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PREFACE

In the mid-1980's the United Nations Statistics Division, acting on the guidance of the General Assembly and United Nations Congresses on the Prevention of Crime and the Treatment of Offenders, published the first edition of the *Manual for the Development of Criminal Justice Statistics*.¹ That *Manual* presented a general framework for developing a system of criminal justice statistics; it was followed by the *Guide to Computerization of Information Systems in Criminal Justice*.² The main purpose of the *Guide* was to assist criminal justice executives and managers in planning, implementing and keeping their criminal justice information systems technically up to date by taking full advantage of new information technologies.

In the period following the publication of these two manuals, a number of advances in the area of collecting and disseminating information on crime took place. The general framework of the criminal justice information system underwent changes, making it more flexible and enlarging it to encompass different sources of data relevant to the understanding and proper functioning of criminal justice, such as victimization surveys and statistics on causes of death.

Another development that clearly marked the previous period is related to "means versus needs" issues. Large-scale social and economic changes have focused attention on issues of criminal justice management and planning, yet at the same time fiscal austerity poses an enormous challenge. As demands for service increase, criminal justice managers must find ways of "doing more with less". In this context, good information on caseloads, case characteristics, case flows and expenditures have taken on a particular importance for monitoring performance and for strategic and operational planning. Furthermore, criminal justice statistics assist in policy research and analysis within criminal justice systems and as part of other social and global policy formation and planning. Finally, good criminal justice statistics are essential for understanding and trying to shape social development.

¹ *Manual for the Development of Criminal Justice Statistics*, Studies in Methods Series F, No. 43 (United Nations publication, Sales No. E.86.XVII.16).

² *Guide to Computerization of Information Systems in Criminal Justice*, Studies in Methods Series F, No. 58 (United Nations publication, Sales No. E.92.XVII.6).

The present *Manual* has been prepared in response to the Economic and Social Council (ECOSOC) resolution 1997/27 of 21 July 1997, entitled "Strengthening the United Nations Crime Prevention and Criminal Justice Programme with regard to the development of crime statistics and the operations of criminal justice system". In that resolution, the ECOSOC welcomed the offer of the Government of Canada "to assist the Secretariat, which will work in cooperation with the members of the Crime Prevention and Criminal Justice Programme Network and other interested experts, in the preparation of the Guide on the Development and Analysis of Criminal Justice Statistics". The Council also requested the Secretary-General "to develop, in cooperation with members of the Crime Prevention and Criminal Justice Programme Network and other interested experts, an annex to the above-mentioned Guide that would include specific examples of basic statistical instruments used for data collection, such as questionnaires, information output, reports, classifications, definitions and victimological issues, with a view to making national approaches to data collecting more compatible, thus making data comparable".

Following the request of the ECOSOC, the Guide, which was subsequently given its present title, *Manual for the Development of a System of Criminal Justice Statistics*, sets out an updated general framework for the development of a national system of criminal justice statistics. As the development of such a system inevitably requires the participation and cooperation of many sectors, the *Manual* is presented in non-technical language, and its intended audience is broad. The potential audience includes users and producers of criminal justice statistics both inside and outside of Government; in particular managers, administrators, professionals, technicians, scholars, researchers, academics, practitioners and others directly or indirectly concerned with criminal justice issues. The *Manual* also recognizes that underlying conditions and readiness to develop a system of criminal justice statistics vary markedly from country to country. National and local circumstances, then, will determine to a great extent how the *Manual* is used.

The discussion of sources complementary to administrative and operational information systems has been expanded into a chapter with the addition of more material on crime victimization surveys. A chapter on international collection of crime and criminal justice statistics has also been added to the present *Manual*.

According to the guidelines established by the ECOSOC, the present *Manual* includes an annex to highlight some of the practical issues related to the design and creation of a sound data collection system. The annex provides examples of data collection forms, statistical tables, an offence classification scheme, an offence severity scoring rule and data analysis, all or parts of which might be a useful starting point for countries attempting to develop or refine their national systems of criminal justice statistics. It is expected that countries will develop data-collection instruments appropriate to their own situation, reflecting the specific characteristics of their criminal justice system and the level of available resources.

The annex also includes questionnaires for the United Nations survey of crime trends and operations of criminal justice systems and the International Crime Victim Surveys. These instruments may serve as references for countries embarking on similar types of data collection, and may inform and stimulate countries to participate in future international justice-related survey activities. Comparison with countries of similar structure and nature provides a broader context for better understanding and shaping social development locally.

Inasmuch as crime and operations of criminal justice systems are part of a society, criminal justice statistics form a part of a larger body of social and

economic statistics that has been a subject of a number of international recommendations and publications by the United Nations Statistics Division.³ The present *Manual* draws on these extensive previous experience and publications.

It is recognized here that certain serious shortcomings in national criminal justice systems are not reflected in the *Manual*, such as abuse of police authority, unnecessary use of force, abuse of human rights, repression and lack of responsibility by the criminal justice system.

The draft of the *Manual for the Development of a System of Criminal Justice Statistics* was prepared by Rick Beattie and Robert Kingsley of the Canadian Centre for Justice Statistics, Statistics Canada. This draft was reviewed at an expert group meeting⁴ convened in Buenos Aires from 23 to 25 April 2001 and benefited additionally from the input of colleagues around the world. The chapter on international collection of data on crime and criminal justice was drafted by the Centre for International Crime Prevention, United Nations Office for Drug Control and Crime Prevention, and the United Nations Interregional Crime and Justice Research Institute.

The *Manual* was edited and prepared for publication by the United Nations Statistics Division.

³ An extensive list of United Nations Statistics Division methodological studies and international recommendations in the fields of social, demographic and economic statistics and the organization of statistical services is available at: <http://unstats.un.org/unsd/pubs>.

⁴ The meeting was organized by the Latin American Crime and Justice Research Institute (IDEJUAL) of the Ministry of Justice and Human Rights of Argentina, in cooperation with the United Nations Statistics Division and the Centre for International Crime Prevention, United Nations Office for Drug Control and Crime Prevention (CICP/ODCCP). Participants included experts from the European Institute for Crime Prevention and Control (HEUNI), the United Nations Asia and Far East Institute for the Prevention of Crime and the Treatment of Offenders (UNAFEI) and the Latin American Institute for the Prevention of Crime and the Treatment of Offenders (ILANUD), as well as national experts from Argentina, Canada, the Netherlands and Venezuela.

