board (NPCD) to check its silos to ascertain whether or not they were contaminated. The NPCD stores the bulk of the grain marketed by farmers in the country, and any contamination of its stores would amount to a major emergency. The NCPD has several grain silos with a total capacity of 80,000 tonnes situated at Embakasi, just in the vicinity of Kabansora. On Monday, the minister for supplies and marketing, Mr. Musalia Mudavadi, issued a statement saying that the silos were clean, and did not harbour rats and such pests. According to Mudavadi, his ministry had responded to Oliech's appeal by sending a team of technical officers to inspect the grain silos and surrounding areas. "The team ascertained that there is no infection or signs of infestation by rodents or storage pests on the premises and on the grain itself," Mudavadi said.

Plague is classified in the category of infectious epidemic diseases. Being highly infectious, it means an outbreak like last week's, if not promptly combated, has the potential to turn into an epidemic and cause a national health catastrophe. In the same category are other

dreaded diseases like cholera, yellow fever typhoid. Plague's symptoms are fever, coughing and swelling of the lymphatic glands; the disease has a very high mortality rate. It has been so over the centuries, especially in Europe, where it wiped out whole cities in the Middle Ages and was referred to as the "Black Death". Since the last century, it has been more or less confined to the tropics, although its incidence has also greatly declined. According to *Black's Medical Dictionary*, about 1,000-6,000 cases are reported annually, of which 100-200 are fatal. The disease is said to be endemic in certain places, like in south-western China, and in certain areas of India and East Africa. It is caused by a bacteria, *Yersinia pestis*, which infects rodents like rats. The fleas infected by the rats in turn infect the humans they bite. An infected person can readily spread the disease through sneezing.

The most effective measure against an outbreak of plague involves the quarantine of infected persons. Where this may not be practicable, health workers resort to monitoring the movements of those likely to be at risk. Oliech was alluding to this when he appealed to any person who had been at the "focal point" of the outbreak and then travelled elsewhere to report to a health facility for examination. The other main preventive measures were not ignored by medical authorities in their efforts to stem last week's outbreak. One such measure is disinfestation, which involves the spraying of chemicals, such as DDT, on contaminated sites. Inoculation of people at risk is also another preventive measure, although its protection capability is limited to only about six months after the date of inoculation. Being a bacterial disease, plague is treated with antibiotics, a treatment which health workers say is easy if the disease is reported early. [passage omitted]

## MAURITIUS

### Hospital Child Care Found 'Inhumane'

*91WE0017A Port Louis LE MAURICIEN in English 21 Sep 90 p 7*

Editorial: "I Only Deal With Policy Matters"]

[Text] Being trained nurses we thought it would be a good idea to visit a couple of general hospitals. We requested permission from the Medical Administrator of each hospital and we visited these hospitals in the island and other services provided by the Government which are free to the public. On the 3rd of August we were introduced to one of the Nursing Administrators who was kind enough to show us the wards of the hospital.

Although the wards were kept clean and tidy, the nurses did not appear to be doing anything beside standing around. This was obviously due to over staffing as every ward we visited had only a few patients but all wards had four nurses. It would have been reassuring to see that they were using their nursing skills to the limit but we did not see a single nurse comforting or reassuring any patient. This need of comfort is universal. It is very important to comfort the sick not only to offset the discomfort of illness and anxieties, but also being in a hospital environment. This was more noticeable in the children's ward and it was quite distressing to visit and indeed a sad sight. What we saw was inhumane and degrading and we would not have the nerve to call ourselves *NURSES* if we started practising what we saw.

We saw small children being tied up to the cots ends by bandages around their ankles and hands. Another child was quite distressed by having both hands tied up to the side of the beds and helpless to move a fly from his mouth. This is indeed a disgrace to the nursing profession. We saw another child not more than 2-3 years old fast asleep, but still had her legs and hands tied up. Just imagine the discomfort of sleeping in one position and unable to turn or even move your hands and legs. We saw four nurses on duty and only five children and not a single child was being comforted by the nurses and the easy option was to tie them up. Don't the nurses keep themselves up to date with modern nursing practices? The alternatives of children who try to pull the drip from their arms are:

(1) Mittens could be put on their hands;

(2) Tubi-grip bandages on their hands and this would not restrict movements;

(3) Have their mothers staying with them by their bedside rather than spending miserable hours at home thinking about their child laying alone and not spoken to for hours;

(4) The nurses could occupy these children especially when you see four nurses and five children.

As trained nurses we do realise that there are times that the wards would be full, but even then there is no reason to tie up a child, it would be more appropriate to seek medical intervention. Furthermore, we wanted to know why these children were tied up and the spontaneous answer from the staff was "to protect them" and "zotte mauvais." It is beyond my understanding why a children's ward did not have any nursery pictures, comic books or any toys around for them to play with. There was no light music on any of the ward and there was complete silence. The potential for providing comfort is bound up with most nursing activities and its release often depends upon the relationship between nurse and patient and recognition of the need for comfort and opportunities to provide it. Indeed the children needed comforting and the opportunities were there to provide it. However, valuable time was wasted.

We met the Hon. J. Goburdhun, the Minister of Health, on the 4th of August and he told us he does not get involved at nurses level as there is a nursing administrator. I reminded him that he is the Health Minister and children are suffering but his reply was "I only deal with Policy Matters" and he avoided the real issue by comparing Heart Surgery in Mauritius with Europe. Had he

visited a few hospitals in England I am sure he would then understand that comparison cannot be made as the quality of care will be beyond his understanding.

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## MOZAMBIQUE

### Influx of Former Captives Increases Disease Hazards

*MB1510130290 Maputo Domestic Service in Portuguese 1030 GMT 15 Oct 90*

[Text] Some 1,500 people lack appropriate health care in Mugeba, Zambezia Province's Mocuba District due to an increase in the number of diseases reported in the province in the past three months. The main causes of the diseases have been attributed to poor sanitation and the increasing number of people fleeing from armed bandit captivity.

A total of 38 cases of diarrhea were reported in August and September, causing the deaths of eight people.

### Cholera Kills 3 in Maputo City; 1,240 Cases in All

*MB0810140090 Maputo Domestic Service in Portuguese 1030 GMT 8 Oct 90*

[Text] A Health Ministry source told our correspondent today that three people have died of cholera in Maputo city. The capital is the fifth region of Mozambique to be hit by a cholera outbreak. Five cases have so far been reported.

The cholera outbreak was first reported in Tete Province, spreading then to Sofala, Zambezia, and Nampula provinces. A total of 1,240 confirmed cholera cases have been reported in the country, with 58 people killed.

No cholera cases have been reported in Tete and Sofala provinces in the past month.

### Maputo To Establish Committee To Fight Cholera

*MB1110201090 Maputo Domestic Service in Portuguese 1730 GMT 11 Oct 90*

[Excerpts] Maputo City, just as was the case with the cities of Tete, Beira, and Quelimane, is currently hit by a cholera outbreak. Maputo health authorities believe that apart from prevention and curative measures, there is a need to establish a committee to fight the disease, involving all sectors that are directly or indirectly connected with the issue. This was pointed out by Maputo Health Director Dr. Joao Leopoldo when our reporting team interviewed him on cholera outbreak in Maputo City yesterday. Before giving details on the establishment of a city committee to fight cholera, the Maputo City health director commented on the case of Muthemba family where both a mother and daughter died of cholera.

[Begin Leopoldo recording] [passage omitted] We favor the establishment of a committee to fight cholera in Maputo. This committee must be led by the Maputo mayor himself and involve all sectors in the fight against cholera. For example, with regard to water supply, I believe that water fountains would help us resolve the problem. We are trying to obtain finances to achieve this goal. However, it is necessary that people connected with maintenance and management work should be fully committed. [end recording]

### Five Cholera Cases in Maputo

*MB1210185490 Maputo Domestic Service in Portuguese 1730 GMT 12 Oct 90*

[Text] A total of 28 people suffering from diarrheal diseases have been admitted to the Maputo Central Hospital. Maputo City Health Director Joao Leopoldo said that of the 28 people, five are confirmed cases of cholera. The remaining people are awaiting laboratory results expected to be known today.

Meanwhile, a French humanitarian organization, Medicins Sans Frontieres, donated medicines to the Maputo City Health Directorate to treat people suffering from cholera.

### Number of Cholera Cases in Maputo Rises to Ten

*MB1310185890 Maputo Domestic Service in Portuguese 1730 GMT 13 Oct 90*

[Text] Maputo City has so far registered 10 cases of cholera, including three deaths. Seven of the people suffering from cholera have been admitted to the Maputo Central Hospital. A total of 26 people suffering from diarrhea have also been admitted to the Maputo Central Hospital.

### Maputo Health Director Says Cholera 'Under Control'

*MB1510151290 Maputo Domestic Service in Portuguese 1400 GMT 15 Oct 90*

[Text] Maputo City Health Director Joao Leopoldo has said that the cholera epidemic which broke out at the beginning of the month is now under control.

Dr. Joao Leopoldo said 14 cholera cases have been confirmed so far, including three fatal ones.

### Number of Maputo Cholera Cases Rises to 16

*MB1610115390 Maputo Domestic Service in Portuguese 1030 GMT 16 Oct 90*

[Text] The number of cholera cases in Maputo city has risen to 16. A total of 25 people suspected of having contracted the disease are at the Maputo Central Hospital.

Maputo City Health Director Dr. Joao Leopoldo said that no further fatal cases have been reported.

### Maputo's Cholera Cases Rises to 23

*MB1910062990 Maputo Domestic Service in Portuguese 0500 GMT 19 Oct 90*

[Text] The number of confirmed cholera cases in Maputo city has risen from 16 to 23. Maputo City Health Director Dr. Joao Leopoldo said the number of suspected cases now stands at 68. He added that of these cases, six were treated at the Catembe health center, and the others at Maputo Central Hospital. Dr. Leopoldo was speaking in Catembe yesterday.

Meanwhile, Catembe health authorities have ordered the closure of Diogo restaurant because it was a potential source of cholera.

### Cholera Kills 19 People in Lugela, Mocuba Districts

*MB2610093190 Maputo Domestic Service in Portuguese 0900 GMT 26 Oct 90*

[Text] Radio Mozambique's Quelimane correspondent reports that the cholera epidemic in Zambezia Province has reached Mocuba and Lugela districts.

Citing Radio Mozambique's Mocuba district correspondent, that source reports the existence of some 200 suspected cholera cases. A total of 19 people have already died. Our correspondent also reports that cholera is believed to have killed another 18 people outside the hospital.

### Health Ministry Lists Cholera Figures

*MB2910190890 Maputo Domestic Service in Portuguese 1730 GMT 29 Oct 90*

[Text] There have been no further cases of cholera in Tete [Province] from the second half of August until now. A total of 799 cases of cholera and 31 deaths had been registered in the district until that period.

