



# CANADIAN WEEKLY BULLETIN

INFORMATION DIVISION

DEPARTMENT OF EXTERNAL AFFAIRS

OTTAWA - CANADA

April 3, 1957

## NORTH ATLANTIC NETWORK

The Government of Canada has agreed to build a \$650,000 "forward scatter" station near Gander Airport in Newfoundland as part of a new-type chain of radio stations which will improve communications for air traffic control and other aviation purposes across the North Atlantic, according to an announcement made at Headquarters of the International Civil Aviation Organization. Canada is also willing to participate with other countries whose aircraft fly across the North Atlantic in the joint financing of stations of the chain in Greenland and Iceland.

The North Atlantic network, which was recommended by a special ICAO Fixed Services Meeting held in Montreal in January, calls for a multiple connection--one direct voice channel and four teletypewriter channels--between Gander, Narssarssuaq in Greenland, Reykjavik in Iceland and Prestwick/Shannon. Canada's acceptance of the ICAO forward scatter proposal was contained in a letter from J.A. Irwin, Canadian Representative to ICAO, to ICAO Secretary-General Carl Ljungberg: "I am glad to state that the Canadian Government is prepared to provide the installations required for the proposed VHF Forward Scatter System on Canadian territory and also to contribute through Joint Financing arrangements to the costs of installations required in Greenland and Iceland. The Canadian Government's agreement to assume these commitments is of course subject to the condition that a complete VHF Forward Scatter or Forward Scatter/Cable

System as envisaged by the Fixed Services Meeting will be installed and that satisfactory arrangements will be made for those parts of the system for which Joint Financing has been requested."

The new forward scatter communications technique, known technically as "forward propagation by ionospheric scatter", uses high-powered transmitters working in the very-high frequency band; signals from specially-designed antennae are scattered by a highly-ionized layer of air about 55 miles (85 kilometres) above the earth, and come back to ground receiving stations a considerable distance away. Because existing high frequency radio-teletype circuits are subject to the frequent radio blackouts characteristic of sub-Arctic altitudes, the new technique is necessary to guarantee the rapid communications between air traffic control centres which are required for effective control of air traffic.

Recommendation of the new forward scatter chain came after the International Civil Aviation Organization's special jet age task force found that "the world's outstanding case of immediate and compelling need for aviation improvement relates to air traffic control and communications in the North Atlantic Region", and predicted that, unless collective action taken by all governments whose airlines fly the Atlantic, development of air traffic in this region will be more and more handicapped as the traffic continues to grow. The task force found that, in the summer of 1956, more

(Over)

## CONTENTS

North Atlantic Network .....	1	Domestic Exports Up .....	4
Dagmar .....	2	New Firms .....	4
Wool Production .....	2	Community Planning .....	5
Civil Defence .....	2	Highway Engineering .....	5
Bermuda Conference .....	3	Gains In TB Battle .....	6
Wage Increases Common .....	3	Trade Office In Ceylon .....	6
Ceylon Mission .....	4	Trophy Winners .....	6

than half the flights across the North Atlantic suffered substantial difficulties originating in communications or air traffic control services; it considered that a forward scatter network would provide a partial answer to this problem, and recommended that the network be set up at the earliest possible date.

\* \* \* \*

**DAGMAR:** Measurement of groundspeed and the true motion of aircraft over the earth's surface, a longtime navigation problem, can now be made directly and accurately due to the development of a new radar aid by Defence Research Board scientists.

Known as a Drift and Groundspeed Measuring Airborne Radar (DAGMAR), the 100-pound equipment developed at the Electronics Laboratory, one of two Ottawa units comprising the Defence Research Telecommunications Establishment, fits readily into the base of the aircraft fuselage. It employs the Doppler principle, a physical phenomenon relating to the change in frequency apparent to the receiver of radio and other waves transmitted from a moving source.

Most people are conscious of this phenomenon. It is noticeable in the apparent pitch variations of the whistle of a train as the latter passes or in the apparent pitch change evidenced by a passing automobile.

The variation in pitch or frequency of vibration is directly proportional to the velocity of the sound source relative to the observer. The change in frequency therefore, is a measure of the velocity.