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I. PURPOSES AND REQUIREMENTS OF A SYSTEM OF CRIMINAL JUSTICE STATISTICS

A. USES AND PURPOSES OF A SYSTEM OF CRIMINAL JUSTICE STATISTICS

1.1 Statistics on crime and criminal justice help Governments to assess and monitor the conditions, circumstances and trends of well-being and the social impact of public expenditures and policies. The collection of reliable and comprehensive criminal justice statistics in countries is of immense importance to everyone involved with criminal justice, especially to the criminal justice administrator. Each component of the criminal justice system inevitably creates large quantities of records, but it is only when such raw information is transformed through purposeful collection and organization into statistical form that these records provide information valuable for criminal justice decision-making.

1.2 Broadly, the uses of criminal justice statistics can be divided into three interdependent areas: administration, planning, and policy research and analysis. Each of these areas is reviewed below.

Administration

1.3 Any organization or agency should be capable of monitoring its own activities. In general terms, management can be characterized as a process of organizing a set of resources to accomplish established goals and objectives. Effective management requires information to determine whether the goals and objectives are being accomplished in a timely and orderly fashion, and whether the resources are being used efficiently and effectively. The more complex the organization, the greater will be the need for statistical information, particularly on resources and resource allocation and on cases and caseloads.

1.4 For example, a police administrator is called upon to meet objectives regarding public safety, citizens' calls for assistance, apprehension of offenders and the like. He or she must allocate a variety of resources, including personnel, money, operating procedures, and facilities and equipment, to accomplish these objectives. Regular statistical reports integrating information on the allocation of resources as well as on such concerns as the incidence of calls for service, types of crime and identification of suspects are crucial if the administrator is to understand the agency's current problems and formulate possible solutions. Similarly, administrators of parole and probation agencies can use

routine statistical information on caseload size to determine, for example, whether the current workload is consistent with agency policy and, if not, what changes are needed.

1.5 Statistics, then, provide a measure of whether personnel are meeting minimal expectations and of how well an agency is accomplishing its stated goals and objectives. Such information is crucial for personnel and budget decisions and can indicate to other units and agencies whether objectives are being accomplished in compliance with established procedures and policies. In some countries information on effectiveness and efficiency is increasingly demanded by overall controlling agencies, the public and representatives of the public interest, particularly the media and special interest groups. Annual statistical reports and special statistical studies can contribute significantly towards meeting these demands.

Planning

1.6 Planning involves identifying alternative procedures for attaining some future goal. For example, for the court administrator planning may involve identifying ways of reducing case processing time or developing a more efficient way to produce trial transcripts. For the prison administrator, it may involve the development of a better classification system so that resources can be allocated to identified needs and objectives. The planning process involves the following steps:

- (a) Understanding the current situation;
- (b) Formulating a clear statement of the goal to be achieved;
- (c) Identifying alternative approaches for achieving the goal and the advantages and disadvantages of each approach;
- (d) Establishing criteria by which to select the best approach;
- (e) Implementing the planned approach for achieving the goal;
- (f) Installing a system to provide information on whether the plan is accomplishing its objectives in an efficient manner.

Each step in the planning process typically requires information, including statistics.

1.7 Consider the example of a criminal justice administrator who knows that prison facilities are currently operating at 95 per cent capacity. Historical trends in admissions and releases indicate that within two years the prison will be operating at 102 per cent capacity. However, conventional wisdom suggests that the prison should never be over 95 per cent capacity. In order to allow some degree of freedom in classifying and administratively segregating inmates, as well as in improving prison facilities through building renovation or extensions, some knowledge of the projected prison population is required. Based on such information, the administration can examine a range of options, such as changing classification standards; increasing releases through reprieves and other methods; expanding existing facilities; and building new facilities. In other words, statistics help the administrator to recognize the problem, identify the consequences, identify possible courses of action in response and recognize the advantages and disadvantages of each. Statistical information is useful for discriminating between options and monitoring the implementation of the selected course of action.

1.8 Every administrator must anticipate possibilities and put in motion plans based on such forecasts. Forecasting techniques vary from qualitative procedures based on experience and practical expertise to sophisticated statistical techniques. Without some systematic approach to forecasting, justice administrators must take the future as it comes, adopting a reactive management style that in the worst case may turn into crisis management. Regardless of the technique, all forecasting methods assume that the future is somehow related to the past and present. Thus, at a minimum, forecasts on crime and various aspects of the administration of justice require the use of statistical data.

Policy research and analysis

1.9 Policy analysis refers to attempts to determine the effects of changes in policy, law or procedure or in the environment and to develop strategies in the light of these anticipated effects. For example, a policy analyst may want to determine the effects of demographic shifts, such as a decline in the median age of the population or a continual migration of unskilled labourers, on the crime rate or the effects of crime-rate shifts on the workloads of police, courts and prisons. The analyst might also be interested in the effect of policy or procedural changes on the criminal justice process, such as the level of increase in judicial capacity that would be effected by a change in case-filing procedures reducing the average case-to-case period by five per cent.

1.10 Policy analysis can take two forms: internal analysis, to determine the effects of self-initiated policy or procedural changes on an agency's operation; and external analysis, to determine the effect on an agency of changes in another agency's policies and procedures or of changes in the environment. Either type of analysis can take place prior to the change, when it is often referred to as policy simulation, and after the change, as evaluation or impact analysis. Such analyses require statistical data.

1.11 Policy research and analysis are generally based on the view that crime is relational; that to understand crime, the link between changes in crime and changes in the social conditions that generate, maintain, decrease or increase its rate and shape its form and nature must also be understood. This implies that criminal justice statistics give only a partial picture of crime and its context. Furthermore, given that crime is said to be a process that often accompanies "development", the relationship between crime and development can only be understood and specified through an informed analysis of the relationship between various crimes and various developmental processes at different levels of development. Thus, just as other social statistics are necessary for an understanding of crime, criminal justice can play an important part in the evaluation of social change and the formulation of social policy.