So far, 21 deaths have been registered in Beira City. The last case of cholera was registered last month.

The source also added that 20 cases and 13 deaths have been registered in Nampula since the outbreak of cholera there.

Maputo City had registered 42 cases and 3 deaths by last Saturday.

The source also pointed out that cholera outbreak continues in Zambezia Province, particularly in the districts of Mocuba, Mopeia, Nicoadala, and Quelimane City. A total of 773 cases of cholera and 36 deaths have so far been registered in Zambezia Province.

### 11 Children Dead from Measles in Cabo Delgado

*MB0310070090 Maputo Domestic Service in Portuguese 0400 GMT 3 Oct 90*

[Text] A total of 11 children have died since an outbreak of measles reported in (Mundu) village of Ancuabe District in Cabo Delgado Province early this year. Reports from Pemba say that 153 children from that village are suffering from measles.

### Measles Kills 90 in Cabo Delgado Province

*MB1710132690 Maputo Domestic Service in Portuguese 1030 GMT 17 Oct 90*

[Excerpt] Some 1,000 children of up to four years-old were severely hit by a measles outbreak in Cabo Delgado Province during the first six months of 1990. The outbreak, which has killed more than 90 people, is still afflicting all of Cabo Delgado Province's districts, except Meluco and Pemba city.

Provincial Health Director Vitorino Nhamazau has described the current outbreak as the most severe in the past five years. He attributed the situation to a decline in the vaccination campaign in 1989. The decline was due mainly to lack of transportation, fuel, and the war in rural areas. [passage omitted]

### 93 Children Die of Measles in Cabo Delgado

*MB2110110990 Maputo Domestic Service in Portuguese 1030 GMT 21 Oct 90*

[Text] A total of 93 children, up to the age of four, have died of measles in Cabo Delgado Province during the first half of this year. Provincial Health Director in Cabo Delgado Vitorino Nhamaza has pointed out that cases of measles have increased substantially in the province this year because of low vaccination coverage in 1989.

### Cabo Delgado Province Identifies 800 Cases of Measles

*MB2210071890 Maputo Domestic Service in Portuguese 0500 GMT 22 Oct 90*

[Excerpt] More than 800 cases of measles were identified in Cabo Delgado Province during the first half of this year. Only 300 cases had been detected by the first half of last year.

Vitorino Nhamazau, health director for Cabo Delgado Province, has said the cases of measles increased this year as a result of low vaccination coverage in 1989. [passage omitted]

## SENEGAL

### Health Care Declines With Standard of Living

*91WE0007A Dakar WAL FADJRI in French 6 Sep 90 p 8*

[Article by Thierno Gningue: "Senegal's Hard Times"; first paragraph is WAL FADJRI introduction]

[Text] "Economic-trend victims," "tired," "pauperized," "destitute": the Senegalese have plenty of words to describe their current situation. Purchasing power has eroded over the last 20 years, and today the adverse material conditions of most of our fellow citizens translate into a rise in indicators that basic human needs (health, schooling, housing, and so on) are not being met.

Without enough money to feed, clothe, and house themselves properly, many Senegalese are unable to attain a minimal standard of living. For the vast majority of the population, both rural and urban, personal income barely covers fixed expenditures for minimal basic food consumption.

"As in a television series, we are living through the last five minutes," ironically comments a bureaucrat in the Ministry of Rural Development. He adds moreover, "You should not even be asking us about the pauperization of Senegalese: as one of the country's children, you should be feeling it." "Yes, but certainly there is a segment of the population that does not feel it," I replied. "Not state workers, in any case. Our salary does not allow us to live as we once did," he explained, thereby raising an important problem—the tumble in purchasing power of the Senegalese.

During a general meeting they held at the labor exchange two weeks ago, trucking labor unionists said before the general secretary of the CNTS (National Confederation of Senegalese Workers): "Because of the high cost of living, we are no longer able to meet our daily "expenses."

The truckers therefore asked that authorities put an end to the unjustified police harassment of which they are daily victims. That is right—the police are also tired and are trying to meet their daily "expenses" with the money they squeeze from their highway "cousins." "The cost of living bears no relation to the incomes of teachers," asserts Moussa Samb. The secretary general of the Autonomous Union of Secondary Teachers (SAES) continues: "Our needs are not limited only to basics (food, clothing, shelter). We also have expenses linked to our teaching duties." Survival is assured by various expedients: tutoring, sale of photocopied courses, etc.

One of the principal causes of the pauperization of Senegalese is indeed the depreciation in their buying power over the years. Studies done in the Statistics Directorate show that in 1960, it took 194.67 CFA [African Financial Commuinty] francs to equal the buying power of 100 1949 CFA francs. In 1988, those 100 CFA francs were equivalent to 1194.06 CFA francs. Today, with the establishment of an impressive arsenal of every kind of tax and the elimination of any kind of price supports for consumer goods by government authorities, who show absolutely no interest in an income policy indexing Senegalese salaries to the high cost of living, the equivalent in buying power of the 194.67 1960 francs would be close to 1,500 CFA francs.

Yet the World Bank stresses that if the government's action is to be successful, it must be motivated by the firm desire to improve the living conditions of the poor. And in this respect, political factors are the most important. The main conflict to be negotiated is not between economic growth and pushing back poverty, but between the interests of the poor and those of the rich.

Senegalese authorities would do well to reflect on these remarks, in order to set up a socially just tax policy whose implementation would relieve the poverty of the majority of Senegalese by redistributing income from the rich minority to the poor majority. That too is one of the functions of taxation.

The worst poverty is to be found in the rural areas. When, just a month ago, our WAL FADJRI colleagues entitled an article "The Rural World Set Adrift," they wanted to show just how pauperized the Senegalese farmer had become. The latter is trapped in an infernal circle of hard-to-get seed and fertilizers, the constant threat of drought and the locust peril, and mortgaged cash income. His poverty is made more absolute by the fact that the new agricultural policy is not matched by any state subsidies.

The explosion in urban unemployment is explained by this rural situation. Indeed, many villages in the center of the country are now totally bereft of their physical strength. Rural youth, boys and girls, are streaming into Dakar. And when they find a livelihood, often in the underground sector, they tend to send for the whole family, whose members will become unemployed dependents on their income. There is no miracle assuring the subsistence of the unemployed: They skim what they can from the income of workers, most often taking advantage of the latters' destitution.

The adverse material conditions of most Senegalese translate into a rise in indicators that basic human needs (health, schooling, housing, etc.) are not being met, but also into a string of sociological and economic urban phenomena.

The health of the vast majority of the population is precarious. According to the secretary general the Sole Union of Health and Social Workers (SUTSAS), Mr. Bakhao Seck, health has become a matter of class. Those without money do not seek care. Certificates of need are now worthless because the poor pay the same as the privileged. The upshot is that many Senegalese are stranded with prescriptions they cannot fill for lack of money.

"The state lacks the political will to set up a health-care system that is effective by being motivating, and that serves the whole population by being accessible to the poorest," says Mr. Bakhao Seck. Malaria still devastates the population, while extraordinary media fanfare is being made about an expanded vaccination program (Pev) whose only goal is to attract outside money that is often misappropriated. As a result, the operation's stated performance rarely matches up with reality.

In 1970, 574 deaths were reported from 472,461 cases of malaria. In 1978, the number of deaths grew: 685 people out of 414,031 cases would not survive. In 1988, 56.15 percent of the 77.98 percent of diagnosed malaria cases did not survive.

The population's access to health care is inadequate: one doctor for 23,212 inhabitants in 1987 and one nurse for 9,015 inhabitants in the same year. We do not have more recent figures, but given the current state of health care, we can attest to the fact that ratios have not improved.

The life expectancy of Senegalese is low (52 years) and the rate of child mortality still high: It dropped from 147 per thousand in 1980 to 131 per thousand in 1987.

Another aspect of the pauperization of the Senegalese is the low rate of school attendance: only 51 percent of boys between seven and 12, compared to 36 percent of the girls, go to school. Thirty-two percent of children between 13 and 16 years of age go to secondary schools. And that inevitably brings us to another aspect of unmet human needs, and thus of poverty as defined by World Bank criteria: the persistently high level of illiteracy. Of the population, 72.8 percent can neither read nor write in any language.

## SEYCHELLES

### Tourist Criticizes Medical Care

*91WE0006 Victoria SEYCHELLES NATION in English No 1, 22 Aug 90 p 6*

[Article by Rebecca E. Potter Editorial—"A Total Disgrace"]

[Text] Upon finding myself in great pain resulting from a severe eye infection, I was advised to report to your casualty clinic, central hospital, where as a tourist I would be given attention. On my arrival at just past noon on Thursday 9 August, I was impolitely told by the receptionist nurse, "There is a doctor but I do not know where he is," and without any further word she turned her back and kept me standing right where I was, unattended, for a good 15 minutes.

Amazed by such an attitude and not knowing what to do, I drove downtown and tried Mrs. Stevenson Delhomme whom, I was told, is a private practitioner. To my total disgust, she told me that she only works from 7.00 a.m. to 11.00 a.m. and thus refused to consult me altogether.

My third dilemma was to call at the English River clinic. There I could not even find anybody at the reception and as I bumped into a nurse in the corridor, I was told there used to be a doctor for tourists but that she was not sure whether this was still being practiced.

As instructed I waited outside only to be told almost half an hour later that there was no doctor available.

At this point I decided to take a last chance and drove to Mr. Fock Heng's pharmacy where, contrary to what I had already been through, I was attended to with utmost kindness, efficiency and professionalism.

To Mr. Fock Heng and his staff thanks and congratulations for whitening the Seychelles medical image in the eye of a visitor.

From all the above mentioned, I cannot help concluding by saying that your present medical system is a total disgrace and indeed in great crisis. Visitors who come to your islands should not only be allowed to enjoy the sun and the beach, but should be reassured of a decent and efficient health system no matter the cost implications.

At this point may I call on the Ministry of Health of Seychelles to seriously look into the matter and adopt the necessary measures in order to avoid further repetition of similar disgraceful situations.

## Encephalitis Reportedly Kills Over 500

*HK3010115090 Hong Kong AFP in English 1133 GMT 30 Oct 90*

[Text] Beijing—More than 500 people died in a hitherto unknown outbreak of encephalitis-B this summer in China's central Henan province, the official Health News reported Tuesday.

Some 10,000 people were stricken by the disease, an infectious inflammation of the brain, it quoted Dai Zhicheng, head of the Ministry of Public Health's epidemic prevention department, as telling Chinese reporters.

