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Information for Agricultural Research Managers

Revenue and Cost Codes for Use with INFORM

Barry Nestel

The International Service for National Agricultural Research (ISNAR) began operating at its headquarters in The Hague, the Netherlands, on September 1, 1980. It was established by the Consultative Group on International Agricultural Research (CGIAR), on the basis of recommendations from an international task force, for the purpose of assisting governments of developing countries to strengthen their agricultural research. It is a nonprofit autonomous agency, international in character, and nonpolitical in management, staffing, and operations.

Of the 13 centers in the CGIAR network, ISNAR is the only one that focuses primarily on national agricultural research issues. It provides advice to governments, upon request, on research policy, organization, and management issues, thus complementing the activities of other assistance agencies.

ISNAR has active advisory service, research, and training programs.

ISNAR is supported by a number of the members of CGIAR, an informal group of donors that includes countries, development banks, international organizations, and foundations.

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Preface

Lack of good information can be a major impediment to effective management of research. Managers need to know exactly what experiments their scientists are carrying out, with which facilities, and at what cost. Without this information, managers cannot perform, or improve, essential functions such as planning, programming, monitoring, and evaluation.

- Effective agricultural research policy cannot be set without good information on which to base decisions.
- Sound agricultural research management is impossible without good information on which to base programs.

To help national agricultural research systems (NARS) address needs for better information and to improve information use for planning and policy setting, ISNAR has developed a management information system called INFORM — *INFORMATION* for agricultural *Research Managers*. INFORM is described in a series of guidelines.

This is Part 3, a technical reference that is not meant to be studied from cover to cover. It is intended as a guide for practitioners and accountants providing financial data for INFORM.

Part 3 resulted from a study of account codes used by agricultural research institutes in several countries in Asia and elsewhere. This was done to suggest a mechanism whereby the account codes used by different NARS can be accommodated in a standardized program budgeting system based on classifying research budgets into nine primary and about 30 secondary codes.

The proposed budgeting system is not intended to be rigid. It offers one approach, used in INFORM, for consolidating accounts. The approach is flexible and can be followed either in its entirety or partially. Part 3 serves as a supplement to the overall methodology presented in Part 2 of these guidelines.

Acknowledgements

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The cooperation of India's National Academy for Agricultural Research Management (NAARM), the Southeast Asian Ministers of Education Organization Regional Center for Graduate Study and Research in Agriculture (SEARCA), and the Philippine Council for Agriculture, Forestry and Natural Resources Research and Development (PCARRD) in planning and running two workshops in the second half of 1990 at which earlier drafts of this document were discussed extensively is gratefully acknowledged. Feedback from workshop participants was obtained through a structured review process, focusing on substance, presentation and applicability of the material. Revised drafts were produced after each of the workshops and the document in its present form has benefitted considerably from participants' comments and suggestions.

Many colleagues at ISNAR and from other national agricultural research organizations contributed ideas and suggestions throughout the development of this volume. The assistance at ISNAR of Byron Mook and Govert Gijbers is especially acknowledged.

1

Managing Funds Allocated to Research

One task of the research manager is to control the use of the funds allocated to research. Effective financial management represents one of his/her strongest tools for directing, monitoring, and measuring the activities of researchers; for accounting for the use of funds; and for reviewing resource allocation. Even though the total research budget may vary little from year to year, there is often an opportunity for flexibility in the way funds are used, providing that appropriate financial management is practiced.

The first step in the establishment of a budgetary control system is to classify costs so they can be readily identified and, hopefully, controlled. This volume suggests how costs can be classified. It does so by indicating how the account codes of different national agricultural research systems (NARS) can be accommodated in a standardized program budgeting system based upon classifying research budgets into **9 primary** and about **30 secondary** codes.

The budgeting system proposed for INFORM is not meant to be rigid; it offers one approach to consolidating account headings, which can be followed either completely or partially. For example, fuel is treated as a transportation cost, but it could equally be regarded as a component of supplies if a NARS chose to do that.

The end product of the accounting exercise, of which this is the first part, will be a budget for each separate research activity (project, experiment, or study), with the sum of the budgets for all activities (the program budget) being identical with the total research funding received by the institute. For each activity, all expenditure is aggregated into nine **primary** cost centers.

For most program budgeting purposes, an analysis at the **primary** level should suffice. However, managers who want to examine any particular aspect of the budget can disaggregate their budget into **secondary** (30) or **tertiary** (about 100) cost codes. Thus, miscellaneous costs (primary code 800) can be broken down to pick out services (secondary code 820), which includes tertiary code 821 (Post and Telephone). Likewise Materials and Supplies (200) includes Research Materials (210), of which Fertilizer (213) is one component (Fig. 1.1).

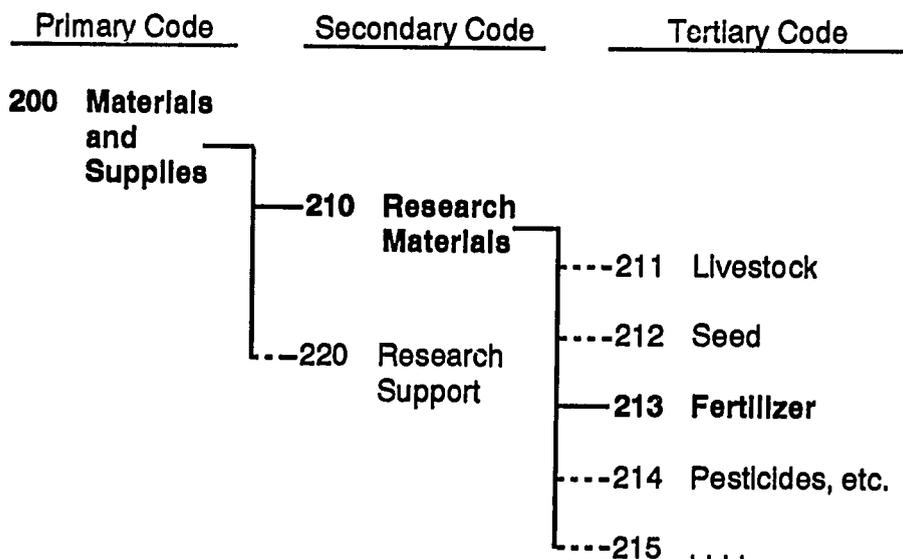


Figure 1.1. The cost code hierarchy

Information at the **tertiary** level may be particularly useful where an institute is contracting its services and needs to allocate indirect costs in order to practice full cost recovery.