This principle applies equally to radio, sound and light waves. DAGMAR employs radio waves and permits measurement of an aircraft's velocity by recording the change in frequency of waves transmitted to the ground and reflected back to the source.

By directing the waves at predetermined geometric angles, both groundspeed and drift angle (deviation of the path of the aircraft from its heading) can be ascertained. A combination of groundspeed and drift angle results in a track measurement, or that of the aircraft's true motion above the earth.

\* \* \* \*

**WOOL PRODUCTION:** Canada's wool production in 1956 amounted to 8,079,000 pounds (greasy basis), up slightly from 1955's production of 8,041,000 pounds, according to the Dominion Bureau of Statistics annual report on wool production and supply. Number of sheep shorn declined slightly to 874,000 from 875,000 a year earlier and the average fleece weight to 7.3 pounds from 7.4.

Shorn wool production fell to 6,372,000 pounds from 6,446,000, but wool pulled rose to 1,707,000 pounds from 1,595,000. Average farm price of fleece wool (greasy basis) advanced to 37.8 cents per pound from 1955's 35.3 cents, boosting total farm value of shorn wool

production 6 per cent to \$2,410,000 from \$2,277,000.

Exports of Canadian wool (greasy basis) climbed 12.5 per cent to 3,594,000 pounds from 2,883,000 a year earlier and imports rose 8 per cent to 58,226,000 pounds from 53,954,000. No data on wool inventories are available, but assuming no change in stocks, domestic disappearance would amount to 62,711,000 pounds, some 6 per cent greater than 1955's total of 59,112,000 pounds.

\* \* \* \*

**CIVIL DEFENCE:** The first civil defence exercise co-ordinating organizations at the federal, provincial and municipal levels will be held on Friday and Saturday, May 10 and 11. This announcement was made by the Honourable Paul Martin, Minister of National Health and Welfare and Federal Cabinet Minister responsible for Civil Defence.

In the past, similar international exercises for Civil Defence has been held on three occasions under the code name of Alert I, II and III. By mutual agreement between Federal Civil Defence Administration in the United States and Federal Civil Defence Headquarters in Ottawa, it has been determined that by holding separate exercises, Canada's in May and the American in July, the two countries will have an opportunity to observe and discuss mutual problems on two, rather than one, annual occasion.

Canada's first national Civil Defence exercise will be held under the code name of "Co-operation I". Maj.-Gen. F.F. Worthington, Federal Civil Defence Co-ordinator, will direct the exercise while Maj.-Gen. G.S. Hatton, Deputy Federal Civil Defence Co-ordinator, will head the exercise control staff numbering 150. Federal Control Headquarters will be located at the Canadian Civil Defence College at Arnprior, Ontario, 40 miles N.W. of Ottawa. The three primary objectives of "Co-operation I" will be to train control centres staffs at all government levels; to test national Civil Defence and inter-headquarters communications systems and procedures; and to study problems which might arise in the implementation of the National Survival Plan, including its impact on government departments other than Civil Defence.

As an example of the close co-operation between the Civil Defence organizations of the United States and Canada, F.C.D.A. observers will be present at the Federal Control Centre at Arnprior and at a number of border control centres across the country during "Co-operation I". During the U.S. exercise "Operation Alert 1957" in July, Canada will assist F.C.D.A. by operating its Federal Control Centre at Arnprior and local headquarters in certain border cities. It is anticipated that Canada will also have observers attend the American exercise at F.C.D.A. Headquarters at Battle Creek, Michigan.

## BERMUDA CONFERENCE

Following is the text of a communique issued at the conclusion of the Conference of United Kingdom and Canadian Prime Ministers on March 26.

The Prime Ministers of the United Kingdom and of Canada met in Bermuda on 25-26 March. Mr. Macmillan was accompanied by the Foreign Secretary, Mr. Selwyn Lloyd. Mr. St. Laurent was accompanied by Mr. C.D. Howe, Minister of Trade and Commerce, and Mr. L.B. Pearson, Secretary of State for External Affairs.

In the course of their talks the Canadian Ministers noted with satisfaction the results of the Anglo-American Meeting of 21 to 23 March. They welcomed, in particular, the joint declaration on nuclear tests as a contribution towards an international solution of this problem.