He blamed the epidemic on severe flooding in the area in recent months and a shortage of vaccine caused by higher pharmaceutical prices.

Without giving details, Health News said epidemics triggered by natural disasters such as floods, typhoons or drought also occurred in 10 provinces.

Besides Henan, two other provinces—Anhui and Hubei—suffered encephalitis-B outbreaks, while Sichuan, Jiangsu and Anhui saw major cases of dysentery and hepatitis.

## Prevention of Animal Epidemics 'Successful'

*OW2310114390 Beijing XINHUA in English 1041 GMT 23 Oct 90*

[Text] China has been successful in controlling major epidemic diseases usually contracted by pigs and chickens, and has decreased the likelihood of some common diseases shared by animals and humans.

According to the Ministry of Agriculture, since China issued a decree concerning epidemic prevention five years ago, various supervisory institutions, which employ 20,000 people, have been set up to control and prevent animal disease.

China has formed a nationwide network concerned with epidemic prevention. The country checks over 100 million of its domestic fowl and poultry and 16 million tons of meat annually. Thus far the country has saved 1.5 billion yuan in ecocomic losses.

At present, epidemic prevention is practiced all year by using comprehensive quarantine methods, instead of only in the spring and autumn when disease is most likely to occur.

# INDONESIA

## Possible Cholera Cases in West Java

*90WE0330A Jakarta SUARA KARYA in Indonesian 21 Aug 90 p 7*

[Text] Bandung—A cholera epidemic has again hit the residents of Bandung Regency. Four victims were yesterday reported to have died, and 164 others are being treated intensively at clinics.

Based on observations made by officials of the Bandung Regency Health Service contacted by SUARA KARYA yesterday, the Cilengkrang Subdistrict is the most seriously affected by the epidemic. The officials deny, however, that the patients are being treated for cholera.

"They do not have cholera, merely ordinary diarrhea," they said.

Drs. K.H. Otjo Busjro, head of the Public Relations Section of the Bandung Regency Regional Government, also denied that there is a cholera epidemic in his regency. Otjo said there are, however, five areas in the regency that have been hit by diarrhea.

"The illness is only a normal, acute stomach ailment. It cannot yet be categorized as cholera," he said. This acute stomach illness has been prevalent in these areas since early August.

Because residents are suffering only diarrhea, Otjo said, the patients need treatment for merely one day. After such treatment, they recover quickly, regain their health, and return to their homes.

Since the beginning of August, several villages in five subdistricts of Bandung Regency have been affected by the stomach illness. Based on SUARA KARYA monitoring of four clinics in the regency's western part, 325 patients have been treated. They are said to have recovered after two days of intensive treatment.

### Thursday Night

According to another report, the illness became serious on Thursday night of last week [16 August]. According to Didi, a paramedic at the Soreang Clinic, at least 50 people were treated at the clinic.

"The most patients, 35 of them, came from Banjaran," Didi said.

Many of them who were treated at the Soreang Clinic could be helped, however. On Saturday [18 August], some were permitted to return to their homes. As of yesterday, Monday, 25 patients were still receiving intensive treatment.

A serious epidemic has indeed struck Cilengkrang Subdistrict, where 104 have fallen ill and four have died. The ones who died were Ade (7) and Karya (54), from Panatag Community, Melati Wangi Village; Momoh (12), of Pasirjati Village; and Nunung (11), of Pasirluhur Community, Panjalu Village.

The 100 patients from Cilengkrang Subdistrict whose lives were saved are now being treated in separate places. Twenty-five of them are being treated at St Yusuf Hospital, 36 at the Cilengkrang Clinic, 36 at the disease prevention command post at the Pasirluhur Elementary School, and the rest at HS [expansion unknown] Hospital.

Yesterday, the number of patients at the Pasirluhur command post declined by two. Ijan, an official at the command post, said the two people had recovered.

### City of Bandung

The stomach illness has also struck residents of the City of Bandung, as evidenced by the number of patients taken to HS Hospital.

An official at HS Hospital said that at least 56 victims of the illness have been treated there in the last 10 days. As of yesterday, however, there was no information on whether they had recovered, died, or needed lengthy treatment.

The cause of the stomach ailment outbreak is not known yet. As of yesterday, Health Service officials were still investigating, but tentatively they believe the illness was caused by certain food and the change of season.

# SOUTH KOREA

## Researchers Find Fatal C-Type Hepatitis Antibodies

*SK2810033990 Seoul THE KOREA TIMES in English 28 Oct 90 p 3*

[Text] A research team at the Genetic Engineering Center of the Korea Institute of Science and Technology (KIST) has discovered antibodies of C-type hepatitis, which is said to be more fatal than the common A- and B-type hepatitis.

The important discovery was reported by Drs. Kim Chol-chung, Kim Won-yong and Choe Chae-yun of KIST at a symposium of the Korea Microbiology Society held in Chunchon Friday.

The KIST team had studied 452 hepatitis patients hospitalized at Seoul National University Hospital and Taejon St. Mary's Catholic Hospital in May and June and found particles of the C-type hepatitis virus in five patients through electromicroscopic test.

They also succeeded in separating the nucleic acid from antibodies of the C-type hepatitis and synthesizing genes from the nucleic acid.

Due to the feat, the KIST researchers claimed, the development of a vaccine which can fight in disease will be possible shortly.

The fatality rate of the C-type hepatitis is estimated at 1-2 percent, five times higher than A-type (0.1-0.2 percent) and four times greater than the B-type (0.2-0.5 percent).

The A-type hepatitis is an acute type, while the B-type is chronic.

The C-type is said to be more chronic than the B-type and it often results in cirrhosis of the liver or cancer.

The C-type hepatitis is caught from food or blood transfusions. Its latent period is 49-56 days, longer than A-type (15-45 days) and shorter than B-type (30-120 days).

The existence of the C-type virus was recently brought to light through culturing the virus.

Two research teams from SNU [Seoul National University] Hospital and the Red Cross Central Blood Center found that 0.9 percent of hepatitis patients carry the C-type virus through tests of blood donors last July.

## LAOS

### Malaria Situation Under Control

*BK2010161090 Vientiane KPL in English 0928 GMT 20 Oct 90*

[Text] The rate of malaria infection in Laos now stands at 14-15 percent, lower than that of 15 years ago at 25.60 percent.

Mr. Khamlian Phonhsena, director of the Malaria and Parasitology Institute, noted that malaria had been put under control and it was not as grave as before. Since 1986 the cases infected by malaria have grown up by season especially in the rainy season.

He went on that however, up to now, the outburst of malaria in some localities was still severe. The rate of malaria infection in the northern provinces of Phong Saly, Bokeo, and Houa Phan was at 17-50 percent and in the southern Sekong and Attopeu at 51.50 percent. The high rate of infection in these provinces was caused by the inadequate resources in terms of personnel, vehicles, and equipment used in the framework of malaria control. The activities of health education were not enough. This had affected the mode of living of mountainous people which remained backward.

### Phong Saly Malaria Incidence

*90WE0351A Vientiane PASASON in Lao 31 Jul 90 p 1*

[Excerpt] During the production season this year the Phong Saly Province Malaria Station sent medical cadres out to check for malaria among the people, cadres and soldiers in the municiple area and districts in a wide-scale effort.

During this period they checked the health of more than 2,900 of the people, cadres and soldiers in the municiple area of the province. Among these they found 471 with malaria, primarily of the falciparum type, which 367 had, but also of the vivax type, which 102 had, and of the [quartan] malaria type, which two had. They gave injections for malaria to most of those with the disease. [passage omitted]

### Malaria in Bolikhamxai

*90WE0351B Vientiane PASASON in Lao 14 Jul 90 p 1*

[Excerpt] According to a report of the public health service of Khamkeut District, Bolikhamxai Province, the disease most likely to occur in this district was malaria. Its average incidence was about 30 percent.

Recently blood tests of 232 doctors in the malaria branch indicated malaria in 80 of them. [passage omitted]

### Pasteurellosis, Hoof, Mouth Outbreak in Khammouan

*90WE0351C Vientiane PASASON in Lao 14 Jul 90 p 1*

[Report by Bouakangbeung: "More Than a Thousand Cattle and Buffalo Die in Khammouan"]

[Text] I came to observe the situation in which cattle and buffalo in many localities throughout Khammouan Province were dying. It could be seen that this problem was still spreading a great deal. It was caused by pasteurellosis and in some cases by hoof and mouth disease.

According to the figures of the conference for summarizing the accomplishments of the first six months of 1990 of the provincial agriculture and forestry service held on 3 July, 734 of the people's cattle and buffalo have died in the past six months from various diseases. This figure was many times higher than for the same period last year.

Comrade Vaiphot, a provincial veterinary cadre, reported that this figure of 734 animal deaths was not a summary for the whole province—it was for only two cantons. These were Sok Canton and Thongkham Canton of Boualapha District. The disease causing them, pasteurellosis, was spreading seriously. According to the people of these localities, the cattle and buffalo started to die in January. In the period from January to March there were not many deaths from disease, but disease spread quickly during the rainy season from May until now; 1,000 poultry died in the two cantons. It reached the point where they were not buried. Many were left lying in streams. The people there, who had never used boiled water, all had to boil their water. Some people were confused and said that the spirits of the houses and districts had taken spouses this year, gotten drunk and had killed cattle and buffalo without stopping. They said that next year if the spirits took spouses again, they would take care of their cattle and buffalo; they did not want them to die.

Actually this was an area where people liked animal husbandry and liked to raise a great deal of livestock. A family would raise at least five to six head, and a family with a great deal might have 30 head or more. However their methods of animal husbandry were basic; they let their livestock wander freely. Most of them stayed in the forest all the time. They ignored giving their livestock injections to prevent disease. In addition to this area there were many other localities where the cattle and buffalo had contracted disease and died. Because of the spread of the disease into Thakhek District there were deaths in Ban Sangmeuangba Canton of Thakhek District and two or three cantons around the town of Thakhek; four or five days later in Ban Nameuang Village downstream on the Mekong River there were five more. In addition in Hinboun District, Gnommalat District, Mahaxai District and Nong Bok District there were similar deaths because of the spread of the pasteuellosis. There have been a total of more than 1,000 deaths of cattle and buffalo so far in Khammouan Province.

These livestock had not received injections. Injections were given to livestock when they were not sick. Why give them if the livestock were not sick? I asked this of Comrade Thongsi, the head of the provincial livestock veterinary service. He responded that when they went out to give injections the people refused them, especially the people of Sok Canton and Thongkham Canton where so many animals died. The people said that there was nothing wrong with their livestock so why give injections! We did not know that when their cattle and buffalo died, the spirits would come to favor injections.