The text and tables presented herein should be read in conjunction with Part 2 of the INFORM guidelines, which explains the detailed procedures used for budgeting and allocating costs at the level of research activities.

2

Revenue Codes

Many NARS research institutes relate their budget only to the core or, perhaps, the development budget funds that they receive directly from the government. But, in fact, a more accurate measure of income provided for research would include all of the funds used to support it. The main funding sources are as follows:

- a. the core budget;
- b. the development budget;
- c. miscellaneous income from sales and service;
- d. the value of services provided to the research institute (e.g., finance, personnel, and administration) by other agencies or departments of government;
- e. grants, contracts, or loans from within the country;
- f. grants, contracts, or loans from donor agencies.

Each of these six sources of funds may provide support for both operational expenses and capital expenditure. Because INFORM is primarily a management tool, the prime emphasis in this document is on operational rather than capital budgets.

Revenue is grouped into three levels. At the **primary code** level all income for research is classified under code 000 (Revenue).

Six sources of financial support are recorded at the **secondary code** level:

Code	010	Core Budget
Code	020	Development Budget
Code	030	Miscellaneous Revenue
Code	040	Central Support Costs
Code	050	External Funding (National)
Code	060	External Funding (International)

The budget of many research institutes is not used exclusively for research because the scientific staff devotes time to nonresearch activities such as training, extension, advisory services, and vaccine production. Where the activities of specific units of the institute are entirely devoted to these tasks, then the costs of these units (and their share of overhead costs) should be excluded from the *research* budget.

In institutes where nonresearch activities are done on a part-time basis by scientists who also do research, their costs should be included in the research budget, with allocations to nonresearch activities made on the basis of the scientists' time allocations (described in Part 2 of these guidelines).

In order to derive nonresearch costs, as suggested above, specific **tertiary codes** can be introduced to both the core and the development budgets. **Tertiary codes** can also be used to relate external funds to source institutes or agencies. The actual breakdown will vary from country to country. In all cases, however, it is important to include all six of the **secondary code** sources of revenue in the revenue summary. Table 2.1 illustrates how a revenue summary may be built up.

Table 2.1. Revenue Code Summary

----- Codes -----			Cost Units	Subtotal Cost Units
Primary	Secondary	Tertiary		
000	010	CORE BUDGET (MINISTRY OF AGRICULTURE)		
		011 Core Budget of Research Institute	500	
		012 Less Funds Used for Nonresearch (e.g., Vaccine Production)	-50	
		Total Income from Core Research Budget		450
	020	DEVELOPMENT BUDGET (MINISTRY OF PLANNING)		
		021 Development Budget of Institute	165	
		022 Less Funds Used for Nonresearch	0	
		Total Income from Development Funds		165
	030	MISCELLANEOUS REVENUE (RETAINED BY INSTITUTE)		
		031 Sales of Livestock	0	
		032 Sales of Seed	10	
		033 Consultancy Fees	20	
		034 Bank Interest	5	
		Total Income from Miscellaneous Revenue		35
	040	CENTRAL SUPPORT COSTS (FROM MINISTRY OF AGRICULTURE)		
		The Research Institute derives its administration from a central or service unit. Total cost of central unit = 350, of which 20% is allocated to the Institute: 350 x 20%	70	
		Total Value of Allocated Service Cost		70
		<i>Total Research Funding from Government Budget (010 + 020 + 030 + 040)</i>		(720)
	050	EXTERNAL FUNDING (NATIONAL)		
		Grants, contracts, or loans for research from other ministries or private sector		
		051 Tobacco Company	20	
		Total Budget from National External Sources		20
	060	EXTERNAL FUNDING (INTERNATIONAL)		
		061 World Bank	150	
		062 Regional Development Bank	50	
		063 IDRC, Canada	60	
		Total Budget from International Sources		260
		<i>Total Research Funding from External Sources (050 + 060)</i>		(280)
		Grand Total of Funding for Research (010 + 020 + 030 + 040 + 050 + 060)		1000
		Of Which:		
		070 OPERATING COSTS	870	
		080 NONOPERATING COSTS	130	
			1000	

3

Cost Codes

The costs of research are recorded in the same manner as revenue: under **primary**, **secondary**, and **tertiary** codes.

There are nine **primary** codes. The first three — personnel, supplies, and transport — are operational costs, which can often be directly linked to experiments. The next five codes are indirect costs that can seldom be related to specific experiments and must be allocated to individual experiments. Indirect costs cover repairs and maintenance, technology transfer, management and administration, utilities, and miscellaneous. The ninth code is for nonoperating costs, including capital and in-kind costs from donors.

The nine **primary** codes are the basic elements of INFORM program budgeting. They were created from about 30 **secondary** and 90 **tertiary** codes, which include most of the cost codes used by the various NARS whose budgets ISNAR has examined. Detailed cost records at the **tertiary** level may be necessary for accounting purposes, but the information needed for research management will rarely need to be below the **secondary** level; often the **primary** codes will suffice. **Secondary** and **tertiary** level codes are listed in this volume to assist those persons using INFORM in allocating detailed codes from national accounting systems into the INFORM framework.

Two aspects of coding that warrant specific mention are the treatments of personnel costs and donor costs.

3.1 Personnel Costs

Code 100 divides personnel into professional staff, technical support staff, administrative support staff, and labor. However, through the use of Scientists' Activity Reports (described in Part 2 of these guidelines), the professional staff costs that are initially shown under code 110 are disaggregated in INFORM under the following codes:

- 110 Scientists
- 510 Scientists Doing Extension
- 520 Scientists Doing Teaching/Training
- 610 Scientists Doing Research Management
- 810 Study Leave (a component of Miscellaneous)

This allocation process is described in Chapter 3, Part 2 of these guidelines and is discussed further in Chapter 4 of this volume.