The Ministers discussed the steps which might be taken to secure acceptable settlements of the short-term problems in the Middle East. They also reviewed a number of less immediate political and economic questions in this area.

Views were exchanged on a number of questions concerning Europe and the North Atlantic Alliance. The Canadian Ministers expressed their interest in proposals for the closer association of the United Kingdom with Europe. A discussion was held on the consequences for Canadian trade of the plans for a common market and a free trade area in Europe, and on other trade and financial questions of common concern to the United Kingdom and Canada. The Ministers recognized the need to strengthen and improve the working of the United Nations and as an instrument for preserving peace with justice.

A contract was approved (see annex below) which will assure over a period of years the

supply of uranium needed for the expanded nuclear power programme recently announced by the United Kingdom Government.

A restricted session was held on defence questions.

This meeting has again demonstrated the value of the family relationship between the peoples of the Commonwealth, and the close and continuous co-operation between the Governments of the United Kingdom and Canada. While there may from time to time appear to be differences in their approach or reaction to international developments, the two Governments are confident that their special relationship will always enable them to work together effectively with a constructive purpose.

## ANNEX

During the meeting, approval was given to a large-scale contract for the purchase of uranium which will greatly assist in carrying out the expanded nuclear power programme of the United Kingdom. Under this contract, the United Kingdom Atomic Energy Authority will purchase, during the next five years, uranium to the value of about 115,000,000 dollars from the Canadian Government Agency (Eldorado Mining and Refining Limited) which in turn has entered into purchase contracts with Canadian mining companies. This contract has been worked out with the co-operation of the United States Atomic Energy Commission and is similar in terms to the contracts by which that Commission purchases uranium from the same Agency.

The Ministers also discussed arrangements to supply United Kingdom requirements of uranium fuel after this five year period, and agreed that further discussions on this matter should proceed between the agencies concerned.

of the second year. Agreements of longer than two years sometimes provided automatic increases on each anniversary date.

Most of the wage increases in the one-year agreements were in the range of 5 to 9.9 cents per hour. However, among those agreements negotiated in 1956 there was a substantial number of increases above this range as compared to the 1955 findings. Among the two-year agreements, the largest number provide wage increases of 5 to 9.9 cents an hour in each year.

About 26 per cent of the agreements studied showed revisions in vacation plans, either in the form of an added week or a reduction in the service requirements or both. In 45 contracts, employees with 15 years' service will now be entitled to a third week of vacation either through a reduction from a longer period of service or through the addition of a third week where none previously existed.

**WAGE INCREASES COMMON:** Out of 545 collective bargaining agreements negotiated between October 1, 1955 and October 1, 1956, 474, or 87 per cent, covering 397,347 workers, provided for wage increases, according to information released by Hon. Milton F. Gregg, Minister of Labour.

The information was based on a study of 545 collective bargaining agreements conducted by the Labour Department's Economics and Research Branch. The 545 contracts studied covered 425,181 workers and represented a sample study.

More than half the 474 agreements providing wage increases were contracts for more than one year. In past years there has been a pre-dominance of one-year agreements. The study showed that the two-year agreements frequently provided for an increase of a stated amount effective on the date the contract came into force and a further increase at the beginning

Twenty agreements added a fourth week of vacation or reduced the service requirements for a vacation of this length. Most frequently, the fourth week was granted after 20 to 25 years. The service requirements for a vacation of three weeks was reduced to 10 years in 19 contracts, and a vacation of two weeks after service of three years or less was the rule in contracts.

\* \* \* \*

**CEYLON MISSION:** The Department of External Affairs announces that it has agreed to the opening of the Office of a High Commissioner, for Ceylon in Canada. His Excellency Mr. R. S. S. Gunewardene, Ambassador for Ceylon in Washington, will be appointed concurrently as High Commissioner for Ceylon in Canada. The Government of Ceylon proposes to open a permanent mission in Ottawa early in May.

\* \* \* \*

**DOMESTIC EXPORTS UP:** Canada's exports were more than 10 per cent higher in value in January this year than last, according to the Dominion Bureau of Statistics. Substantially larger shipments to European countries, Latin American countries, and "other" foreign countries, coupled with smaller increases to the United States, and Commonwealth countries in America, Africa and Asia, more than offset smaller exports to the United Kingdom.