In any case the veterinary cadres of all these localities should redouble their efforts. They should not wait for orders or reports from the grassroots. They should have a plan to collect the data on the number of livestock the people had of each type and be prepared to give injections before the rainy season and to help with other problems. If the problems of disease prevention and care are not mastered, animal husbandry throughout Khammouan Province will decline steadily.

## THAILAND

### Contact Planned With Cambodia Over Drug-Resistant Malaria

*90WE0342B Bangkok BAN MUANG in Thai 26 Aug 90 p 18*

[Text] Dr. Prasong Buranaphong, a deputy minister of Public Health, was interviewed by reporters after being chairman of the opening of the war on Malaria. He said that the border provinces of Thailand, especially Trat Province, had the highest level of malaria in the country. In the past there had been statistics indicating that of 100 people 58 would suffer from malaria, or that of 1,000 people 211 would suffer from malaria. The death rate from malaria had been 45 per 1,000 people. This caused great concern. At present the death rate has declined to only 20 per 1,000 people, but this was still not satisfactory. There should not be more than five per 100,000 people who suffered from malaria.

Dr. Prasong said that one reason malaria was still so prevalent in Trat Province was that about 10,000 people per month travelled back and forth between Trat Province and Cambodia. The ministry had set up inspection points to check the blood of those entering and leaving for malaria in order to prevent this problem. In addition it gave mosquito netting to these people which had been coated with pairiton [pyrethin] to prevent mosquitos from biting them. And it had officials spray DDT around houses.

In any case these anopheles mosquitos were getting more skillful; they bit people outside their houses and created an even greater problem. As far as those who suggested that people take medicine, he felt that at present there was more resistance to medicine because the people had used the medicine incorrectly.

He said that he would go to Cambodia to take part in finding methods to prevent malaria. These would be beneficial for both countries in controlling the mosquitos which carried malaria.

The budget for malaria prevention this year was about 490 million baht. This would be used to buy DDT to kill the mosquito larvae and pairiton to control the mosquitos later.

"I implore the people to sleep inside mosquito netting to prevent mosquito bites and malaria. This is the best method of prevention. I think those mosquitos are worse than tigers."

Dr. Thira Ramsut, the Director of the Department of Communicable Disease Control, said also that illness from malaria was the most serious problem for Borai District. Up to 3,600 malaria patients per month were coming for treatment to the Borai District Hospital, which was the highest incidence in the country. And five to six people per month were dying; they generally were very sick - so sick that the malaria affected the brain. They died very quickly. Because people from all sections of the country were working to mine gems in Cambodia or haul supplies through to these gem mining areas, they had been contracting the very severe strain of malaria which was widespread there. If those sick with this strain were not cared for quickly, they would die within seven to 10 days as this severe strain had been found to have a tendency to resist drugs in 50 percent of the people coming for care and in 65 percent of the people coming for care from the countryside. When these people returned to their native areas, they would take this resistant strain with them and spread it in every section. This was causing a great deal of concern among the Thai people, and it would cause an even greater problem for malaria control throughout the country. Therefore it was necessary to rush to halt the spread of malaria on a continuing basis.

## BULGARIA

### Hepatitis Cases Increase, Vaccine Costs Rise

*90WE0340A Sofia DUMA in Bulgarian 7 Sep 90 p 2*

[Article by Katya Karagyaurova: "1,600 Hepatitis Cases in a Month, All Medicines by Prescription"]

[Text] So far no cholera cases have been registered in our country, whereas, in countries such as Algeria, Morocco, and our northern neighbor, there are epidemics. Minister Professor Ivan Chernozemski stated this in yesterday's press conference at the Ministry of Public Health and Social Welfare.

According to data made available by the Romanian Ministry of Health, up to 30 August new cholera cases there numbered 183, one with a fatal outcome. The measures now being taken in our country to improve hygiene are by no means superfluous. Although there is no cholera, there is alarm. In August alone in our country, 1,600 cases of infectious hepatitis were registered as against 580 last year. This threefold increase suggests that there is a great shortage of disinfectants. The situation is especially grave in hospitals and kindergartens, where a priority soap-powder supply is imperative.

Minister Chernozemski advises that it is imperative to introduce a system of extraordinary measures in the supplying of medicines. A proposal was made in the Council of Ministers to introduce certain economic incentives—namely, increasing or reducing the prices of a number of medicines. Almost all medicines will be sold by prescription, and free medicines will be registered in special files so that there will be no abuses.

It is proposed that the security guard be increased at warehouses and pharmaceutical plants so as to cut off the taking out of medicines in which a speculative trade is carried on.

At present, one ampoule of analgin, the price of which is 0.08 lev, sells for more than a lev in the flea market. Analgin serves as raw material for the narcotics concocted by drug addicts. Our country, until recently a large exporter of analgin, has ceased exporting this drug because of the discontinuation of certain capacities. The remaining amount that is produced goes for our own needs.

In a meeting with representatives of the Ministry of Public Education, it was decided to take speedy measures to improve schoolchildren's food service. The Schoolchildren's Lunchrooms Enterprise will not, as hitherto, be subordinated to four departments, but to one only. It is planned to set up economic organizations for schoolchildren's food service and a chain of mother kitchens to prepare higher quality meals. It is proposed also to raise the daily fee, which is now only 70-90 stotinkas, and, for children from the first to the third grade, snacks will be provided free of charge. These measures have been worked out by a special study group and will be submitted to the Council of Ministers for approval.

### More Hepatitis Cases Registered

*AU1810210190 Sofia BTA in English 1957 GMT 18 Oct 90*

[Text] Between October 1 and 15, 1,923 cases of infectious hepatitis have been notified in this country. In Sofia alone, there are 282 cases, including 58 children under 14.

No epidemic flare-ups have been registered, according to Health Ministry experts. They told the press today about the urgent measures they are taking to secure extra places for the hospitalization of the patients.

### Plane With Medical Aid Arrives From Greece

*AU1910211890 Sofia BTA in English 2055 GMT 19 Oct 90*

[Text] Ten tons of medicines mainly against hepatitis and cholera amounting to 400 thousand dollars' worth arrived from Greece at the Sofia Airport today. This is the first consignment of humanitarian aid granted to Bulgaria by decision of the Greek Government in response to President Zhelyu Zhelev's request.

According to Mr. Kiropoulos, adviser of the minister of health of Greece, in five or six days another aircraft carrying food stuffs will land in Sofia.

The relief that comes to Bulgaria not only from Greece but from other countries as well will be distributed by an aid agency set up with the Presidency and comprising representatives of the Grand National Assembly, the government and the parliamentary political forces. Its work will be given full publicity. Distribution will be carried out with the consent of the donors and they will be given the possibilities of exercising control.

# BRAZIL

## Vaccination Rate Among Lowest in Latin America

*90WE0344A Sao Paulo O ESTADO DE SAO PAULO in Portuguese 29 Aug 90 p 13*

[Text] Brasilia—Official data from the Health Ministry demonstrate that Brazil is one of the world's most backward countries in disease prevention among children under the age of one year. With only 55 percent of its children vaccinated against whooping cough, tetanus and diphtheria, the country ranks next to last in Latin America for vaccination, preceding only Bolivia (with 40 percent), and trailing Chile and Uruguay (with 95 and 82 percent) by far. The data compiled by the ministry in July attest that, every year, approximately 2,000 Brazilian children die of measles, 200 of diphtheria, 300 of whooping cough, 200 of tetanus, and 5,000 of tuberculosis. In an attempt to reverse this situation the health minister, Alceni Guerra, decided to institute National Multi-Vaccination Day, set for 22 September. The governnment's goal is to vaccinate 90 percent of children under one year of age. Last year vaccination against poliomyelitis reached 97 percent of the children in that bracket, making polio the only disease controlled in the country. Based on those data, the Health Ministry's technicians decided to stop concentrating efforts on national campaigns to prevent a single disease. The target now is to promote national multivaccination days, an experiment already conducted successfully in 1984. According to the official adviser on child health of the United Nations Childrens Emergency Fund (UNICEF), Roger Schrimpton, this practice was given up owing to the slight involvement of state governments.

### Northeast

According to data from the Health Ministry's National Immunization Program, the Northeast states are in the most critical situation. For example, in Maranhao, only 36 percent of the children under one year old have been vaccinated against measles, 45 percent against tuberculosis, and 29 percent against whooping cough, tetanus, and diphtheria. In the South those indexes vary greatly. In 1989 Paråna, an outstanding national example, vaccinated 87 percent of the children under one year old against measles, 85 percent against whooping cough, tetanus, and diphtheria, and 99 percent against tuberculosis. In Rio Grande do Sul those indexes drop to 50, 49, and 28 percent, respectively.

The Health Ministry is also distributing millions of vaccination record books, with the basic system for monitoring children's health during their first year of life, as well as thousands of leaflets aimed at dispelling some myths spread by the population and even by physicians. Among the mistaken notions that must be clarified is the recommendation not to have sick children vaccinated, or the false impression that fever, crying, or inflammation after vaccination represents a problem.

**The Neglect at the Needle's Point**

**The vaccination coverage for measles, triple immunization, BCG, and polio in Brazil is one of the lowest in the world**

| Countries | Measles | Triple Immunization | BCG | Polio |
|---|---|---|---|---|
| Brazil | 64 | 55 | 73 | 97 |
| China | 95 | 95 | 98 | 96 |
| Indonesia | 68 | 75 | 86 | 78 |
| India | 55 | 80 | 80 | 75 |
| Nigeria | 69 | 58 | 72 | 57 |
| Kenya | 65 | 77 | 90 | 78 |
| Mozambique | 48 | 39 | 51 | 39 |
| Chile | 91 | 95 | 95 | 95 |
| Uruguay | 75 | 82 | 97 | 82 |
| Colombia | 73 | 75 | 90 | 92 |
| Argentina | 78 | 74 | 93 | 81 |
| Mexico | 85 | 65 | 80 | 96 |
| Peru | 52 | 58 | 61 | 59 |
| Bolivia | 70 | 40 | 70 | 50 |

Source: UNICEF, World Health Organization

## PRC Donates Almost 2 Tons of Malaria Medicine

*PY1110131790 Brasilia Domestic Service in Portuguese 2200 GMT 10 Oct 90*

[Text] The PRC has donated to the Brazilian Government almost two tons of medicines to be used against malaria.

PRC Ambassador to Brazil Shen Yunao made the donation today. It consists of 300 boxes each containing thousands of ampoules and tablets. The donation contains more than 10,000 courses of treatment. These medicines have not yet been licensed for use in Brazil. For this reason, according to Health Minister Alceni Guerra, they must first be submitted to quality control tests.