3.2 Donor Costs

Donor costs for operational activities are shown in the main operational budget (see Chapter 4). The cost of capital items provided by donors is shown under cost code 900. This also includes the costs paid by donors for technical assistance personnel and for overseas training of national staff. The costs of these items are often so high, relative to other elements in NARS budgets, that their inclusion as operating costs distorts resource allocation. For this reason, they have been treated here as in-kind human resource costs in the nonoperating budget rather than as operating costs. This is not strictly correct in accounting terms, but it is a realistic practical measure in terms of most NARS accounts.

3.3 Primary and Secondary Codes

The primary and secondary codes used by INFORM are shown below.

PRIMARY CODES		<u>Code</u>
REVENUE		000
EXPENDITURE		
RESEARCH PERSONNEL		100
MATERIALS/SUPPLIES		200
TRANSPORT/TRAVEL		300
REPAIRS/MAINTENANCE		400
TECHNOLOGY TRANSFER		500
MANAGEMENT/		
ADMINISTRATION		600
UTILITIES/FACILITIES		700
MISCELLANEOUS		800
		SUBTOTAL
		OPERATING
		COSTS

NONOPERATING		900
		GRAND TOTAL

SECONDARY CODES

<u>Primary Code</u>	<u>Secondary Code</u>	<u>Number of Tertiary Codes</u>	
100	RESEARCH PERSONNEL		
	110 SCIENTISTS	3	
	120 TECHNICAL SUPPORT STAFF	5	
	(130) (ADMINISTRATIVE SUPPORT STAFF — ALLOCATED TO CODE 620)	(4)	
	140 LABOR	5	
	(150) (OTHER PERSONNEL COSTS — ALLOCATED TO 110/120/130/140)	(6)	
200	MATERIALS/SUPPLIES		
	210 RESEARCH MATERIALS	7	
	220 RESEARCH SUPPORT	4	
300	TRANSPORT/TRAVEL		
	310 SUBSISTENCE	3	
	320 CONVEYANCE	3	
	330 VEHICLES	5	
400	REPAIRS/MAINTENANCE		
	410 PHYSICAL PLANT	7	
	420 RESEARCH EQUIPMENT	2	
500	TECHNOLOGY TRANSFER		
	510 SCIENTISTS DOING EXTENSION	0	
	520 SCIENTISTS DOING TEACHING/TRAINING	0	
	530 PUBLICATION STAFF	0	
	540 PUBLICATIONS	3	
	550 PROMOTION	2	
	560 LINKAGES	4	
600	MANAGEMENT		
	610 SCIENTISTS DOING RESEARCH MANAGEMENT	0	
	620 ADMINISTRATIVE SUPPORT STAFF	3	
	630 BOARD OF DIRECTORS OR GOVERNORS	0	
	640 DEPARTMENTAL	0	
700	UTILITIES/FACILITIES		
	710 UTILITIES	2	
	720 FACILITIES RENTAL	3	
800	MISCELLANEOUS		
	810 TRAINING	3	
	820 SERVICES	7	
	830 FINANCE	3	
	840 OTHER	?	
900	NONOPERATING		
	910 CIVIL WORKS (CAPITAL)	3	
	920 EQUIPMENT (CAPITAL)	3	
	930 TECHNICAL ASSISTANCE PERSONNEL IN-KIND	2	
	940 OVERSEAS TRAINING (IN-KIND)	2	
Main Codes: 9		Secondary Codes: 30	Tertiary Codes: (90)

3.4 Primary Code 100 — Research Personnel

<u>Secondary Code</u>	<u>Tertiary Code</u>	
110		SCIENTIFIC STAFF (Partially reallocated to codes 510/520/610/810)
	111	Researcher Salaries
	112	Researcher Pensions and Terminal Benefits
	113	Other Researcher Costs
120		TECHNICAL SUPPORT STAFF
	121	Salaries of Technical Support Staff
	122	Pensions and Terminal Benefits
	123	Overtime/Holiday Pay
	124	External Technical Consultants
	125	Other Technical Support Staff Costs
130		ADMINISTRATIVE SUPPORT STAFF (Reallocated to code 620)
	131	Salaries of Administrative Support Staff
	132	Pensions and Terminal Benefits
	133	Overtime/Holiday Pay
	134	Other Administrative Support Staff Costs
140		LABOR
	141	Permanent Labor
	142	Casual Labor
	143	Pensions and Terminal Benefits
	144	Overtime/Holiday Pay
	145	Other Labor Costs
(150)		(COSTS TO BE REALLOCATED BACK TO CODES 110/120/130)
	(151)	(Honoraria/Gratuities)
	(152)	(Health/Medical)
	(153)	(Welfare)
	(154)	(Cost-of-Living Allowances)
	(155)	(Other Allowances, e.g., food, housing, cafeteria subsidy)
	(156)	(Pensions and Terminal Benefits)

Personnel costs make up 60% to 80% of the total operating costs of many NARS. In some cases, personnel costs are consolidated under one head in the budget. In other cases, items such as pensions appear in a separate part of the budget. The objective in INFORM is to bring all personnel costs together in four categories: professional staff costs, technical support staff costs, administrative support staff costs, and labor costs.

As the first stage in budgeting personnel, all human resource costs are included in primary code 100.

In order to do this, the various items of personnel costs used by most NARS have been grouped in five categories. The first four cover scientists (110), technical support staff (120), administrative support staff (130) and labor (140) — they represent items that can often be identified directly in a NARS budget. The final category (costs to be reallocated: 150) deals with items in budgets that the staff implementing INFORM must reallocate among the first four categories. Thus, pension costs (code 156) may be pooled for all staff in the NARS budget but must be allocated to codes 112, 122, 132, and 143 for the INFORM exercise.

At a later stage in the work (see section 3.4.6), the costs in code 110 can be broken down into scientific staff costs for

- Research (110)
- Extension (510)
- Teaching/Training (520)
- Management (610)
- Study (810)
- Publications (530)

In the final budget preparation, administrative costs (130) are transferred out of research personnel to administrative support staff (620).