1.12 In this context, criminal justice statistics can be viewed as part of a larger body of social statistics and indicators consisting of generalized or aggregated data on the central features of society. To understand the relationship between crime and social development—that is, to understand social change—the construction and evaluation of criminal justice statistics should be viewed in relation to other areas of statistics, such as:

- (a) Knowledge (education, innovation, other types of knowledge);
- (b) Population shifts;
- (c) Organization of society;
- (d) Culture and cultural changes;
- (e) Technology;
- (f) Changes in political and legal structures;
- (g) Various forms of social differentiation.

B. PRIMARY REQUIREMENTS OF A SYSTEM OF CRIMINAL JUSTICE STATISTICS

1.13 The very idea of a statistics system or programme is ambitious; it implies an enormous amount of planning and coordination. Like any other statistical system, a system of criminal justice statistics must meet certain basic user and management requirements, including the following:

(a) It must be user-oriented. Statistics must not be viewed as ends in themselves but rather as means to other ends such as decision-making, research and general enlightenment. Statistics must serve the user, or ideally many users, in a variety of ways;

(b) Statistics are most useful in context and when related to other statistics. This has two implications. First, time series are typically more useful and instructive than a single discrete observation. Second, a given body of statistics is most meaningful when linked to other statistics both within and outside the subject matter, as this emphasizes the importance of coordination and harmonization of concepts, definitions, classifications, methods and procedures;

(c) To be useful, statistical information must be timely. It must be collected, processed and released with due consideration to the requirements of decision makers;

(d) A statistical programme must be credible. First, to maintain the good will of the suppliers of data and information, consideration must be given to their concerns, especially that of the confidentiality of individually identifiable data and records. Second, to ensure the support of the users, the programme must be impartial, objective and technically and substantively sound;

(e) Just as a criminal justice system must be effectively planned and managed, so too must a criminal justice statistics system. The production of good quality statistics is complex and potentially costly, and thus requires effective management of human and fiscal resources.

1.14 In addition to these basic user and management requirements, several other essential factors contribute to the successful functioning and sustainability of a system of criminal justice statistics. They include:

(a) Obtaining and maintaining the commitment of stakeholders;

(b) Fostering the evolution of the statistical programme;

(c) Maintaining political neutrality and objectivity;

(d) Using analytical and technical resources effectively;

(e) Articulating of the scope and content clearly;

(f) Using an integrated approach;

(g) Maintaining a high public profile.

Obtaining and maintaining the commitment of stakeholders

A **stakeholder** is a person or group of people who have a share or a personal or financial involvement in an enterprise or undertaking. In the case of a criminal justice statistics system, stakeholders are many and may include government officials, criminal justice personnel, the media, researchers, scholars and the public.

1.15 The development of a national system of criminal justice statistics is a complex process. It requires the participation and cooperation of many components of the system, including the police, prosecutors, courts, and corrections. Experience shows that information programmes will not develop without the commitment of senior criminal justice managers. Core data for the ongoing production of national statistical information in the criminal justice area are extracted from administrative records that are kept by the various components involved, including police, prosecutors, courts and correctional personnel. This activity by itself is resource-intensive, but it is further complicated by the need to have national standards, common data definitions and other desirable attributes expected of a credible and usable statistical series. In practice, those who keep records for operational purposes pay only rudimentary attention to the non-operational uses of those records. Without the commitment of senior managers, conversion of official records into usable statistical data becomes a difficult proposition.

1.16 A wide variety of initiatives could be employed to sustain commitment of the major stakeholders. The most effective among them is a commitment based on the value of justice statistics for achieving the fundamental goals of the criminal justice system. The least effective, on the other hand, would be a situation in which legislation is used as the sole mechanism to force administrators of justice programmes to participate in a national justice statistics enterprise. However, a proper legislative framework is often necessary to establish the legal authority of the

system and the legal responsibilities of the administrators.

Fostering the evolution of the statistical programme

1.17 Once a basic statistical programme has been established, the greatest substantive challenge of a criminal justice statistics system is to foster the evolution of its outputs in response to the most pressing needs of data users. The key operational needs in this area are a capacity for effective interactions with a wide range of client groups, a planning system that can translate these needs into specific projects, and the resources to achieve the desired outputs.

Maintaining political neutrality and objectivity

1.18 One essential obligation of a national criminal justice statistics programme is public accountability. This obligation cannot be effectively fulfilled if the national justice statistics programme is viewed as one subscribing to a political ideology or subject to interference by the Government in power. The programme must be, and must be seen to be, impartial and objective.

1.19 Given that in most cases criminal justice statistics programmes have been developed by Governments for the purposes of planning and monitoring the criminal justice system, establishing political impartiality may prove to be quite challenging. Making the statistical system independent of the criminal justice system may be beneficial in terms of increasing impartiality. For example, establishing a criminal justice statistics agency independent of any other criminal justice agency (police, prosecutors, courts and corrections) increases its autonomy, independence and, ultimately, its impartiality.

Using analytical and technical resources effectively

1.20 The knowledge and experience of subject-matter specialists are invaluable in any statistical programme, and the field of criminal justice statistics is no exception. Experts in crime and victimization, criminal justice policy and programme administration must play a key role in designing the statistical series; in developing the concepts and definitions to be employed; in planning and conducting the analysis; and in preparing the outputs. Much of the raw data for the statistics programme is generated within the operational justice system (i.e., police agencies, courts, prisons) and therefore tends to reflect the policies and processes needed for the day-to-day administration of the system rather than a depiction of the substantive phenomena. The knowledge and experience of subject-matter

specialists are essential to ensure that the data are competently analyzed and placed in a proper context.

1.21 Data processing and analysis require an infrastructure of computer technology. Recent technological advances, if properly mobilized and used, will immensely facilitate all aspects of information production. Working with computers, however, raises many issues that must be addressed in a proactive way. These issues range from organizational concerns to security and access, from procurement and maintenance to training and development.