[Begin Guerra recording] These medicines have yielded excellent results in the PRC. We are going to test them now in Brazil before distributing them among the people. If approved, they will be used as another drug for the struggle against malaria. [end recording]

Ninety five percent of the reported malaria cases in Brazil are in the Amazon region, especially in the mining areas. According to the health minister, this year the government expects at least 500,000 cases of malaria in the country. The government hopes to eradicate malaria from the country within five years through the intensive use of insecticides, through sanitation works, and through the use of the first Brazilian vaccines against this disease.

# COSTA RICA

## Nation First in Stomach Cancer Cases

*90WE0361A San Jose LA NACION in Spanish 3 Sep 90 p 8A*

[Article by Maria Isabel Solis]

[Text] Two persons die of stomach cancer every day in our country. The principal victims are male, live in the Central Valley, and are in the lower-income groups.

Few such categorical statements can be made about this malignant disease, inasmuch as its origins, distribution, and the possibility of finding easy proof remain in the gray areas of science.

Many hypotheses have been advanced about its origins, but experts still do not venture any categorical claims about the reasons for the prevalence of the disease among residents of Costa Rica.

Concern is spreading even more rapidly now because studies published in 1989 by Japanese Kurihora M. Aoaki and Hisanichi show that our country has the highest incidence of the disease and rate of mortality.

No one knows why our country has been hit so hard. "What a horrendous honor!" scientists exclaim.

Gastric cancer is the second cause of death in Costa Rica, exceeded only by heart attacks. Malignant stomach tumors are what kill the most Costa Ricans. Last year they caused 26 percent of all tumor deaths occurring in our country.

Of the 624 persons who died of the disease, 407 were men and 217 women. This ratio, repeated in nations such as Chile and Japan which share the three top spots in the world with Costa Rica, can be explained by no one. There is no dearth of explanations, but no definitive answer can be given.

Nor is any reason advanced as to why certain areas of the national territory have a higher incidence than others, varying between 84.2 and 25.4 per 1,000 inhabitants for men and 45.7 and 10 for women for the period between 1980 and 1983.

Studies completed by "the master," Rafaela Sierra, have shown that in places such as Paraiso, La Union, Jimenez, Alvarado, Oreamuno, El Guarco, Puriscal, Tarrazu, Mora, Aserri, Acosta, Turrubares, Dota, Perez Zeledon, and Leon Cortes, the incidence of the disease is very high.

Areas further from the Central Valley such as Puntarenas, Guanacaste, and Limon have significantly lower rates. Experts are still unable to explain why Central Valley residents are more vulnerable to the affliction than residents of coastal areas.

Researchers and the nation's physicians are even further intrigued by the fact that mortality as a result of the disease shows a slight downward trend. Between 1973 and 1977, the mortality rate was 52 per 1,000 for men, but dropped to 45.5 between 1978 and 1982.

These questions are formulated every day by the coordinator of the National Cancer Unit, Dr. Gonzalo Vargas Chacon; Dr. Juan Jaramillo Antillon, chief of surgery of Calderon Guardia Hospital; Dr. Rafaela Sierra; Dr. Francisco Hevia Urrutia, gastroenterologist at San Juan de Dios; Dr. Manuel Angel Cortes, deputy minister of health; and Dr. Emilia Maria Leon, general director of health and epidemiology.

### No Answer

Extensive research has been conducted in Costa Rica over the past 20 years in an attempt to solve the enigma surrounding stomach cancer, but no definitive answer has emerged.

Our situation has been compared with that of other countries which also ingest smoked, salted, and canned foods and which have acid, volcanic soils. In recent years, researchers have investigated the possible relationship of a bacteria which lodges in the stomach, known as Elicobacter pylori, in cases of gastritis and cancer.

One team made up of professionals from the University of Costa Rica and the Costa Rican Social Security

Institute (CCSS) is conducting a study seeking the association of this microorganism with gastric diseases. Previous studies showed that Costa Rican children had a high prevalence of antibodies against the bacteria.

Dr. Darner Mora of the Costa Rican Institute of Aqueducts and Sewer Systems is also comparing water from high-risk and low-risk areas and although his research is not completed, preliminary reports reveal there are no major differences. These results coincide with previous studies done by Dr. Sierra which found no substantial variations.

Soils from the zones were also compared and it was determined that land in regions with more stomach cancer were more acidy than those where the incidence was lower.

Another hypothesis investigated in our country has to do with the consumption of preserves. The study, coordinated by Dr. Emilia Maria Leon, has shown that persons who consume more of this substance run a higher risk of gastric cancer than those who consume less. This was associated with the use of sodium hyposulfite used to bleach lids. This research has been challenged by some researchers.

Experiments are being conducted on rats at Mexico Hospital in an attempt to determine the association of such consumption with stomach tumors.

Studies have also been done on a fern which grows in Costa Rican fields and which is eaten by cattle. It contains many carcinogens and scientists do not yet know whether they pass into the milk. Further studies are therefore needed.

Dr. Sierra has also analyzed urine samples from children in Turrubares, comparing them with those from Hojancha children, and has found that urine from the former contains more nitrosamines than from the latter.

Nitrosamines are chemical compounds which may be found in smoked or canned foods. They can also form in the stomach and have been related to stomach cancer. Dr Sierra's study only evaluated the endogenous formation of such compounds.

For surgeons Sara Garcia and Danilo Solera at Calderon Guardia, this hypothesis may be among the closest to discovering the causes of stomach cancer.

### Food Problems

According to a thesis written by Cecilia Gamboa for the Master's Degree in nutrition at the University of Costa Rica and entitled "The Diet of School-Age Children in Areas of Costa Rica With High and Low Incidences of Stomach Cancer," it was found that Turrubares children had poorer eating habits than those from Hojancha.

The study revealed that Turrubares children drank less milk and ate less pork, vegetables, and fats than those from Hojancha, while the ingestion of sausages, carbonated beverages, and coffee was higher in the San Jose canton than in the Nicoya population.

The findings of this thesis agree with the concern of the director of the Turrubares Clinic, Dr. Katia Ugarte Mohs, who expressed her concern over the inadequate diet of Turrubares residents.

She explained that the socioeconomic conditions of residents of the area are poor and added that their diet is very low in fiber and based on rice and beans. In addition, due to supply difficulties, they have problems getting enough fresh fruits and vegetables.

Experts agree on the urgent need to continue scientific research in order to determine what factors cause the disease.

Specialists consulted by LA NACION agree that stomach cancer may not have a single cause. They are convinced that inadequate or unbalanced nutrition is probably to blame for this cellular deterioration, but the mystery has yet to be solved.

Researchers agree that they must combine their efforts in a common fight to shed light on this problem in order to face the evil.

## DOMINICA

### Chief Medical Officer Denies Typhoid Outbreak

*FL1910171590 Bridgetown CANA in English 1605 GMT 19 Oct 90*

[Text] Roseau, Dominica—An increase of eight cases of typhoid fever in Dominica this year over the 1989 figure has health officials concerned, but Chief Medical Officer [CMO] Dorian Shillingford says there's nothing to be alarmed about. He said the increase over the four cases reported in 1989 might just be a matter of "more intensive case findings."

"I think that twelve to date is a matter of concern because we would prefer to see the figures keeping at a lower level of four of last year and nine of 1988," Dr. Shillingford admitted. He said health education efforts were being increased, with efforts being made to improve water supplies and sanitation," particularly food-handling measures."

The chief medical officer was emphatic that there is no outbreak of typhoid fever in Dominica, explaining that the local situation was different from that in Jamaica, which he said has had at least two outbreaks of the fever this year.

"I think the problem in Jamaica was related to their water supply.... that gives a much wider outbreak, whereas in Dominica ....most of the cases have been family settings—a family carrier affecting other members of the family, but not directly related to infected water supplies," the CMO explained. Dr. Shillingford

says as far as he is aware, there have been no typhoid-related deaths in Dominica so far this year.

## HONDURAS

### White Fly Infestation Hits Vegetable Crops

*90WE0345B San Pedro Sula LA PRENSA in Spanish 18 Aug 90 p 2*

[Text] Comayagua—Yesterday the head of the Ministry of Natural Resources' Western Central Regional Agricultural Department Manuel Enrique Borjas admitted that the impact from the white fly pestilence in Comayagua Valley "has been quite severe on vegetable crops in general and tomatoes in particular: to the point where the crops that have survived are currently producing only 50 percent of the normal volume."

The official claimed that the fly pestilence has stricken most of the crops in Comayagua Valley, especially in Ajuterique, Lamani, Lejamani, and part of Palmerola, where nearly 250 manzanas [each manzana equivalent to 1.75 acres] of plants have been lost. A few crops that have withstood the insect's attack are yielding only 50 percent of the normal amount.

Borjas added that this situation has caused a tomato shortage, recently noted in the central zone; which, in turn, has brought about a rise in the product's price.

Nevertheless, he stated that crops planted several months ago are being harvested, and have withstood the attack of the white fly. This may possibly allow for a reduction in tomato prices.

In Borjas' view, the incidence of the pestilence may be due to seasonal weather changes, although he noted that the new cultivation techniques introduced by producers in plant nurseries have made it possible to obtain healthy plants.

The regional director expressed the opinion that the research being conducted with industrial firms in the sector would provide an opportunity to find concrete responses for countering the pestilence.

He remarked that this research is aimed at finding tomato varieties resistant to the fly's attack, suitable insecticides, and technical recommendations to prevent the transmission of the virus from one plant to another through the insect.

The official explained that the white fly problem is not the insect itself, but rather its action as the transmitter of a virus that destroys the crops.

## JAMAICA

### Government Initiates Measures To Contain Typhoid

*FL2610181490 Bridgetown CANA in English 1657 GMT 26 Oct 90*

[Text] Kingston—In a move to stem the spread of typhoid the Jamaican Government has banned all public meetings of more than 100 people in the south-west coastal district of Westmoreland. Health Minister Easton Douglas, said this was the latest in a series of measures to contain the typhoid outbreak in the area by reducing the "opportunity for mass contact among people in the parish."

Three persons have so far died from typhoid fever and there are 203 reported cases in the area about 120 miles west of the capital, Kingston, the authorities reported. Some 194 people have been admitted to the hospital including infants. An outbreak of the disease in the same parish killed four people in July.

Douglas told Parliament Wednesday that the government was spending U.S. 500 000 dollars "to meet priority needs" associated with the outbreak. In addition international agencies have been approached for technical and financial assistance "for effecting relevant long-term improvements to the health system."

The outbreak has been blamed on the continued use of rivers and canals for washing, bathing, and drinking, as well as the consumption of contaminated foodstuff—particularly vegetables—and the possibility of typhoid carriers within the food vending trade, health officials said.