3.4.1 Secondary Code 110 — Scientists

Scientific staff are all of the staff at an institute, including biological, natural, and social scientists, who are actively engaged in the research program and its follow-up. At some institutes, there are nongraduates holding the posts of scientific officers by nature of long service and experience. If such persons are treated as fully qualified scientists, they should be regarded as professionals. In contrast to this, some countries have both three- and four-year bachelor degrees, and although the three-year degree holder is a graduate, he/she is not regarded by the NARS as a professional scientist. These individuals may be treated as technical support staff for INFORM purposes.

Code 110, *Scientists Costs*, is occasionally directly obtainable from an institute's budget. More commonly, scientists' salaries are combined in the budget with support staff salaries (and sometimes with permanent labor costs), and selected items, such as pension costs, are also added. Thus, code 110 often has to be built up from a study of the payroll.

Code 111, *Researchers Salaries*, may not be available directly from the institute budget but can always be built up using the payroll.

Code 112, *Researchers Pensions*, is built into salary budgets in some accounting systems. In others, pensions are shown separately in the payroll. They may be shown as a percentage of salary costs, which may differ for different categories of staff. Where only a figure for total pension cost is available, it can be divided among scientists, support staff, and labor if the percentage contribution of each is known. This is done by allocating the pension costs in code 156 among scientists (code 112), technical support staff (code 122), administrative support staff (code 132), and labor (code 143).

Pensions may be noncontributory or contributory, (sometimes called a provident fund). In all cases the treatment for INFORM is identical.

Code 113, *Other Researcher Costs*, is designed to cover any personnel costs for scientific staff resulting from the reallocation of costs aggregated under codes 151-155. This is discussed under code 150.

3.4.2 *Secondary Code 120 — Technical Support Staff*

Technical Support Staff are permanent staff (and consultants) who have some form of technical training and whose work is directly associated with the research program. This includes research, field, and laboratory assistants.

Code 120, *Technical Support Staff*, is sometimes available directly from the budget of a research institute. Usually, however, technical support staff salaries are mixed with other support staff salaries. Some parts of the technical support staff costs, such as pensions, may be shown separately from salary costs and may be pooled with other staff pensions. Thus, code 120 often has to be built up from component elements.

Code 121, *Technical Support Staff Salaries*, is occasionally a line item in the institute budget, but it may have to be built up by selecting data from the payroll.

Code 122, *Technical Support Staff Pensions*, is derived in a manner identical to that used for code 112.

Code 123, *Technical Support Staff Overtime/Holiday Pay*, is a line item in many institute budgets. Sometimes the overtime, or holiday, pay shown in the budget is not entirely for support staff; some may be for scientists or field labor. In such cases, part of the total can be allocated to codes 113 (Other Scientific Staff Costs) or 145 (Other Labor Costs). However, because overtime is rarely a major budget item and is usually intended for support staff, it is generally satisfactory to leave it under code 123 (or code 133) for the purposes of INFORM.

Code 124, *Consultants*, can be treated as either scientists or technical support staff. Because most NARS have limited funds available for consultants, they are usually a minor budget item and are treated as a technical support cost. In the case of foreign consultants funded by donor agencies (Technical Assistance Personnel), the cost is normally much higher than that of local scientists and its inclusion in the national personnel budget causes major distortions. Thus, all foreign consultants are treated as costs in kind rather than as a personnel cost (see code 930 later in this report).

Code 125, *Other Technical Support Staff Costs*, is designed to cover any personnel costs for technical support staff resulting from the reallocation of costs aggregated under codes 151-155.

3.4.3 Secondary Code 130 —Administrative Support Staff

Administrative Support Staff are permanent staff who provide administrative and general-service support to scientists. This group includes administrators, clerical and secretarial staff, drivers, watchmen, and maintenance and cleaning staff.

Code 130, *Administrative Support Staff Costs*, is sometimes available directly from the budget of a research institute. Usually, however, administrative support staff salaries are mixed with other support staff salaries. Some parts of the administrative support staff costs, such as pensions, may be shown separately from salary costs and may be pooled with other staff pensions. Thus, code 130 often has to be built up from component elements.

Code 131, *Administrative Support Staff Salaries*, is occasionally a line item in the institute budget but it may have to be built up by selecting the data from the payroll.

Code 132, *Administrative Support Staff Pensions*, is derived in a manner identical to that used for code 112.

Code 133, *Administrative Support Staff Overtime/Holiday Pay*, is a line item in many institute budgets. Sometimes the overtime or holiday pay shown in the budget is not entirely for support staff; some may be for scientists or field labor. In such cases, part of the total can be allocated to codes 113 (Other Scientific Staff Costs) or 145 (Other Labor Costs). However, because code 133 is rarely a major budget item and is usually intended for support staff, it is generally satisfactory to leave it under code 133 (or code 123).

Code 134, *Other Administrative Support Staff Costs*, is designed to cover any personnel costs for administrative support staff resulting from the reallocation of costs aggregated under codes 151-155.

Once the total administrative support staff cost is identified, it is placed in code 620. Code 130 is a dummy code used for working purposes and should read zero (0) in the final version of the budget.

3.4.4 Secondary Code 140 — Labor

Labor covers unskilled personnel associated with the research program, either in the field or the laboratory. Such labor may be permanent payroll, casual, or temporary. Semiskilled or skilled labor, such as laboratory assistants, foremen, supervisors, storekeepers, or watchmen are regarded as support staff.

Code 140, *Labor Costs*, is often a troublesome item because permanent labor may be merged with other staff costs in the accounts, whereas casual labor is often treated separately. Some institutes record labor use by projects or programs and know the daily rate, so labor costs per project or program are readily identifiable. Other institutes treat all labor as a pool and do not cost it out against projects. Permanent labor costs can be identified in the payroll, if in no other way, and casual labor can be identified either from the payroll or from the records kept by the field-labor foreman.

Code 141, *Permanent Labor Costs*, is occasionally a budget line item. If not, it can be built up from payroll records. Because most labor is paid at a set rate, it is possible to cross-check the budget by multiplying the number of laborers by the daily, weekly, or monthly wage rate to build up a total annual labor cost.

Code 142, *Casual Labor Costs*, is often not difficult to derive, although only a few institutes may present these on a program or project basis.

Code 143, *Pension*, is treated in the same manner as code 122 where applicable.