Articulating the scope and content clearly

1.22 A comprehensive programme of criminal justice statistics should describe the scope and structure of crime in society in the context of demographic, social and economic realities. It should also reflect the response to the problem of crime on the part of the criminal justice system including costs of administrative interventions.

1.23 These broad objectives may mean different things to different people. However, a national system of criminal justice statistics cannot be all things to all users. It follows then that a decision has to be made, through a priority-setting exercise, as to what information packages are to be sought. The outcome of this exercise will depend on the amount of resources available, the commitment and willingness of data suppliers to provide the data required and the hierarchy of information requirements of the major stakeholders. Experience suggests that the following four broad categories of information should be given the highest priority in the determination of the content of a national criminal justice statistics programme:

(a) Crime data that indicate the incidence of victimization in society by type of victimization; crimes reported and not reported to the authorities and reasons for not reporting; and the level of fear of crime;

(b) Caseload data, which indicate the number and types of cases handled by the different components of the criminal justice system (police, courts, corrections); and the characteristics of persons processed through the system, such as age, sex, education, language and marital status;

(c) Resource data regarding the numbers of persons employed in the criminal justice services; expenditures; and the distribution of services;

(d) Qualitative descriptions of the justice services, outlining organizational structures, responsibilities and jurisdictions, and programmes operated.

1.24 The importance of collecting crime data is self-evident. Caseload statistics enable justice administrators to compare the volume and composition of their workloads and the disposition of cases. Resource data, when combined with caseload data, can provide performance indicators and outline the level of services provided by the municipal, regional and central Governments. Accurate descriptions of justice services provide a framework within which statistics can be meaningfully interpreted.

Using an integrated approach

1.25 Countries differ greatly in their level of statistical development in the field of criminal justice. The kinds of programme goals set by each will depend on the current state of national criminal statistics, but the ultimate goal is to achieve a fully integrated system of criminal justice statistics, a goal that few, if any, have achieved.

1.26 An important step towards an integrated system of criminal justice statistics is the development and use of common concepts and classifications, both within and across components of the criminal justice system and, as much as possible, between criminal justice and outside agencies. Uniform classifications allow the linking of data from different components of the criminal justice system and between the criminal justice system and other agencies.

Maintaining a high public profile

1.27 A high public profile for the justice statistics system is advantageous from many points of view: it contributes to a higher level of awareness of statistical information and hence to its wider utilization; it helps to achieve higher response rates and hence better quality data; it contributes to the effectiveness of feedback mechanisms with data users; and, very importantly, it enhances protection of the system from political interference.

C. THE NEED FOR COMPLEMENTARY INFORMATION

1.28 A criminal justice system can generate and maintain vast amounts of data in the form of records of events, victims, offenders, circumstances, processes, dispositions and decisions. Such data are the raw material for ongoing decisions on individual cases and are typically more or less organized in some type of operational filing/record system to serve administrative purposes. These operational systems represent the primary source of core or baseline criminal justice statistics.

1.29 Most operational systems are designed primarily to monitor the day-to-day operation of various components of the criminal justice system. Hence, they do not always contain the kinds of information necessary to support good decisions about policy, programmes and services. While the development of criminal justice statistics must inevitably start from these records, several alternative data sources and approaches to data collection that should be considered as complementary to those data are available from the administrative records contained in the various justice operational systems.

1.30 Since the establishment of modern information gathering on crime, it has been recognized that a sizable portion of criminal events are never reported to the police and are therefore not included in police or any other statistics. This unknown number, often referred to as the “dark figure” of crime, has prompted researchers to look beyond the instruments of traditional criminal justice statistics for ways of assessing it. Because they capture this “dark figure”, crime victimization surveys have evolved as a valuable complementary data source to police statistics. Other data sources for crime statistics include self-report surveys and general population censuses and surveys. Public and private agencies not thought of as criminal justice organizations may also provide information on specific crimes, offenders and victims. These and other potential data sources for crime statistics are presented in chapter VII.

II. ORGANIZATIONAL MODELS FOR A NATIONAL SYSTEM OF CRIMINAL JUSTICE STATISTICS

A. GENERAL CONSIDERATIONS

2.1 The organization of a programme for improving criminal justice statistics must reflect the needs of a country and its criminal justice system, its degree of centralization, its traditions and its past practices and procedures, as well as the availability of skilled personnel, technical resources and funds. No single blueprint can be offered for such a range of circumstances.

2.2 Certain basic principles of organization, however, are particularly relevant to a statistical programme. Given the wide diversity of skills and functions, and given that subject-matter experts often lack statistical expertise and statistical experts often lack subject-matter expertise, statistical programmes require a clearly defined delegation of responsibility and authority, coordination and mechanisms for sharing skills and expertise.

2.3 While delegation allows for the efficient exploitation of specialized skills, coordination is necessary to bridge the divisions that specialization brings. Coordinating mechanisms are essential aspects of any statistical organization. Coordination within and between agencies, between subject-matter specialists and technical experts, and between the users and producers of data is one of the greatest challenges to the development of a good statistical system. The ways in which these principles are realized in any country depends a good deal on the way in which criminal justice is organized, the kinds of records produced and maintained by criminal justice agencies and the way information flows from one agency to another and from one justice component to another.

2.4 Chapter II presents some of the main advantages and disadvantages of different administrative and organizational approaches to national criminal justice statistics systems. The selection is not exhaustive but is intended to make clear some of the main choices and trade-offs implied by each choice.

2.5 One of the major characteristics distinguishing different types of criminal justice statistics is the degree of centralization of data collection and processing, which is typically a reflection of the degree of administrative centralization of the criminal justice system itself.

B. CENTRALIZED APPROACH

2.6 A centralized data-collection system may be very broadly defined as one in which most data collection, processing, dissemination, design and development are performed by one government agency at the national level. In a country with a national form of Government in which most criminal justice agencies are subsumed under a single ministry of justice, a central bureau of justice statistics might be responsible for (a) system design and operation; (b) data collection, analysis and publication of reports; and (c) system modification and enhancement.