Gains were posted from a year earlier in all main commodity groups except animals and animal products and wood, wood products and paper. Chief gains were in agricultural and vegetable products, iron and products, and non-metallic minerals and products. Among individual commodities, main increases were recorded for wheat, and other grains, wood pulp, aluminum and products, seeds, crude petroleum, and rolling-mill products and ships.

January's domestic exports to all countries were valued at \$396,900,000, up 10.3 per cent from \$359,700,000 a year earlier. At the same time, foreign exports rose to \$7,201,000 from \$5,719,000. Volume of domestic exports climbed 7.7 per cent and prices averaged 2.4 per cent higher.

Exports to the United States at \$212,909,000 were about the same value as last year's like total of \$212,711,000. Larger shipments of fibres, textiles and products, iron and products, non-ferrous metals and products, non-metallic minerals and products, and of miscellaneous commodities counterbalancing smaller export values for agricultural and vegetable products, animals and animal products, wood, wood products and paper, and chemicals and allied products.

Shipments to the United Kingdom were lower in the month at \$63,420,000 compared to \$72,565,000 a year earlier, increases in agricultural and vegetable products being too small

to outweigh decreases in the other commodity groups. Large value decreases were recorded for wood, wood products and paper, and non-ferrous metals and products.

Exports to all other Commonwealth countries increased to \$21,262,000 from last year's corresponding total of \$18,223,000, larger totals being posted for Jamaica, Trinidad and Tobago, Pakistan and New Zealand, but decreases for India and Australia.

Geographically the largest dollar increase in domestic exports was in shipments to European countries, these rising in value to \$52,425,000 from \$31,070,000 a year earlier. Large increases in shipments to the Federal Republic of Germany, Italy, Netherlands, Belgium and Luxembourg, France, Switzerland and Ireland being mainly responsible for the gain in total value.

Shipments to Latin America rose to \$21,416,000 from 1956's January total of \$13,363,000, gains being reported to most of the countries. Greatest increases in dollar value occurred in shipments to Brazil, Cuba, Panama, Peru and Columbia. To all "other" foreign countries exports increased to \$22,865,000 from last year's \$10,573,000. Shipments to Japan, which accounted for two thirds of the January total, were substantially above last year's value.

January exports by main commodity groups were as follows (in millions): agricultural vegetable products, \$82.1 (\$64.6 a year earlier); animals and animal products, \$21.1 (\$23.5); fibres, textiles and products, \$2.3 (\$2.0); wood, wood products and paper, \$117.1 (\$121.0); iron and products, \$31.2 (\$24.9); non-ferrous metals and products, \$87.4 (\$80.9); non-metallic minerals and products, \$27.5 (\$20.2); chemicals and allied products, \$16.1 (\$14.7); and miscellaneous commodities, \$12.2 (\$7.9).

Values of leading commodities exported in January were (in thousands): newsprint paper, \$58,663 (\$58,503 a year earlier); wheat, \$33,804 (\$27,113); wood pulp, \$25,804 (\$23,212); aluminum and products, \$21,072 (\$18,880); planks and boards, \$20,146 (\$25,846); copper and products, \$19,439 (\$18,921); nickel, \$19,115 (\$18,621); seeds, \$13,799 (\$9,609); crude petroleum, \$12,468 (\$7,148); fish and fishery products, \$9,533 (\$9,403); zinc and products, \$7,080 (\$6,255); asbestos and products, \$6,429 (\$7,015); and rolling mill products, \$5,086 (3,102).

\* \* \* \*

**NEW FIRMS:** A total of 4,684 new companies were incorporated in Ontario during 1956. Provincial Secretary George H. Dunbar disclosed recently in the Legislature.

Mr. Dunbar pointed out this was the highest number of incorporations ever registered in one year in the Province's history.

**COMMUNITY PLANNING:** Public Works Minister Robert Winters has announced that Federal financial encouragement to students of community planning and housing is to be provided through 20 fellowships and bursaries to be awarded by Central Mortgage and Housing Corporation for the academic year 1957-58.