Code 144, *Overtime/Holiday Pay*, is treated in the same manner as code 123 where applicable.

Code 145, *Other Labor Costs*, is treated in the same manner as code 125 where applicable.

3.4.5 *Secondary Code 150 — Personnel Costs to Be Reallocated*

The budget codes listed in code 150 are ones that appear in some NARS accounts but not always directly under personnel costs. For INFORM these costs are reallocated to either pensions (codes 112, 122, 132, and 143) or other costs (codes 113, 125, 134, and 145).

The objective of reallocating personnel costs for INFORM is to include all costs for personnel under four heads:

- professional staff;
- technical support staff;
- administrative support staff;
- labor.

Code 150, disappears in INFORM by being absorbed by codes 110, 120, 130, and 140.

Code 151, *Honoraria/Gratuities*, can involve professional or support staff and will normally be reallocated to code 113 or occasionally divided between codes 125 and 134.

Code 152, *Health/Medical*, usually covers all staff and is best prorated between codes 110, 120, 130, and 140 in line with their respective magnitudes. Because code 152 is a small budget item, it need not be split into fractions of less than 10% of its total.

Code 153, *Welfare*, is best treated in the same manner as code 152, unless it can be specifically associated with one group of employees.

Code 154, *Cost-of-Living Allowances*, can sometimes be directly related to salaries or wages as a percentage. In such circumstances, it should be calculated and reallocated to codes 113, 125, 134, or 145. In

a few cases, the figures can be drawn directly from the payroll and no reallocation is needed.

Code 155, *Other Allowances*, relates to costs that vary widely among institutes; it can include subsidized housing or an entitlement to a free supply of institute produce. For allocation, the general principles used for codes 152 and 153 should apply.

Code 156, *Pension*, the basis for the reallocation of pooled pension costs was discussed under codes 112, 122, 132 and 143.

3.4.6 *Reallocating Personnel Costs*

Once the total personnel costs have been assigned to codes 110 (Scientists), 120 (Technical Support), 130 (Administrative Support), and 140 (Labor), the scientist costs are broken down to represent the actual or planned time allocations shown in the completed Scientists' Activity Questionnaires. See Part 2 of the guidelines, Chapters 3 and 4, and Chapter 4 of this volume for a fuller treatment of this topic.

In the INFORM budget, personnel costs are then shown as follows:

Table 3.1. Personnel Costs as Shown in the INFORM Budget

	Researcher (100)	Technology Transfer (500)	Management Admin. (600)	Miscellaneous (800)
SCIENTISTS				
Research	X			
Extension		X		
Teaching/Training		X		
Management			X	
Study				X
TECHNICAL SUPPORT	X			
ADMINISTRATIVE SUPPORT			X	
LABOR	X			

3.5 Primary Code 200 — Materials/Supplies

Secondary Code	Tertiary Code	
210		RESEARCH MATERIALS
	211	Livestock
	212	Seed
	213	Fertilizer
	214	Pesticides/Herbicides/Chemicals/ Pharmaceuticals
	215	Small Machinery/Equipment/Glassware
	216	Fencing Materials
	217	Other Consumables
220		RESEARCH SUPPORT
	221	Stationery and Office Supplies
	222	Computer supplies
	223	Books/Periodicals/Newspapers/Photography
	224	Uniforms

Materials/Supplies are items purchased for use by the research institute but which are not capital items. The costs of haulage are included in this code. New equipment, other than small items, is not included under code 200 but is treated as a nonoperating cost (code 900). The distinction between supplies and capital items will vary from country to country according to government practices.

Code 210, *Research Materials*, covers materials used directly for research trials.

Code 211, *Livestock*, represents animals or fish purchased for experimental purposes. If there is revenue from the sale of livestock, this should be treated as a credit in the income account (code 030).

Code 212, *Seed*, denotes seed purchases. Sales of farm products may be credited to this code if the institute is allowed to retain the funds from such sales, or it may be credited to the income account (code 030).

Code 213, *Fertilizer*, is self-explanatory.

Code 214, *Pesticides/Herbicides/Chemicals/Pharmaceuticals*, is self-explanatory. If required, these items can be separated into individual codes.

Code 215, *Machinery/Equipment/Glassware*, covers purchases of small pieces of machinery, equipment, and glassware normally regarded as consumable in a research institute.

Code 216, *Fencing Materials*, includes posts and wire.

Code 217, *Other Consumables*, denotes any other research materials not listed above.

Code 220, *Research Support*, covers the cost of office, computer, and library materials. These are divided into four areas.

Code 221, *Stationery and Office Supplies*.

Code 222, *Computer Supplies and Services*.

Code 223, *Books/Periodicals/Newspapers/Photographic Supplies*.

Code 224, *Uniforms for Drivers, Watchmen, etc.*

3.6 Primary Code 300 — Transport/Travel

Secondary Code	Tertiary Code	
310		SUBSISTENCE ALLOWANCES
	311	Local Travel
	312	Overseas Travel
	313	Change of Station/Holiday Travel
320		CONVEYANCE COSTS
	321	Air tickets
	322	Bus/Train tickets
	323	Car Hire
330		VEHICLE COSTS
	331	Fuels/Lubricants
	332	Maintenance
	333	Insurance
	334	Licensing
	335	Depreciation

This code includes all costs associated with mobility. It involves costs of vehicles (cars, trucks, and farm vehicles) and haulage, as well as costs of staff travel (tickets and per diems). The treatment of these costs varies considerably among NARS. Some treat per diems as a major head; others include vehicle maintenance and insurance as components of general maintenance

and insurance costs. Some NARS include fuel, lubricants, and haulage under supplies.

Code 310, *Subsistence Allowances*, includes per diem allowances paid to staff for their hotel and out-of-pocket expenses on duty travel.

Code 311, *Local per Diem*.

Code 312, *Overseas per Diem*.

Code 313, *Per Diems* associated with nonwork activities, such as holidays or change of duty station.

Code 320, *Conveyance Costs*, covers costs where either public transport or a hired vehicle is used for staff travel.

Code 321, *Air Tickets*.

Code 322, *Bus and Train Tickets*.

Code 323, *Car Hire*, both local and overseas.