2.7 Data from local level units, such as a police department or court location, or a local prosecutor or correctional facility, are sent directly to a national statistics bureau. The data are typically produced at the local level, and these producers are responsible for transforming administrative data into statistical data. The form in which data are sent to the central bureau has important cost and policy implications. If each agency sends to the national bureau all the individual data (i.e., case-specific or person-specific information), the bureau is in a position to create a large flexible database, but requires significant resources for processing, training of data producers, quality control and analysis. At the same time, controversies may easily arise as to the use, distribution, confidentiality and ownership of the information.

2.8 If, however, each local or other small agency aggregates its own data into summary tables or reports, each agency faces new resource requirements in terms of processing and data quality control. Furthermore, the national database is less flexible and the ability of the national bureau to answer information requests depends on the quality of the forms and procedures governing the process of aggregation.

2.9 In a centralized model, the national bureau becomes the single agency where external users who wish to acquire national statistical series on a particular topic can find all available data. Provided that the bureau has a close relationship with the national statistical office, which would facilitate uniform, comparable or harmonized classifications, such an arrangement can provide users with criminal justice information complemented with broader statistical data.

2.10 There are three types of statistical organizations under centralized systems: (a) an independent agency; (b) an agency in the justice ministry; and (c) an agency in the national statistical office.

Independent agency

2.11 One way of organizing a criminal justice statistics system is found in countries that have set up national criminal justice statistics offices that are independent of the agencies responsible for the operations of the criminal justice system. Presumably, officials of an independent office can deal with officials of criminal justice agencies or other parts of Government on an equal basis and can thereby more easily gain access to data from outside the criminal justice system, such as economic or demographic data. The statistical office can also participate more directly in policy decision-making, including decisions on the allocation of resources for statistics. Finally, such an office, with no evident vested interest in the data produced, can have more credibility than a statistics programme lodged within a criminal justice agency. However, such a model may have certain disadvantages that may be particularly important to some countries. These include:

(a) **Duplication and overlap** For most countries, an independent office of criminal justice statistics would have to be newly created. The creation of any new agency creates a new bureaucracy and therefore the potential for duplication and overlap in the use of scarce human, technical and fiscal resources. Such problems might be minimized if the office were made part of a central national statistical office where administrative support staff and equipment were already available.

(b) **Distance from data source** An office outside of the criminal justice system might have greater difficulty in establishing good relations with the operational agencies that produce the primary records on which the statistics are based. Furthermore, the office may not gain sufficient access to subject-matter experts for the effective design, implementation and analysis of criminal justice statistics.

2.12 It should be emphasized that a fully independent bureau of criminal justice statistics is not a very common practice in the majority of countries. The level of independence, however, varies significantly; thus, while some bureaus formally do not meet the level of full independence (for example, they are part of the central criminal justice department), they are still fairly autonomous in discharging their assignments.

Agency in the justice ministry

2.13 There are significant advantages to locating a criminal justice statistics office within a national ministry or department responsible for justice, with a single minister responsible for both statistical and operational functions. The development of operational and statistical information systems useful for decision-making is far less problematic, as is active use of the data. There are, however, major disadvantages in such an approach, including the following:

(a) **Credibility and objectivity** The analysis and interpretation of results and how these are perceived may be or may be seen to be influenced by the vested interests and perhaps the political interests of those responsible for policy and administration. Indeed, the office responsible for criminal justice statistics and crime-related data might find itself pressured by the threat of the withdrawal of resources if its products displease senior policy and decision makers in the agency;

(b) **Relations with other statistical agencies** Such an office may on occasion find it difficult to deal on an equal basis with other statistical services or even with the senior operational personnel in other criminal justice agencies.

2.14 In brief, the location of a criminal justice statistics office within the justice ministry, despite its apparent efficiency, might also make it vulnerable to interference, even if inadvertent.

Agency in the national statistics office

2.15 Another form of organization is the placement of the criminal justice statistics office within an existing national statistical office. Many countries have a single national agency responsible for gathering and analyzing a wide range of statistics, including vital statistics, census data, economic statistics, labour force statistics, and health, education and welfare statistics. If crime and criminal justice statistics were placed within such an agency, the expected results would be a reduction of administrative costs; ready access to other important data sets such as various demographic and economic data; ready access to other experienced and skilled statisticians; and finally, savings in the cost of the actual collection and analysis of the data owing to the existing national infrastructure, including communications, equipment and personnel.

2.16 However, locating an agency in a national statistical office can have some disadvantages. These include:

(a) **Priorities** The priorities of the national statistical bureau may override those of the criminal justice system. In such a case, the allocation of resources may not be favorable to the justice statistics component and the work of the justice statistics office may therefore be curtailed. This in turn could lead to dissatisfaction within the criminal justice system, with the ultimate result that the relationship with operating agencies might deteriorate.

(b) **Distance from users** There may be a tendency for the staff of a central bureau to become more concerned with the methods and priorities of the parent statistical office than with the needs and priorities of the criminal justice system, which is one of the most important users of criminal justice statistics.

C. DECENTRALIZED APPROACH

2.17 Another, and more common, form of organization might be called “decentralized” and is often found in countries that have federalist forms of Government. The decentralized approach implies the existence of a network of statistical services at various levels of Government or in various regions of the country. Such a system may also have a national bureau. Data are compiled locally or regionally from primary data sources, and nationwide statistics are aggregated only at the national bureau, if one exists. Unlike centralized systems, however, data collection, editing and analysis are conducted at subnational levels, producing reports on issues specific to the particular subnational entity. With this approach, the volume of data received at the national level is generally less than in a centralized system, and the national bureau usually has less responsibility for training and quality control of the data.

2.18 The decentralized approach is often associated with a federal system of Government and the centralized approach with a central system of Government, but successful examples of each approach can be found under both forms of Government. A country may find that certain statistical series are more easily collected under a centralized approach (for example, national victim statistics), while other statistical series are more amenable to a decentralized approach (for example, national criminal justice statistics). The best approach for a particular statistical series in a given country depends upon the specific opportunities and constraints within the country.

2.19 It should also be noted that within a decentralized national data-collection system, there could be centralized data collection at one level of Government and decentralized collection at another

level. For example, there could be centralized collection at the municipal level but decentralized collection at the regional level.