In making the announcement, Mr. Winters stated that urban expansion had created an urgent need for people qualified in community planning. The purpose of the awards is to stimulate interest in planning as a profession in Canada in view of present needs and future requirements of governments at all levels for expert guidance in urban development.

The awards, which are being provided under Part V of the National Housing Act, include two senior fellowships for applicants with professional experience in city planning or residential development. These will be awarded to persons who wish to undertake special studies or research and who are qualified to make an original contribution to the knowledge of planning or housing in Canada. Recipients will be expected to devote their full time to such work for at least eight months.

Fifteen fellowships of \$1,200 each are offered to graduates of recognized universities in the social sciences, architecture or civil engineering who wish to take professional training in community planning. The fellowships are tenable at universities which offer community planning courses (McGill, Toronto, Manitoba and British Columbia). Applicants must meet the academic requirements of the university they choose and be prepared to undertake a prescribed course of study.

Three bursaries of \$800 each are available for graduate students who wish to undertake special studies of housing or urban development other than in established planning courses.

\* \* \* \*

**HIGHWAY ENGINEERING:** A programme of post-graduate instruction in highway engineering will be inaugurated at the University of Alberta this year, according to the Alberta Government publication "Within Our Borders". First of its kind in Canada, the course will be under the direction of the Civil Engineering department of the University.

One of the main objectives of the new programme is to provide expanded facilities for advanced instruction for young engineering graduates in preparation for any one of many positions in highway engineering.

Research efforts concerned with problems of highway construction and maintenance, as well as related fields of traffic and safety on highways will be greatly expanded.

The research aspect of the new programme will be in co-operation with the Research Council of Alberta. Work will be done under the direction of university staff, using university facilities. The graduate student thesis projects will be closely integrated with current research programmes.

Another major objective of the course is dissemination of topical information among the technical personnel of organizations concerned with highway transportation. It is expected to publish bulletins and papers, and hold schools or conferences organized on an extension course basis.

The educational, research and extension programmes were carefully combined into an integrated programme after study of similar projects at various schools in the United States and in Europe.

The degree course in Civil engineering at all Canadian universities is considered to provide a suitable engineering background for a graduate wishing to enter the highway construction field. Post graduate courses providing a more specialized background in highway transportation have been available at the University of Alberta for the past twelve years, but they have not been closely integrated with the needs of the industry.

The new programme involves an expansion and extension of existing post-graduate courses. Soil mechanics and foundation engineering courses, the fundamental basis of modern road design and construction, will be continued. Instruction will cover the design and control of construction of asphalt and concrete pavements, and highway planning and traffic engineering. Elective courses with subjects such as highway bridge design and river engineering will be available.

Two scholarships valued at \$2,000 each have been made available through the Canadian Good Roads Association.

Research projects concerned with highway problems will be greatly expanded. Problems resulting from soil and climatic conditions peculiar to Western Canada and the Far North will be given attention. These include compaction of soils, prevention of frost heaving of soils by chemical treatments, effect of cycles of freezing and thawing on strength of soils, treatments to improve the stability characteristics of base course gravels of types having exceptionally high affinity for water, and stabilizing factors of slides of a particular nature which occur widely along river valleys in Northern Alberta, North-eastern British Columbia and parts of the Yukon.

Highway transportation plays a significant part in Canada's economy. Total expenditures connected with automotive transportation exceed one and one-half billion dollars annually. One person of every seven, directly or indirectly, draw their livelihood from it. Expenditure for highway construction and maintenance programmes in the western provinces during the next fiscal year is estimated at \$150,000,000.

It is hoped the course will provide solutions to various problems resulting in substantial savings in construction and maintenance costs.

## GAINS IN TB BATTLE

The incidence of tuberculosis continued to decline in 1956 during which, according to the Dominion Bureau of Statistics, there was a 10 per cent reduction from the preceding year in the number of cases reported as distinct from admissions to sanatoria.

Tuberculosis death rates have fallen dramatically in the last 10 years, with new record lows being a commonplace annual occurrence. In contrast, figures of new cases and of first admissions to sanatoria have clung more closely to prewar levels. Between 1931 and 1955 the chances of dying from tuberculosis declined by nearly 88 per cent but the chances of contracting tuberculosis in the first place dropped only 6 per cent. Expectation that the rapidly falling death rates of recent years foreshadowed a gradual drying-up of the reservoir of tuberculosis in this country appear nearer realization with the 1956 decline of 962 cases.