Code 330, *Vehicle Costs*, covers all costs associated with the running of an Institute's fleet of vehicles: cars, trucks, tractors, harvesters, etc.

Code 331, *Fuels and Lubricants*.

Code 332, *Vehicle Maintenance*, is the cost of vehicle maintenance, including spare parts. It *does not include* the cost of replacement vehicles, which is included in the capital budget, nor does it include the wages of maintenance staff and supervisors. In practice, those wages are usually too difficult to pick out of the payroll. Some research institutes include building and vehicle maintenance in the same code, and some form of arbitrary division may be needed to separate these costs.

Code 333, *Vehicle Insurance*, in some institutes, this may be difficult to separate from other insurance (code 733). If so, code 333 will have to be left blank or an arbitrary part of the total insurance will need to be allocated to it.

Code 334, *Vehicle Licensing*, this covers vehicle licensing fees, but in some countries government vehicles may be exempt from this charge.

Code 335, *Vehicle Depreciation*, is for vehicle depreciation if this is a budget item. At many research institutes this is not the case, and depreciation costs are ignored.

3.7 Primary Code 400 — Repairs/Maintenance

Secondary Code	Tertiary Code	
410		PHYSICAL PLANT
	411	Offices and Laboratories
	412	Housing
	413	Field Stations
	414	Roads and Bridges
	415	Pumps and Canals
	416	Furniture and Fixtures
	417	Utilities
420		RESEARCH EQUIPMENT
	421	Farm Machinery and Equipment
	422	Laboratory Equipment

Repairs/Maintenance represents the costs of contract work and purchased materials for maintaining an institute's physical plant. It does not include personnel costs for payroll staff employed in maintenance activities.

Code 410, *Repair and Maintenance of the Physical Plant.*

Code 411, *Institute Offices and Laboratories.*

Code 412, *Staff Housing.*

Code 413, *Field Stations* (if separate from main complex)

Code 414, *Roads and Bridges.*

Code 415, *Pumps and Canals.*

Code 416, *Furniture.*

Code 417, *Utilities* (electrical and water system maintenance).

Code 420, *Repair and Maintenance of Research Equipment*, which should not be confused with codes 215 and 900, which deal with purchases of equipment.

Code 421, *Farm Machinery and Equipment.*

Code 422, *Laboratory Equipment.*

3.8 Primary Code 500 — Technology Transfer

Secondary Code	Tertiary Code	
510*		SCIENTISTS DOING EXTENSION
520*		SCIENTISTS DOING TEACHING/TRAINING
530		PUBLICATIONS AND PROMOTION STAFF
540		PUBLICATIONS
	541	Writing and Editing Contracts
	542	Printing
	543	Distribution
550		PROMOTION
	551	Publicity/Media Advertising/Shows
	552	Hospitality/Gifts
560		LINKAGES
	561	Workshops/Conferences/Meetings
	562	Subscriptions to Local Organizations
	563	Subscriptions to Overseas Organizations
	564	Transfer Payments for Supporting Research in National Institutions

Technology transfer covers activities that include the research institute's relationships with the outside world. It incorporates activities in the fields of extension, training other people, publications, promotion, conferences, subscriptions, and transfer payments.

Code 510, *Scientists Doing Extension*, is derived from the INFORM personnel database through the information fed into it from the scientists' activity reports. This shows how much of the scientists' total time is devoted to extension and enables these activities to be costed out. (See Chapter 4 for further details.)

*Codes 510 and 520 are included in code 110 in the initial analysis and are then derived by an analysis of the Scientists Time Allocation Reports (see page 16). Code 513 (if used) may be derived by shifting costs out of codes 110 or 120.

Code 520, *Scientists Doing Teaching/Training (of other people)*, is derived from the INFORM personnel data base through the information fed into it from the scientists' activity reports. This shows how much of the scientists' total time is devoted to teaching or training and enables these activities to be costed. (See Chapter 4 for further details.)

Code 530, *Publications and Promotion Staff*, is an area that many institutes will opt to leave in professional, administrative, or technical support staff salaries (codes 110 and 120).

Code 540, *Publications*, covers all the costs of institute publications of any type.

Code 541, *Writing and Editing Contracts*, is relevant where contracts are used for these tasks.

Code 542, *Printing*, includes all identifiable costs for printing and art work other than staff payroll costs, which are reflected in either code 130 (Administrative Support Staff) or code 530.

Code 543, *Distribution*, includes any specific costs for this task if such costs can be shown separate from postage (code 821) and haulage of documents (code 223).

Code 550, *Promotion*, represents the public relations activities of a research institute.

Code 551, *Publicity/Media Advertising/Shows*, covers promotion through press, radio, television, agricultural shows, etc.

Code 552, *Hospitality/Gifts*, covers hospitality to guests, mementos or gifts to visitors, etc.

Code 560, *Linkages*, denotes payments made by the institute for joint or collective activities.

Code 561, *Workshops/Conferences/Meetings*, should not include items classified under code 812 as in-service training.

Code 562, *Subscriptions to Local Organizations*, particularly professional societies or commodity associations.

Code 563, *Subscriptions to Overseas Organizations*, such as joint research organizations, FAO, etc.

Code 564, *Transfer Payments for Supporting Research in Other National Institutions*, such as universities.

3.9 Primary Code 600 — Management/Administration

Secondary Code	Tertiary Code	
610*		SCIENTISTS DOING RESEARCH MANAGEMENT
620		ADMINISTRATIVE SUPPORT STAFF
	621	Professional Administrators
	622	Office Support Staff
	623	General Services Staff
630		BOARD OF DIRECTORS OR GOVERNORS
640		DEPARTMENTAL

Management represents the management or administration, and, if relevant, the governance of a research institute. It has four components.

Code 610, *Scientists Doing Research Management*, represents the cost of the scientific direction of the Institute. It comprises the cost of staff time involved in management and is derived from the scientists' activity reports. It therefore represents a deduction from the total scientific staff costs in code 110.

Code 620, *Administrative Support Staff*, is the cost of the administrative support and general services staff of the Institute. This cost is isolated initially as code 130 and then transferred to code 620 in the final budget presentation. If required, it can be subdivided into codes 621, 622, and 623.