2.20 Two types of statistical organization are found under decentralized systems: (a) agencies within components of the justice system; and (b) a network of state/provincial agencies.

Agencies within components of the justice system

2.21 One way of organizing a criminal justice statistics system is to have it incorporated in and operated by each major component agency of the criminal justice system: police, courts and corrections. The immediate advantage of such an approach is that a suitable foundation already exists in many countries, and it is easier and certainly less costly to develop an existing system than to establish a new one, particularly when resources are limited. Furthermore, the personnel responsible for the collection of data, who are already closely involved with the agency, can be expected to have a high commitment to the accuracy and reliability of the data. Finally, the administrators of each agency or each sub-unit are in a strong position to arrange for and ensure the collection of data within their own agencies. This type of organization, however, has certain disadvantages, including the following:

(a) **Limited commitment** Whatever the theoretical plans or stated commitment, very little upgrading may actually take place in response to a programme of improvement. This can occur because decision makers in one component of the system have no responsibility for statistics in another component and consequently will not invest significant energy to modify or enhance their statistics for the benefit of another component;

(b) **Limited coordination** Above all, decentralization makes coordination very difficult. Coordination is important because of the tendency for each component to collect its own statistics on the basis of its own priorities. However, as mentioned previously, the police statistics that would be most useful to court administrators, or the court statistics that would be most useful to prison administrators, are not necessarily those that are of first priority to the agency that collects them.

Network of state/provincial agencies

2.22 A particular problem for federated countries is the relationship between provinces/states or other subnational entities and the national capital. One advantage of developing the operations of a criminal justice data-collection process at the state level is that

relatively small administrative and geographical units are likely to be sensitive to the significance of their own local data. However, individual states or provinces may not be sensitive to federal or national needs. Often they are unable or unwilling to make their own data compatible with those of other states or provinces to produce nationally comparable data. Where there are major differences in definitions and concepts used by these different subnational agencies, it is often impossible for a national agency to reprocess the data to produce comparable information. Even if efforts are made to present national data from independently produced subnational data, the number of footnotes, caveats and data limitations can be so great that meaningful interpretation of the results is not possible. Furthermore, if the bulk of the work and responsibility for justice statistics is decentralized to subnational authorities, the quality of national data is constrained by the quality and comparability of data in the weakest subnational programme (i.e., the lowest common denominator).

2.23 The question of coordination deserves separate attention. A major problem in criminal justice statistics is the difficulty in tracking an offender through the system or, more generally, in making data from one agency available to another in a form useful to the receiving agency. The problem is often aggravated in a federated nation where statistics are compiled at state or provincial levels. A few developed countries have recently experimented with the introduction of a national office of crime statistics associated with the national statistical services. One of the main benefits in these cases has been the development of a structure or basis for coordination and a growing appreciation of the value of system-wide or inter-agency data which is consistently defined, consistently verified at an acceptable level of data quality and more comparable in the end.

D. A SHARED RESPONSIBILITY AND COMMITMENT

2.24 Regardless of the degree of centralization or decentralization, an important aspect of the organization and improvement of a system of criminal justice statistics is the development of relationships with other institutions inside and outside of Government, including private research institutes and public or private universities. Such institutions are important sources of criminal justice and other social and economic data; evaluation and analysis of data; and technical and substantive expertise and skills.

2.25 However, to successfully implement a national system of criminal justice statistics, a work plan is

required that involves as many of the key players—data suppliers and users—as possible. Foremost, it requires the establishment of strong working relationships and partnerships together with a clear delineation of responsibility and commitment. Given the overall terms of reference of implementing a national system, three basic questions must be addressed:

- (a) Where are you now in the development and production of timely, useful, comprehensive and comparable national justice information and statistics?
- (b) Where do you want to be?
- (c) How do you expect to get there?

2.26 While it may be relatively easy to define the present situation and how it has evolved, answers to the two remaining questions are less apparent. Defining where you want to be requires an examination of views from each of the agencies having a shared responsibility for the administration of justice in the country as well as other organizations that may be identified as potential users of the information. Moreover, this consultation may require dealing with components across agencies since representation of the courts, prosecutors' offices, police or corrections may be fragmented across organizational structures.

2.27 There are bound to be differences of opinion in regard to what information is required and how the data should be collected, processed, analyzed, interpreted and documented. However, given a spirit of goodwill and cooperation, and faced with collective responsibility for putting forward a national strategy for justice statistics and information, these problems may be overcome. What is seen as a more difficult task is solving the problems associated with the funding of the total effort and devising the nature and organizational structure of the mechanism that will be created to achieve the overall goals and objectives.

2.28 In approaching these challenges, the following step-by-step process may provide a useful starting point for planning:

- (a) Provide the historical background to the development of the present situation;
- (b) Analyze the background in order to learn from past errors;
- (c) Outline the parameters of the criminal justice system and who has responsibility for what;
- (d) Develop a high-level profile of information currently available and the gaps that currently exist as viewed by the various stakeholders;

(e) Develop a fairly detailed concept of national information requirements that all the stakeholders can buy into;

(f) Examine the possible options relating to a proposed organizational structure for the collection, processing and dissemination of national criminal justice information and statistics;

(g) Obtain, in as detailed a form as possible, an estimate of all resources currently being spent on justice information and statistics, locally, regionally and nationally, by all stakeholders;

(h) Develop criteria for the evaluation (refer to section E below for more detail) of the options identified in (f);

(i) Choose and recommend the option all stakeholders are willing to commit to. This option must consider the development of a clear mandate and statement of objectives, information requirements, mechanisms and processes to ensure the ongoing involvement and commitment of all partners, as well as a practical funding proposal. In order to ensure their participation, it will be necessary to involve senior managers from the outset of this initiative.

2.29 In addition to the above tasks, it may be useful to prepare background papers to address key issues in the country that provide input and direction to the overall process. These may include topics such as privacy and confidentiality; the development of systems technology as applied to the justice community; and the experience of other countries in this field.