The tuberculosis case rate for the year, the lowest since 1929, stood at 57.8 per 100,000 population, with the reduction being shared by all provinces except Nova Scotia, Manitoba and Alberta. The nation-wide improvement, states the Bureau's 4-page special report released recently, reflects the effects of higher Canadian living standards, new treatment methods and expanded anti-tuberculosis services.

Revenue of 56 of Canada's tuberculosis sanatoria reached a record \$31,241,532 in

1955, up slightly (0.2 per cent) from the preceding year's \$31,174,016, the Dominion Bureau of Statistics reports. This was the smallest percentage gain in more than a decade and followed annual increases of 8 per cent or more from 1945 to 1953 and a modest rise (0.9 per cent) in 1954.

Expenditure decreased for the second successive year in 1955 to \$31,132,850 from \$31,520,269 in 1954 and \$32,439,000 in 1953. The 1955 decline amounted to 1.2 per cent; the 1954 drop was 2.8 per cent, while 1953's expenditure figure, the last to show an increase, was 11.2 per cent above that for 1952.

Most of the revenue was in the form of provincial grants, accounting for 70.6 cents of the revenue dollar as compared with 74.7 cents in the preceding year. A small sum was reported as received from paying patients--1.1 cent per dollar in 1955 versus 1.4 cents in 1954. Federal grants represented 6.3 cents of the revenue dollar versus 5.5 cents and contracts (Workmen's Compensation Board and other contracts) 11.6 cents versus 5.8 cents.

Cost per patient day has increased steadily. From \$2.60 in 1942 it rose above \$3.00 in 1945, above \$4.00 in 1947, above \$5.00 in 1949, above \$6.00 in 1952, and to \$7.08 in 1955. The highest cost per patient day was British Columbia's at \$14.07, averages for the other provinces ranging from \$9.14 in Alberta to \$5.67 in Quebec.

**TRADE OFFICE IN CEYLON:** The Department of Trade and Commerce has decided to reappoint a representative in Ceylon. Mr. W.R. Van, recently Commercial Secretary in the Canadian Embassy in Rome, has been appointed Commercial Secretary in the Office of the High Commissioner for Canada, Colombo, and will take up his duties in this new post about April 5.

Canadian firms interested in trade with Asian markets will recollect that Ceylon has for many years been a substantial and consistent supplier of Canadian requirements of tea, rubber in various forms, desiccated coconut, and a number of coconut by-products. That country has at the same time purchased considerable quantities of Canadian motor vehicles, railway ties, household and office equipment, and a variety of foodstuffs. However, postwar controls have affected the extent and composition of the trade to a point where it is now made up to a substantial degree by flour, newsprint paper, powdered milk, machinery, electrical apparatus, automobile parts and hardware.

The trade has traditionally shown a large balance in Ceylon's favour. For the calendar year 1955, Canadian statistics show that imports from Ceylon totalled \$15,580,693 and exports to that country totalled \$2,671,252.

**TROPHY WINNERS:** Royal Canadian Army Cadets and Royal Canadian Air Cadets have won the King George V Trophy for 1955 and have received the congratulations of Her Majesty The Queen. The King George V Trophy recognizes the highest standard of small-bore shooting among cadets of Commonwealth countries.

Canada had 9,077 Army cadets and 11 Air cadets competing, the largest representation in the Commonwealth, and the average scores of 2,000 boys were computed to arrive at the result. Canada won the trophy with an average of 88,079 points of a possible 100. Runner-up was South Africa with 88,022 points.

The competition has been staged annually since 1910 and results take approximately a year to compute.

The Queen's congratulations are contained in a letter from the Privy Purse Office, Buckingham Palace.

In the Imperial Trophies competition, the Senior Shield was won by No. 2307 St. Coeur de Marie Cadet Corps of Shediac, N.B. No. 30 Mont St. Louis Cadet Corps, Montreal, was runner-up.

In the number of medals won by various Commonwealth countries, Canada also led the field with 77 silver and 104 bronze medals.