## MARTINIQUE

### Three Typhoid Deaths in Savanna-la-Mar

*FL2210140190 Bridgetown CANA in English 2130 GMT 20 Oct 90*

[Text] Kingston—Three persons including a child have died from the latest outbreak of typhoid fever in the southwest coastal town of Savanna-la-Mar and the number of typhoid cases reported has risen to 163, Jamaican health officials reported. The latest count of hospitalised cases was 39 females, 51 males, and 69 children.

Health officials have not been able to pinpoint the source of the latest outbreak, but say that the canals which surround the town are a likely source, as well as improper sanitation.

Meanwhile, Health Minister Easton Douglas said his ministry cannot be blamed for the latest outbreak in the parish. He was responding to a recent newspaper editorial accusing the ministry of complacency which led to the resurgence of the disease. An earlier outbreak of the disease in Savanna-la-Mar killed four persons.

Douglas said that his ministry had taken certain safety measures after the first outbreak in August such as removing sidewalk vendors who he said continued to defecate in nearby canefields. He said there were adequate supplies of drugs to fight the disease and that the Savanna-la-Mar hospital was "in a state of readiness" to deal with the situation.

## MEXICO

### 300 Dengue Cases in Ciudad Victoria

*PA1410173890 Mexico City NOTIMEX in Spanish 0102 GMT 14 Oct 90*

[Text] Epidemiologist Oscar Flores has reported that health officials have thus far discovered some 300 cases of the dengue epidemic.

According to Flores, the epidemic is caused by heavy rains in this area. However, he added that "the necessary measures have been taken to prevent the epidemic from spreading to other states."

The heavy rains and the lack of hygiene in many abandoned lots have enabled the vector mosquitos to thrive.

The epidemiologist said that the hepatitis epidemic has been controlled. He said that currently, the coordinated health services are mostly concerned with implementing the adequate measures to avoid dengue cases from increasing.

Flores reported that most of the persons sick with dengue have been reported in the border city of Matamoros.

He urged the residents to throw away tires that have accumulated water, as well as jars or any other containers that have been thrown in empty lots, to avoid an increase in the reproduction of dengue vector mosquitos.

## PANAMA

### Health Ministry Authorities Report Meningitis Epidemic

*PA0610232690 Panama City EL DIARIO INDEPENDIENTE in Spanish 6 Oct 90 p 2*

[Report by Josefa Cedeno]

[Text] Since a meningitis meningococcica epidemic has broken out in our country, Health Ministry authorities have called on the citizens to take the necessary preventive measures.

According to the ministry source, the B type variety of the "neisseria meningitidis" is causing the epidemic. There is no effective vaccine against this illness. However, private hospitals are vaccinating to avoid contracting the illness.

Health ministry officials said the preventive measures consist of avoiding overcrowded places and applying the most basic hygienic rules.

## PERU

### Skin Leishmaniasis Said Spreading in Huanuco

*PY1510151490 Lima Television Peruana in Spanish 1100 GMT 15 Oct 90*

[All numbers as heard]

[Excerpt] Deputy Lucila Shinsato called on all Peruvians to join the struggle against the uta [skin leishmaniasis common to the Peruvian Andes region] from which over 10,000 people suffer in Huanuco. Shinsato said that the area could be declared in a state of emergency because of this. [Begin recording]

**Reporter:** What are the worst problems that Huanuco health officials are encountering in their struggle to prevent the uta from spreading?

**Shinsato:** You see, right now uta can be treated with only one very specific kind of medicine: glucantine. The Health Ministry does not have this medicine. I have talked with the health minister, and he told me that since this disease requires a very expensive treatment, a technical study will be required. He said that two experts left for Huanuco the day before yesterday. They will establish the exact number of patients so that action can be taken in the future.

**Reporter:** Why should an emergency be declared?

**Shinsato:** Look, 226 cases of uta have been reported in the cities of Ambo and Huaca, very near the city of Huanuco. This requires immediate action because if we add these additional cases to the 994 cases that we had previously, the figure becomes a source of concern.

**Reporter:** How much vaccine is needed?

**Shinsato:** Right now we need 160,000 ampoules of glucantine. There have been talks with the people of Quimica Suiza, the company that imports this product from France, and they have told us that each ampoule costs $7. [passage omitted] [end recording]

## VENEZUELA

### Malaria Cases Increase

*90WE0332B Caracas EL DIARIO DE CARACAS in Spanish 24 Aug 90 p 5*

[Excerpt] Malaria is lurking in the country again. A total of 28,699 cases has been reported by the Health Ministry this year. This means that there are 342 more cases than there were by the same date in 1989.

This was reported by Jose Felipe Aranguren, director of malariology and environmental sanitation for that ministry. He explained that, of this number, 17,075 cases are associated with the state of Bolivar; 3,218, with the

Amazonas Federal Territory; and 3,474, with Sucre. "The other cases are scattered through various sections of the country."

The malariology director expressed his concern over the increase occurring in Amazonas; and, for this reason, there is a plan to invest 27 million bolivares to combat the vector and halt the increase in cases, through an agreement with the Venezuelan Corporation of Guayana, and the state of Bolivar's Departments of Interior and Health.

He explained that 80 percent of the cases recorded in Bolivar occur in the Las Claritas, El Dorado, and Kilometer 88 mining areas. "In order to sanitize these regions, we are devising an aggressive campaign for air and land fumigation with malathion, an insecticide that eliminates the vectors causing the disease."

It would appear that the old story of alarm and concern experienced in 1988 and 1989 by the Health Ministry and the stricken populations is being repeated again.

On that occasion the outbreak reached a total of 44,627 cases of persons infected, and 11 deaths recorded by the Health Ministry. [passage omitted]

## BANGLADESH

### 'Alarming' Spread of Tuberculosis, Other Diseases

*91WD0022 Dhaka THE NEW NATION in English 16 Aug 90 p 5*

[Editorial]

[Text] In a poverty-ridden society, undernourishment, malnutrition, and diseases of different kind take toll on human lives, not to speak of permanent physical disability such as blindness. The scenario in Bangladesh is equally vexing. Contagious diseases such as diarrhoea, smallpox, malaria, tuberculosis, etc. are spreading in an alarming proportion. Although Bangladesh was declared a pox-free area, reappearance of the disease is certainly a matter of serious concern. Malaria is having its full play while pox and diarrhoea have become too common these days. Vulnerability to diseases in an underdeveloped region poses a positive threat to the efficacy of health welfare measures. On top of that, incidence of tuberculosis is on the increase and 3.6 percent of the population of the country have already been attacked with this dreadful disease.

According to reports published in the media, as high as one lakh T.B. patients die in Bangladesh every year and 1.10 lakh germ-carrying cases are detected annually. One would shudder to think that there are 40 lakh T.B. patients in the country but the number of T.B. clinics is only 44 making it well-nigh impossible to treat such a staggering number of patients. Of course, there is provision for four more hospitals and eight segregation cells to cater to the requirements of T.B. patients. But when increasing incidences of tuberculosis are found in a particular region, given facilities turn out to be minimal.

According to a survey carried out by Lamb Hospital at Parbatipur, 10 out of every 100 persons in the northern region have fallen victim to T.B. and one out of the 10 patients has reached the stage of contagion thereby spreading the disease at an alarming pace. It is all the more agonising that 20 percent of the patients are in the age group of five to 15 years and another 50 percent of the T.B. patients are women. That being the trend, the coveted family and child welfare measures are bound to be offset. The existing T.B. clinics and hospitals are equipped to facilitate treatment of only 10 percent of the patients leaving 90 percent of the patients without clinical facilities. Another shortcoming is that the required nine to 18 months continuous treatment of patients is not possible becuse of heavy pressure on the existing 966 beds. Most of these half-recovered patients die after long sufferings unless they have means of treatment privately. A sad commentary on the health sector indeed.

It may be recalled that in the fifties incidences of tuberculosis in this region was on wane but instead of further improvement in the situation a deteriorating trend is discernible. The health authorities would better ponder over the basic reasons behind this trend and hammer out cogent steps in order to halt the inroads of T.B. in our society with a bang. Provision for nutrition apart, the Government should try to enlarge the base for treatment. In that case the half-treated patients languishing for death might survive the ordeal and, at the same time, those denied of hospital or clinical facilities could get medical attention by specialists. Things cannot be allowed to deteriorate like that when it is the declared policy of the Government to ensure 'health for all by the year 2000.' It is high time that treatment and convalescence facilities are enlarged and unfortunate T.B. patients allowed further lease of life. The nation can never march along the road to progress unless the workforce comprising healthy people put in their best of efforts to that end. Circumstances demand allocation of more resources for the health sector so as to face the challenge posed by various diseases.

### Ershad Explains Planned National Health System

*90AS0410Z Dhaka THE BANGLADESH OBSERVER in English 26 Jul 90 pp 1, 10*

[Text] President Hussain Muhammad Ershad on Wednesday announced the outline of a three-tier health system envisaged in the health policy of the country which included Upazila Health Authority, District Health Authority and eight regional health authorities, reports BSS [Bangladesh News Agency].

Addressing the nation over Radio Bangladesh and Bangladesh Television on national health policy, the President said the main basis of the policy was democracy and participation of the people in it.

He said his government wanted to evolve a system where the people themselves would be able to solve their health problems by exercising their rights. Keeping this in view, he pointed out that the health system had been reorganizing by making the upazilas as the source of all power.

President Ershad said upazila being the nearest administrative infrastructure available to the people, a upazila health authority would be established with representation from different strata of population of the upazila. He said this authority would be headed by upazila chairman.

He said similarly, there would be district health authority which would coordinate all health activities under the jurisdiction of the district. It will also be a democratic organization like that of the upazila health authority, he said.

The President said eight regional health authorities would be set up to coordinate the activities of the districts. They are Dhaka, Jessore, Barisal, Rangpur, Rajshahi, Mymensingh, Sylhet and Chittagong. He said adding, besides, there would be metropolitan health authorities in the cities of Dhaka and Chittagong.

President Ershad said being the apex bodies, the role of the regional and metropolitan health authorities would

be to collect fund from the centre as to participate in the discussions with foreign donors on financial matters. At the same time, he said, they would establish a system of accountability to the people on the health services activities at regional district and upazila levels. This would be headed by an officer of the level of Additional Secretary, he said.

He said there would be representation from all strata of population in the Upazila Health Authority committee and as a result there was the opportunity to listen to their viewpoints and accept them in determining health related policy locally. The number of members in the Upazila Authority committee would not be more than twenty-five, he said.

The President said the committee would take up effective steps for the successful implementation of the approved overall health services plan of the upazila. This, he said, would also approve the health budget of the upazila and other activities of the Upazila Health Authority.

He said it would take steps for enforcing the concerned laws on health-care, family planning, nutrition, medicines and environment. This authority would have the power to collect money for the development of the health system, he said.