E. CRITERIA FOR EVALUATING AVAILABLE ORGANIZATIONAL OPTIONS

2.30 The overall objective in selecting an organizational structure should be to choose an approach that will result in the continuous and timely production of useful, high quality and comparable national justice statistics and information as well as the ability to address issue-specific policy research requiring ad hoc data collection. Each country will have to decide which approach can best meet this objective. To help make that decision easier, examples of criteria that could be considered are presented below, according to the following three main categories: organizational issues, statistical issues and respondent/user issues.

Organizational issues

2.31 **Commitment and ownership** The option should promote federal and regional consensus on national statistical priorities and how they are to be

achieved. It must be designed to ensure a commitment from all participating jurisdictions to provide adequate support and resources that are apportioned in some agreed-upon way and are stable over time.

2.32 **Evolution versus revolution** The option should be, and should be viewed as, a clean start, unencumbered by traditional assumptions and patterns of operation that may have hampered progress in the past. It should maximize the use of existing systems and pools of expertise and avoid unnecessary organizational change.

2.33 **Accountability** The option should ensure that those charged with the production of national justice statistics are held accountable to the persons who are ultimately responsible for both the administration of justice and for national statistics.

2.34 **Simplicity** The option should attempt to achieve organizational simplicity and ensure clear lines of accountability, communication and decision-making. It should be designed so as to establish programs incrementally, if necessary, according to an overall plan.

2.35 **Resource coordination** The option should promote the coordination of resources and effort by utilizing resources already committed to the system and avoiding duplication of effort.

2.36 **Human resources** The option should attract and retain highly qualified staff.

Statistical issues

2.37 **Statistical integrity and credibility** The option must ensure that it has political independence in terms of the impartiality and objectivity of its outputs such that all users, including the public, can have confidence in its products.

2.38 **Flexibility** The option must be designed to recognize and adapt to changing information needs and priorities. It must be able to adopt alternative methods and modes of data collection and production.

2.39 **Uniformity** The option should facilitate consensus in such areas as standard definitions, units of count, security and quality, and it should be able to support their implementation and maintenance.

2.40 **Comparability and continuity** The option should facilitate the comparability of national justice statistics across components of the justice system and with other social and demographic statistics. It should

recognize the importance of longitudinal continuity in statistical series.

2.41 **Security of information** The option must be designed to ensure that databases containing personal information are secure.

Respondent/user issues

2.42 **Respondent burden** The option should minimize respondent burden, limiting national statistical activities to those that are demonstrably necessary.

2.43 **Systems development** The option should derive national statistics from operational information systems, to the extent possible.

2.44 **Consultation and communication** The option should ensure communication among all those involved in or affected by the statistical process, including data providers, systems designers, programme managers and information users. There should be mechanisms for consulting non-government users of justice information on their needs and priorities.

2.45 **Accessibility of information** The option should ensure that data are available and useful to the full range of criminal justice users at all levels and users outside the criminal justice system. It should offer a central focal point for users to access national statistics and information on all components of the justice system.

III. SCOPE AND CONTENT OF A NATIONAL SYSTEM OF CRIMINAL JUSTICE STATISTICS

3.1 This chapter describes in general terms the scope and content of criminal justice statistics at the national level. The content of criminal justice statistics is established by the criminal legal system of each nation. It is the criminal legal system that defines crimes and consequently designates individuals as offenders. Transnational differences in definitions of such widely-used terms as crime, offender, victim, suspect, charge or conviction are inevitable. Similar observations apply to data from the administrative records of the police, courts and prisons. The range of data is wide, including not only data produced by the criminal justice system, but also data produced by other agencies necessary for understanding crime and criminal justice.

A. THE CRIMINAL EVENT

3.2 The criminal event is the most basic category for any criminal justice statistics system. It includes data on the “criminal act”, the “offender” and the “victim”.

The criminal act

3.3 To monitor, assess and deal with fundamental government concerns regarding public order and safety, statistical series are needed on the prevalence and severity of criminal offences. It is imperative to know the extent to which particular types of offence are concentrated in certain communities and regions, the characteristics of the offence and its severity. For example, a statistical series on criminal events should include not only the number and type of offences or selected offences, but also classifications such as urban and rural, geographical area, and size and type of place.

3.4 Despite the importance of data on criminal acts, they are perhaps the most challenging to collect. A large body of research has documented the problem of underreporting of criminal acts in the statistics derived from reports of offences to policing authorities. Available data on criminal acts, then, typically capture only those offences officially known and recorded by the police. The extent to which such data can provide an index or measure of crime is an open question. More precisely, there remains a great deal of debate on the kinds of bias introduced when official police statistics are used to provide a measure of criminal behaviour. Research has shown that not all offences are equally likely to come to the attention of the authorities because of the priorities that the police authorities themselves attach to various

criminal acts, and because of the varying likelihood that victims or witnesses will bring these acts to official attention.

3.5 To the extent that users of the data wish to compare the police record of events to actual charges, court dispositions and the like, it is crucial that the definitions and recording procedures share common concepts and classifications. While the national criminal code provides the critical point of departure, many countries have found it useful to introduce common classification schemes that distinguish violent and non-violent offences, personal and property offences, and criminal code and other offences. Furthermore, as police usually record cases for their own operational purposes, and as these cases may involve more than one criminal event, explicit agreement on how to distinguish and count events is necessary, at least for selected offences.

The offender

3.6 Justice statistics users want information on accused persons that indicates their prevalence in various groups of the population, as well as the severity of the offences committed. This implies statistics on the number of offenders charged and their proportion in the population for specified periods, including such classifications as type of offence, sex, age, national or ethnic origin, geographical area of residence, and size and type of place.

3.7 Because basic statistics on the characteristics of offenders are normally derived from the records of policing officials, they are subject to many of the same limitations and qualifications discussed under the previous section on the criminal act. The probability of apprehension and charge is greater for some crimes than for others (e.g., murder compared to theft) and for some categories of individuals than for others (e.g., juvenile compared to adult offenders, as well as some visible minorities). Therefore, police statistics may provide a biased sample of the population of offenders.

3.8 It must also be recognized that the status of the offender changes depending on the data source. For example:

(a) Police records often include suspects and persons charged;

(b) Court records include persons appearing in court, convicted, and sentenced;

(c) Prison records include inmates.