Code 621, *Professional Administrators*, such as finance and personnel officers.

Code 622, *Office Support Staff*, such as clerks and typists.

*Code 610 is derived from code 110 as a result of the analysis of the Scientists' Time Allocation Reports (see page 16).

Code 623, *General Services Staff*, covers drivers, watchmen, catering staff, cleaners, etc.

Code 621 }
Code 622 } include salaries, allowances and pensions
Code 623 } (see secondary code 130).

Code 630, represents the costs for the *Board of Directors or Governors*, if one exists.

Code 640, *Departmental*, is a notional charge for services rendered to the research Institute by other departments of government, e.g., when personnel, finance, etc., are handled by a central unit outside of the research system.

3.10 Primary Code 700 — Utilities/Facilities

Secondary Code	Tertiary Code	
710		UTILITY SERVICES
	711	Electricity/Gas
	712	Water
720		RENTAL OF FACILITIES
	721	Offices/Laboratories
	722	Housing
	723	Land

Code 700 covers the costs of the utility services (electricity, gas, and water) and those for renting physical facilities.

Code 710, *Utility Services*.

Code 711, *Electricity and Gas*.

Code 712, *Water*.

Code 720, *Rental of Facilities*.

Code 721, *Office and Laboratory Rental*.

Code 722, *House Rental*.

Code 723, *Land Rental*.

3.11 Primary Code 800 — Miscellaneous

Secondary Code	Tertiary Code	
810		TRAINING
	811*	Salary Costs of Staff Undertaking Study Leave
	812	In-service training
	813	Overseas training
820		SERVICES
	821	Post and Telephone
	822	Telegrams/Telex/Fax/Courier
	823	Insurance (other than car)
	824	Audit
	825	Legal
	826	Security (other than staff costs in code 100)
	827	Other Service Charges (e.g., customs, management consultants)
830		FINANCE
	831	Depreciation
	832	Bank Charges and Interest
	833	Rates and Taxes
840		OTHER

Miscellaneous Costs are those not covered under codes 100-700. These costs are sometimes referred to as *overhead costs*, but because some items under codes 100-700 are treated as overhead costs in some NARS accounting systems, the term *miscellaneous* is used. Three main groups of items are listed, but additional items may be added under code 840 if they do not fit elsewhere.

Code 810, *Training*, relates to the costs of training activities.

Code 811, *Salary Costs of Staff Undertaking Study Leave*, is a deduction from salary costs (code 110) (see Chapter 4 and page 16).

Code 812, *In-Service Training*, includes staff training seminars, meetings, and workshops, this should not be confused with code 541 which represents the cost of these activities presented to the outside world.

*Code 811 is derived by an analysis of the Scientists' Time Allocation Reports, and in the initial analysis, it is included in code 110 (see page 16).

Code 813, *Overseas Training*, if this is not paid for by technical assistance programs.

Code 820, *Services*, covers the costs of the services that any institute requires.

Code 821, *Post and Telephone*.

Code 822, *Telegrams/Telex/Fax/Courier*.

Code 823, *Insurance* (vehicle insurance should be transferred to code 333 if possible).

Code 824, *Audit Fees*.

Code 825, *Legal Fees*.

Code 826, *Security Services* (if contracted). Watchmen costs are, however, included under support staff (code 623).

Code 827, *Other Service Charges*, such as customs fees, management consultants, etc.

Code 830, *Finance Charges* of various types.

Code 831, *Depreciation*, if the institute charges for this. Note that if vehicle depreciation is charged separately, it can be budgeted in code 335.

Code 832, *Bank Charges and Interest*.

Code 833, *Rates and Taxes*, if applicable.

Code 840, *Other Miscellaneous Costs*, is available for covering any costs that do not fit elsewhere in the budget.

3.12 Primary Code 900 — Nonoperating Costs

Secondary Code	Tertiary Code	
910		CIVIL WORKS (CAPITAL)
	911	Buildings
	912	Housing
	913	Roads/Bridges/Canals
920		EQUIPMENT (CAPITAL)
	921	Laboratory
	922	Office/Computer
	923	Farm
	924	Vehicles
930		DONOR FUNDED TECHNICAL ASSISTANCE PERSONNEL (IN-KIND)
	931	Long-Term Personnel
	932	Short-Term Personnel
940		DONOR FUNDED OVERSEAS TRAINING (IN-KIND)
	941	Short-Term Training/Meetings/Conferences
	942	Long-Term Training for Higher Degrees

Nonoperating costs represent capital assets acquired, or to be acquired, during the year. These may be completely new, such as buildings or a new piece of equipment, or major replacements that are not usually acquired from the operating budget, such as vehicles. The costs of foreign technical assistance personnel and those for overseas training are treated as human resource capital development and are included here rather than under operating costs.

Code 910, *Civil Works*, concerns capital expenditure on new items.

Code 911, *Buildings* (offices and laboratories).

Code 912, *Housing* (for staff and visitors).

Code 913, *Roads/Bridges/Canals*.

Code 920, *Capital for New Equipment*.

Code 921, *Laboratory Equipment*.

Code 922, *Office Equipment*.

Code 923, *Farm Equipment* (including machinery).

Code 924, *Vehicles*.

Code 930, *Costs of Donor-Funded Technical Assistance Personnel*, represents the (in-kind) costs for these personnel. Funds for this are usually handled entirely by the donor and the actual cost may not be known to the research institute.

Code 931, *Long-Term Personnel*.

Code 932, *Short-Term Personnel*.

Code 940, *Donor-Funded Overseas Training*, is (in-kind) funding for overseas training. This may or may not be handled directly by the research institute.

Code 941, *Short-Term Training/Meetings/Conferences*.

Code 942, *Long-Term Training for Higher Degrees*.

4

Sample Budget Layout

The budget codes and the methodology described in Chapters 2 and 3 are used in INFORM. A research institute budget would be presented as shown in Tables 4.1 to 4.5.