The President said the yardstick for the evaluation of the accounts of actual health services to the people would be the improvement in the health condition of the people, increase in the number of recipients of preventive vaccinations, reduction in the rate of infant and mother mortality rates, checking of deaths due to diarrhoea and diphtheria, registration of births and deaths and increase in the number of recipients of family, planning methods.

He said the Upazila Health Authority was a democratic infrastructure and this was aimed at bringing out the health system from clutches of the bureaucratic complexities. He said the Vice-Chairman of the Upazila Health Authority would be a doctor of the rank of Additional Civil Surgeon and there would be doctor representatives at other levels.

President Ershad said the District Health Authority committee would be headed by the District Council chairman who is also a member of the Jatiya Sangsad while the Civil Surgeon would be the Member Secretary to the committee. The District Authority would do the jobs which were not needed to be done by Upazila Health Authority and at the same time special health facilities would have to be introduced in district towns to handle referred cases, he said.

He said these health facilities would have to be maintained centrally in district towns. Use of ambulances and blood transfusion system were the most important among them, he said adding: and a month or week, specialists would be sent to upazilas.

President Ershad said his government is determined to ensure people's basic needs such as food, clothing shelter and health and for that reason he has been working hard for the last eight years. He also said following the pragmatic industrial policy the industrial production has been increasing due to the coordinated efforts of private and public sectors.

He also mentioned the establishment of Gucchagram projects for the well-being of landless, Rin Shalishi Board to free the poor farmers from bondage of debt.

The President said his government believes in democracy not as a belief but also impleted it in pledges and practical steps. In this context, he said many criticize the government in the name of democracy but also impleted it in pledges and practical steps. In this context, he said many criticize the government in the name of democracy but do not present any alternative proposal for formulation of national policy.

## INDIA

### Bombay Has World's Highest Incidence of Throat Cancer

*90WD0776 Bombay THE TIMES OF INDIA in English 15 Aug 90 p 10*

[Article by Deepak Parvatiyar]

[Text] Bombay has the highest incidence of throat (oropharyngeal)cancer in the world. About 40 percent of the total cancer patients in the city suffer from it, according to a study by Tobacco Addiction Surely Kills (TASK), an anti-tobacco movement.

"The study suggests that tobacco consumption in the city is more than in any other part of the country," Dr S.D. Chivate, a cancer specialist and leader of TASK, told this paper today.

About one lakh people in the country die every year due to tobacco-related cancers, the study shows, and Dr Chivate stated that 60 percent cancers could be avoided by quitting tobacco.

While in Western countries tobacco consumption mostly caused lung cancer, in India it was related to throat cancer mainly because of genetic differences, he said.

Every year, intake of tobacco in its various forms leads to about one million premature deaths between the ages of 35 to 55 in the country. The amount of destruction it wrought could be estimated from the fact that out of every 1,000 deaths, eight were caused by accidents, while 250 were caused by tobacco consumption, the study shows.

Though the government had taken some measures to discourage smoking by banning it on domestic airline flights, in government offices and trains, Dr Chivate felt that tobacco consumption had to be banned all-together.

His studies have shown that while the government earns a revenue of about Rs 1,600 crores every year from tobacco products, it spent even more on advertisements to educate people of tobacco related hazards.

According to the studies, about 5 million people are involved in the tobacco industry in the country which is the third largest producer of tobacco in the world. But with increased general awareness about the ill-effects of tobacco, export has decreased considerably. While in 1987, tobacco worth Rs 120 crores were exported, in the following year, the export came down to Rs 90 crores.

Moreover, persons who were actually involved in the cultivation of tobacco didn't get their due as a major portion of the gross earnings was spent in advertisements, Dr Chivate complained.

About Rs 35 billion is spent every year only on advertisements the world over. About 1 million acres of land in the country is devoted for tobacco farming. With the per capita availability of land in the country being 0.05 acres only, already there had been a shortage of foodgrains and the government should think of channelising resources to rehabilitate the workers in the tobacco industry, once tobacco was banned, Dr Chivate said. With the availability of more land for cultivation of food grains and other commercial crops, the resources could be generated from within, he added.

## IRAQ

### Certain Medicines Rationed; Expatriates Told To Register

*JN1910110590 Paris Radio Monte Carlo in Arabic 0600 GMT 19 Oct 90*

[Text] In Baghdad, the Iraqi Health Ministry has decided to suspend the delivery of 15 types of medicines to private pharmacies, and to restrict their sale only to hospitals and public pharmacies, with the provision that a card stamped by the medical authorities must be submitted.

The Iraqi health minister denounced the embargo imposed on medicines to his country, and held the United States responsible for this shortage.

As for the foreigners in Kuwait, Baghdad authorities have asked them to report to offices that issue residence permits before 15 November. Otherwise, they will be liable to legal prosecution and to the definitive cancellation of their residence permits.

## ISRAEL

### Rift Valley Bovine Fever Strikes Cattle

*TA0510074590 Jerusalem THE JERUSALEM POST in English 5 Oct 90 p 2*

[ITIM report]

[Text] A Rift Valley bovine fever has struck about half the herds in the Jordan and Bayt She'an valleys in the past three weeks. The herds there provide 40 percent of the country's milk. The short-term virus affects the cattle's digestive system and joints, and can cause paralysis, veterinarians say. Humans are not affected by the disease, neither by drinking the milk or eating the meat of stricken cows, nor by contact with the animal. Even after a cow is cured, it never recovers its ability to produce milk.

## OMAN

### Biological Controls Introduced Against Citrus Blackfly

*91WE0023 Muscat TIMES OF OMAN in English 16 Aug 90 pp 8-9*

[Article by Meena Ganjoo]

[Text] The Agriculture Research Centre at Rumays has made a significant break-through in its biological control activities with the successful introduction of a parasite against citrus blackfly [CBF], a serious pest on limes in Northern Oman.

The Director of Agriculture Research at the Ministry Tariq al-Zijali told the TIMES that after over two years of efforts, the scientists at the research had succeeded in establishing the parasite, which although successful in the Southern Region had failed to colonise in the Northern Region in the past.

According to surveys conducted last month the parasites 'Encarsia opulenta,' which were obtained from Salalah and released in a farm in the Rumays area had increased in number and reached Barka' Round-about on one side and up to Ma'abilah on the other side.

While the number of parasites increased the pest populations in the farm where it had been introduced dwindled considerably and due to the scarcity of hosts at the farm the apparently large parasite populations started migrating to other CBF infested orchards.

"From these studies it can be concluded that the parasite has brought the pest under complete biological control at the host farm and adjoining farms and the similar sort of effect is expected in other areas."

Describing it as a 'big success' for the Rumays Research Station, Mr al- Zijali said, "since CBF is an extremely serious pest at some farms in Sohar and almost all the citrus plantations at al-Hamra', efforts will now be made to colonise this parasite at these locations."

CBF is a member of the whitefly family many of which attack vegetables and some other important plants. Although it attacks other species of citrus, its most preferred host plant in Oman is 'acid lime,' one of the major agricultural exports of the country.

**Asia**

It is native to Southeast Asia but was accidentally transported to practically all the tropical and parts of the subtropical citrus areas. Oman was invaded by this pest sometime in the mid-1960s on citrus seedlings.

The female pest lays eggs on the underside of new growth foliage of the host plants. The egg stage is followed by three mostly black larval stages and then the pupal stage.

The Director explained that CBF damage is caused directly by the actual feeding of larval stages particularly on new growth of host plants and indirectly by the production of honeydew which covers the surface of leaves and on which develops a sooty mould fungus. The fungus growth interferes with the normal function of the plant's leaves, reducing respiration and photosynthesis. Prolonged feeding larvae and reduction of photosynthetic area by sooty mould can cause weakened trees.

Fruit production drops considerably when infestations are heavy and prolonged. Depending upon the severity of pest attack sometimes the entire orchards may be rendered unproductive and such cases have been observed at Sib, Barka', Suhar and Ibra."

The Director said the Centre was carrying out research to find biological control for some other major pests in the country, including Dubas Bug, Mango Lead-Gall Midge, Florida Wax Scale, Datepalm Scale, Citrus Leaf Miner, Citrus Snow Scale and Scales on mango trees.

The Director said among these Dubas was an extremely serious pest of Datepalm. It causes damage in several ways, i.e., by direct feeding on the plants and through the production of large amounts of honeydew which falls on the vegetation under the palm trees as a result of which sooty mould develops, adversely affecting the photosynthesis.

**Studies**

Mr al-Zijali said studies have been carried out at many locations in Northern Oman, including the Musandam area, and only one specie of a 'Hymenopterous' parasite had been recorded on its eggs. However, some predators like Coccinellid beetles, lacewings and spiders, had been observed feeding on various stages of this pest, he added.

Mr al-Zijali said biological control was being encouraged because although insecticides are tremendously important in protecting the plants their use has created special problems in some countries.

One of the problems is that a large number of different insect species have displayed resistance to certain of the chemicals used against them. Then improper and excessive use of these chemicals is likely to build up new insect pests through the destruction of their parasites and predators though it should not be inferred that all the friendly insects are being killed by chemicals.

"Realising the possible detrimental effects of such toxic chemicals on non-target organisms, air pollution, resistance etc., the Ministry decided upon incorporating biological control approach in the pest control strategies a few years ago."

**Suppression**

The biological control works by the suppression of pest species through the action of other living organisms, i.e., parasitic and predacious insects. In other words the parasites live at the expense of insect pests. Biological control agents are virtually harmless to all but their particular hosts. They present no hazard to the health of man, animals or plants, the Director said.

"The biological control activities were started at the Ministry on a small scale some five years ago but activities picked up last year with the strengthening of the facilities for biological control and now we have complete laboratories for the purpose."

In this field, he added, the Ministry was cooperating with Commonwealth Agriculture Bureau of the International Institute of Entomology [CABIIE] in England for specific determinations of parasites and predators.

Several specimens of parasites were recorded on scales on mango trees, and citrus snow scale and citrus mealybugs, citrus scales and whiteflies on grapevines which are under submission to the CABIIE.

However, he pointed out that biological control was no panacea for meeting the insect problems of agriculture despite its merits.

"One of the chief problems in biological control through the introduction of parasites and predators is the difficulty of getting them established, and in sufficient numbers to be effective."

## PAKISTAN

### Cholera Deaths Reported

*91WD0053 Lahore THE PAKISTAN TIMES in English 26 Aug 90 p 2*

[Text] Sialkot—Dozens of children of village Gondal in Tehsil Sialkot have fallen prey to cholera, out of them two have died.

According to details, cholera is taking a serious turn in and around the village and those who have died of it include two children of Pervaiz Akhtar, three children of his brothers who had fallen prey to cholera have been admitted to hospital.

Another villager Mohammad Amin's minor daughter also suffered an attack of cholera and is receiving treatment in the hospital.

## Swiss Drug Company in Joint Diagnostics Venture

*PM1010132690 Moscow Television Service in Russian 1800 GMT 5 Oct 90*

[From the "Vremya" newscast: Report by V. Flyarkovskiy, identified by caption]

[Text] **Reporter:** What connection do you think there is between this small pellet and perestroyka in the USSR? There is no direct connection, of course, but both help to save lives.

Two years ago the Biotekhnologiya Association, the Swiss Hoffman-La Roche Corporation, and the USSR Ministry of Health agreed to fill a gap in Soviet medicine—by organizing diagnosis of AIDS, cancer, allergies, and so forth. A joint venture was born—DIAplus. As soon as the inauguration ribbon was cut, DIAplus output began arriving in all republics and all major cities in special laboratories which by this time had been equipped and staffed with trained personnel. Incidentally, these are purely Western standards—starting a business from the other end, from educating clients. This is precisely what DIAplus is doing. Taking care of its clients, who, by the way, arrive in droves, the company holds scientific—and I must stress this—scientific-and-practical conferences for them, regularly and at its own expense. Conferences like this one, the biggest so far, which is currently being held [video show conference participants]. These are no longer merely Western standards, it is more than that.

When the opportunity arose to organize DIAplus, could Hoffman-La Roche have run into competition from other Western companies?

**Unidentified Hoffman-La Roche representative:** [speaking in German with superimposed Russian translation] Of course. We were aware of unsatisfied demand in the USSR, plus the high scientific potential of your scientists, plus your useless equipment. It was obvious than if we did not step in, someone else would. And without delay. Delay in our business may be fatal. [Video shows patients being treated.]

**Reporter:** Here too, DIAplus is following Western standards, the standards of speed. The company is already ahead of its 5-year program.

What is your secret?

**R.G. Vasilov:** [chairman of the board of the joint venture, identified by caption] First, the great demand for our output which exceeds even our expectations. Second, an excellent partner and excellent mutual relations.

**Reporter:** Time has gone by, and it has become obvious that DIAplus is a great plus, a plus for the perestroyka of our economy, a plus for Soviet medicine, and a plus for Soviet citizens who have a long way to go before their demand for normal health care is satisfied.

We do not claim that DIAplus is a model, but it is worth learning from it because every small success may be a step toward a major victory.

Let me add for specialists that DIAplus diagnoses are virtually never wrong.

## Diphtheria Vaccination Shunned out of AIDS Fears

*PM1110075990 Moscow IZVESTIYA in Russian 8 Oct 90 Morning Edition p 1*

[V. Tosltov report under "Rumors and Facts" rubric: "Surely Diphtheria Is Not More Dangerous Than AIDS?"]

[Text] Moscow medics have noted with alarm a significant increase in cases of diphtheria infection among the capital's inhabitants.

The rise is almost double compared with last year. Nine people have died, including three children. Once a menacing and widespread illness, diphtheria has not presented a great danger in recent years. So why has it broken out again?

In the opinion of experts, the cause lies in the fact that the inhabitants of Moscow are now extremely wary of inoculations. Many explain their refusal of vaccination by the fear of being infected with AIDS during inoculation and by doubt as to the quality of the vaccine.

The Moscow City Executive Committee Public Health Main Administration refutes these rumors. Information promulgated by the administration claims that the vaccine up to the standard of the best Western samples, and is administered only via disposable syringes. The risk of fatal illness through refusing the inoculation is, medics claim, incomparably higher than that of being subjected to accidental infection with AIDS. Unlike the AIDS virus, diphtheria is easily transmitted by air or through droplets, and you can catch it from shared crockery and everyday objects and on public transport.

## Plague Quarantine Lifted in Aralsk

*LD0510123190 Moscow TASS in English 1206 GMT 5 Oct 90*

[By TASS correspondent Vladimir Ganzha]

[Text] Alma-Ata—The Kazakhstan medico- sanitary service has lifted a quarantine imposed on the city of Aralsk in mid-September after an outbreak of plague in the city in which one person died.

Camel meat, which was intended for sale at the city market, was the cause of the outbreak, physicians

believe. Medical specialists managed to identify and hospitalise all who had contact with the two plague patients—some 250 people.Although the quarantine on Aralsk has been lifted, disease prevention work is continuing there. Mass inoculations of the population are under way. Expeditionary parties of medics are treating rodent burrows with pesticides to destroy fleas that are specific carriers of plague.

"This year four plague cases were recorded in Kazakhstan—two near the north-eastern coast of the Caspian and two in Aralsk, Kzyl Orda region. In two cases, those who were taken ill could not be saved because of late diagnosis," Professor Vladimir Stepanov, head of the anti-plague institute in Alma-Ata, told TASS.

The institute specialists have now begun to monitor rodents. A computer-aided forecast will then be made about the epidemiological situation in the republic for 1991.

**Suspected Cholera Outbreak in Moscow Contained**

*PM2410184990 Moscow KOMSOMOLSKAYA PRAVDA in Russian 23 Oct 90 p 1*

[Report by Ye. Zhirnov: "Will There Be Cholera in Moscow?"]

[Text] At the end of last week a tourist returning from India asked for medical help at the capital's Kiev Railroad Station. The preliminary diagnosis is cholera.

What is happening today? We put that question to N. Shestopalov, Moscow's chief health inspector.

"All the tourists, with the exception of four in the Infectious Diseases Hospital, have been sent home," he said. "The cholera vibrio El Tor has been isolated from them and from the eight people in the group hospitalized in Bryansk. Around 100 people have been traced who came into contact with the vibrio carriers—they have been isolated and are under observation. Other tourists are also under observation in Bryansk."

The quarantine service assures us that there is no danger of a further outbreak of cholera.

## CANADA

### Virus Kills Pelicans, Cormorants in Saskatchewan

*91WE0020 Toronto THE GLOBE AND MAIL in English 22 Sep 90 p A4*

[Text] Saskatoon—A virus of "epidemic proportions" is killing white pelicans and cormorants across Saskatchewan. More than 6,000 cormorants and 100 white pelicans have been found dead of Newcastle Disease recently, says Gary Wobeser of the department of veterinary pathology at the University of Saskatchewan.

### New Brunswick Reports Spruce Budworm Decline

*91WE0021 Toronto THE GLOBE AND MAIL in English 20 Sep 90 p A7*

[Text] Fredericton—The spruce budworm is on the decline in New Brunswick.

The total area of moderate and severe defoliation was 40 percent less than in 1989, the government said yesterday in releasing results of the 1990 aerial survey of budworm damage.

"The area of moderate and severe defoliation is at its lowest level since 1967," Natural Resources Minister Morris Green said.

Defoliation caused by the persistent pest was light on 60,000 hectares of forest, moderate on 146,000 hectares, and severe on 91,000 hectares.

The spruce budworm—which does its damage to spruce, fir and other softwoods in its worm-like larval stage—has survived decades of chemical-spray programs in many parts of North America.

In New Brunswick, this year's spray program covered 533,000 hectares of forest.

## PORTUGAL

### Newcastle Disease Affects Poultry Farms

*90WE0363A Lisbon DIARIO DE NOTICIAS in Portuguese 18 Sep 90 p 29*

[Text] Alves de Almeida said that the disease, which affected livestock raised for sale, especially chickens, "did not have serious consequences," and "just gave the farmers a scare."

"The disease was found at small farms in Entre Douro and Minho, where there was a high mortality rate among chickens," said the official in charge of the poultry-breeding station.

According to Alves de Almeida, the illness, known as "Newcastle's disease" or "avian plague," is caused by factors associated with the failure to vaccinate the poultry, and poor hygienic conditions at backyard poultry farms.

The director of the ENA [National Agricultural Station] said he was unaware that the disease had affected industrial-scale poultry farms, either in the regions mentioned above or in any other part of Portugal.

"I think the disease appears to have disappeared," acknowledged Alves de Almeida, in whose opinion the outbreak of Newcastle's disease may have gotten started among poultry sold by street vendors.

The expert emphasized that it is mandatory that vaccinations be administered at every poultry farm, both in the industrial sector and in individual backyards.

Alves de Almeida also explained that the Ministry of Agriculture is taking steps through its regional offices to exercise strict supervision over the sale of live animals.

## SWEDEN

### Field Mouse Disease in North

*90WE0362C Stockholm DAGENS NYHETER in Swedish 30 Aug 90 p 12*

[Article by Caj Noren: "Field Mouse Disease Threatens in North"]

[Text] The feared viral illness, field mouse disease, is expected to strike many people in Upper Norrland, Vasternorrland, Jamtland, and Varmland. Up to now, ten people have been taken ill in Vasterbotten alone.

Field mouse disease is a viral illness that causes high fever. The kidneys almost stop functioning after a few days, and it takes several months before the patient can return to work.

"The illness is not directly life-threatening, but one becomes very sick," Dr. Bo Settergren at the infection clinic of the regional hospital in Umea said.

He has his doctor's degree in the illness and is one of the country's few experts in the area.

But neither he nor anyone else can explain why the disease has not spread over the country in spite of the fact that the carrier, the field mouse, is found everywhere.

Field mouse disease is most normally found in Vasterbotten, and then in Norrbotten.

The infection is believed to be spread through the air. Researchers know that the field mice have the disease virus in their air passage secretions and in their urine.

Bo Settergren believes that at this time of year most people are infected when the virus is stirred up by lawnmowing, leafraking, and the like. Later, in the winter, when the field mice get into houses and potato cellars, the virus is often spread during cleaning.

The field mice themselves do not all suffer from the virus. Investigations in north Finland, among other

places, have shown that in some areas as many as 75 percent of the field mice may carry the disease.

Men are hit two to three times as often as women by the virus, but susceptibility varies strongly in different people.

Up to now no one has found an effective treatment of the disease.

## Vasternorrland Salmon Hit by Furunculosis

*90WE0362B Stockholm DAGENS NYHETER in Swedish 29 Jul 90 p 10*

[Text] Almost half of Vasternorrland's salmon culture has been hit by the deadly fish disease, furunculosis. The district also has the greatest spread of the disease in the country.

Forty-one percent of Sweden's salmon culture hit by furunculosis is in Vasternorrland.

In all, seven out of ten of the cultured salmon in the district are infected.

One problem is that the source of the disease has not been identified. Some people say that the wild salmon population may already be infected and that they infect the salmon from the cultured stock when the latter "escapes" to the Baltic Sea. Others think that the disease spreads when the salmon cultivators buy live spawn, so-called seed-fish.

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