Table 4.1. Original Budget Layout

Use of Funds	Source of Funds			Total
	Treasury	Donor A	Donor B	
1 Personnel				80,005
Scientists	49,129			
Support Staff	26,376			
Subsistence	1,500	3,000		
2 Labor	26,000		12,000	38,000
3 Supplies				39,000
Stationery/office	4,300			
Fuel	500	5,000		
Other	1,200	20,000	8,000	
4 Travel			6,000	6,000
5 Maintenance/Repairs				7,500
Buildings/equipment	3,000			
Vehicles	500	4,000		
6 Overhead				14,300
Publications	1,000	4,000		
Electricity	8,000			
Phone/telex	300			
Other	1,000			
TOTAL	12,2805	36,000	26,000	184,805

Scientists' time allocations are built up from the scientists' activity forms (Chapter 3 of Part 2 of the guidelines). Those are then printed as shown in Table 4.2. Note that the total cost of 49,129 is the same as the total cost for scientists' salaries in Table 4.1.

A study of the payroll enables the support staff cost of 26,376 in Table 4.1 to be divided between technical support staff and administrative support staff. For this budget, it is assumed that the cost for technical support staff is 4152 and for administrative support staff, 22,224 (Table 4.3).

Table 4.2. Scientists' Time Allocations

Name	Initials	Research		Management		Training		Extension		Full-Time Study		Unit Cost	Time Check
		Time	Cost	Time	Cost	Time	Cost	Time	Cost	Time	Cost		
ALAM	MS	85	1595	15	282	—	0	—	0	—	0	1877	100
BANDARA	C	80	1502	20	375	—	0	—	0	—	0	1877	100
CHAUDRY	HJ	80	3018	20	754	—	0	—	0	—	0	3773	100
DANAO	C	90	1689	10	183	—	0	—	0	—	0	1877	100
HOSSAIN	MA	90	2732	10	304	—	0	—	0	—	0	3036	100
KARIM	A	90	2732	10	304	—	0	—	0	—	0	3036	100
LIU	L	40	1509	40	1509	20	754	—	0	—	0	3772	100
MEHTA	V	95	2884	5	152	—	0	—	0	—	0	3036	100
PANDA	N	90	2732	10	304	—	0	—	0	—	0	3036	100
RAO	K	—	0	100	4140	—	0	—	0	—	0	4140	100
SINGH	FP	80	2429	20	607	—	0	—	0	—	0	3036	100
SISON	P	80	1502	—	0	—	0	20	375	—	0	1877	100
SOETOPO	R	80	3018	20	754	—	0	—	0	—	0	3772	100
SUBRAMANIAN	P	—	0	—	0	—	0	—	0	100	3036	3036	100
THAVEETHAJ	S	100	3036	—	0	—	0	—	0	—	0	3036	100
VIRULRAK	C	100	1502	—	0	—	0	—	0	—	0	3036	100
ZADOKS	JC	80	2185	—	0	5	0	20	0	—	0	1877	100
TOTAL		1260	34916	280	9672	20	754	40	751	100	3036	49129	1700

Costs can then be summarized as shown in Table 4.3.

Table 4.3. Summary of Personnel Costs

Activity	Cost	Percent of Total
Scientists Doing:		
research	34,916	71
management	9,672	20
training	754	2
extension	751	2
study leave	3,036	6
Total Scientists	49,129	100
Support Staff		
technical	4,152	16
administrative	22,224	84
Total Support Staff	26,376	100

It is now possible to complete the budget layout proposed in the earlier chapters by reallocating some of the figures in Table 4.1 and inserting the results of the scientists' time allocation report (Table 4.2) as summarized in Table 4.3. The INFORM budget layout is shown in Table 4.4.

Table 4.4. INFORM Budget Layout

Activity	Treasury	Donor A	Donor B	Total Budget	Source of Data
1 Research Personnel				77068	
Researchers*	34916				Tables 4.2/4.3
Technical Support	4152				Tables 4.2/4.3
Labor	26000		12000		Table 4.1
2 Materials/Supplies			33500		
Stationery/Office	4300				Table 4.1
Research Operations	1200	20000	8000		
3 Transport/Travel**				20500	
Subsistence	1500	3000	3000		Table 4.1 Personnel
Fuel	500	5000	1500		Table 4.1 Supplies
Vehicle Maintenance	500	4000	1500		Table 4.1 Maintenance
4 Repairs/Maintenance				3000	
Buildings/Equipment	3000				Table 4.1
5 Technology Transfer				6505	
Extension*	751				Tables 4.2/4.3
Training/Teaching*	754				Tables 4.2/4.3
Publications	1000	4000			Table 4.1
6 Management/Administration				31896	
Scientific Management*	9672				Tables 4.2/4.3
Admin. Support	22224				Tables 4.2/4.3
7 Utilities/Facilities				8300	
Electricity	8000				Table 4.1
Communications	300				Table 4.1
8 Miscellaneous				4036	
Study Leave*	3036				Table 4.2/4.3
Other	1000				Table 4.1
Total	122805	36000	26000	184805	

* Derived from the scientists' time allocations shown in tables 4.2 and 4.3.

**These reallocations are not mandatory but are preferred. They avoid, for example, having to allocate subsistence to individuals.

The data in Table 4.4 can be analyzed for management purposes in various ways. An example is to show the percentage components of the budget (Table 4.5).

Table 4.5. Use of Budget Expressed on a Percentage Basis

	Percent of Treasury	Percent of Donor	Percent of Total
Research Personnel	53	19	42
Materials/Supplies	5	45	18
Transport/Travel	2	29	11
Repairs/Maintenance	2	—	2
Technology Transfer	2	6	4
Management/Administration	26	—	17
Utilities/Facilities	7	—	4
Miscellaneous	3	—	2
Total	100	100	100
of which personnel is	82	19	61
and budget source is	66	34	100

Table 4.5 raises several issues, such as those based upon the following points:

1. Thirty-four percent (34%) of the total operational budget comes from donors.
2. Eighty-two percent (82%) of the national budget is used for personnel costs.
3. In the national budget, personnel costs for management and administration are almost half as much as the costs of personnel doing research.
4. Only 2% of the total budget is available for repairs and maintenance of equipment and facilities.

This example presents a fictitious research institute budget, but it relates to the real situation in a number of NARS. It provides the starting base for inputting costs on an activity (experiment) basis and illustrates the type of financial management analysis that INFORM can offer.