3.9 Each data source has its own strengths and limitations. For example, prison records usually provide more detailed and accurate information on individual offenders than police records, but prison records provide an even more biased sample of offenders than police records since offenders sentenced to prison tend to be those involved in more severe crimes. The further along in the offender processing system offender statistics are gathered, the more likely they are to be accurate and more detailed but the less likely they are to be representative of all offenders.

The victim

3.10 Statistical series on victims are used to monitor and assess the impact of crime on and the relative safety of various segments of the community. Such series, then, are classified according to the characteristics of victims and the type and severity of their injuries and losses. Interest in statistics on victims is relatively recent and such data are therefore perhaps the weakest and most variable of criminal justice statistics. In some countries, police officials routinely gather some victim data and are examining ways of enhancing such series. In a growing number of countries, victimization surveys have become a regular exercise aimed at collecting more general information on victims, the criminal event and public perceptions of the criminal justice system.

B. THE CRIMINAL JUSTICE SYSTEM

3.11 The development of criminal justice statistics is closely tied to the operations of the criminal justice system itself. Broadly speaking, the system is composed of five major justice components: police, prosecutors, courts, prisons and non-custodial measures. Each component can be broken down into smaller subcomponents, resulting in a complex network of agencies concerned with crime, offenders and/or victims.

(a) **Police component** The police component is typically composed of national, state, regional and/or local police agencies. In addition, there may be specialized policing agencies concerned with specific issues, such as traffic, drugs, executive protection, tax violations or environmental crimes;

(b) **Prosecution component** The prosecution component may be composed of public prosecutors at various levels of Government, public defenders or private defense systems;

(c) **Court component** The court component may range from local courts with limited jurisdiction to general trial courts, appellate courts and courts with specialized jurisdictions, such as tax courts, juvenile courts and admiralty courts;

(d) **Prison component** The prison component includes institutions such as jails for pretrial detainees and prisons for post-trial detainees as well as various specialized institutions for juveniles, the criminally insane, sex offenders, alcoholics and drug abusers. In addition, this component often includes probation and parole agencies, various kinds of community treatment centres and privately contracted halfway houses;

(e) **Non-custodial component** The non-custodial component varies greatly from country to country and is typically the least well documented. It includes a wide range of non-custodial dispositions, activities and facilities, such as fines and fine programmes, community alternatives to incarceration, treatment programmes and community service orders.

C. DEFINING THE SCOPE OF CRIMINAL JUSTICE STATISTICS

3.12 The most important step in defining the scope of a criminal justice system is to identify the users and uses of the data. Who are the potential, present and past users of the system? To what uses will the data be put (e.g., administration, planning, policy research and analysis, etc.)? What are the critical policy issues that should be included in a programme to improve criminal justice statistics? Who should submit data to the national system? Who should receive the data? What data should be submitted, in what form, at what intervals and most importantly, for what purposes?

3.13 Statistical data are gathered to answer questions. Therefore, a preliminary step in developing a programme to improve the national system of criminal justice statistics is the identification of the important questions to be answered. What are the problems of crime and criminal justice that are of greatest national concern? An analysis of requirements for a justice statistics programme might list the following categories of concern, which could serve as the starting point:

(a) Incidence of crime (seriousness, trends, structure, etc.);

(b) Characteristics of offenders;

(c) Workload of the system (crimes, arrests, dispositions, offenders under supervision);

(d) Offenders and cases moving through the system;

- (e) Recidivism;
- (f) Characteristics of victims;
- (g) Resources expended (fiscal and human);
- (h) Correlates of crime (economic, demographic, etc.);
- (i) Social and economic cost of crime;
- (j) Citizen's attitudes towards and concerns about crime and criminal justice.

3.14 The next step is to identify the pertinent questions subsumed under each category. For illustrative purposes, some sample questions are provided below.

(a) Possible questions regarding the amount of crime:

- What is the prevalence or frequency of various crimes?
- What is the crime rate? Which areas of the country have the highest crime rates?
- Are particular types of crimes increasing or decreasing?
- How prevalent is family violence?

(b) Possible questions regarding offender characteristics:

- How many offenders are there?
- What do we know about the offender?
- To what extent are offenders and victims similar? How are they different?
- Who is the "typical" offender?
- What types of crime are committed by which offenders?
- What are the characteristics of career criminals? How much crime do they account for?
- How much crime is attributable to youths?
- To what extent do people of different ethnic groups participate in crime?
- Are women becoming more involved in crime?
- What are the family, socio-economic and educational backgrounds of prison inmates?

- What is the role of drugs and alcohol in offenders' lives?
- How does drug and alcohol use by offenders differ from that in the general population?

(c) Possible questions regarding criminal justice processing and caseload:

- How does the criminal justice system process cases? What is discretion and how is it exercised in the handling of criminal cases?
- How does police strength in one part of the country compare with strength in other parts?
- What is the relationship between police strength and crime?
- How many people are arrested in a typical year, and for what offences?
- What percentage of crimes result in an arrest?
- What effect does delay in victim reporting have on arrests?
- What is the role of the prosecutor?
- How many arrests result in prosecution? How many prosecutions result in conviction?
- To what extent are defendants released pending trial?
- How many released defendants fail to appear for trial or commit additional offences?
- Are juveniles handled differently from adults? Can they be tried in a criminal court?
- How are courts organized? To what extent do the various courts interact?
- What are the main differences between adult and juvenile courts?
- How many cases brought by the prosecutor result in guilty pleas? How many result in guilty verdicts?
- How long does it take for a criminal case to move through the criminal justice system?
- Are similar sentences given for similar offences?

- Is the caseload for courts of appeal increasing?
- How many people are under some form of correctional supervision?
- How do sentence lengths differ from actual time served?
- How many prisoners are confined in local or national facilities?
- Are prison populations increasing?
- How many people are serving community-based sentences such as probation?
- In what types of facilities are prisoners held?
- How many parolees return to prison?

(d) Possible questions regarding the cost of crime:

- How much does the Government spend on criminal justice?
- What is the cost for policing, criminal prosecution and court systems, and for corrections?
- What do justice monies buy? How are they spent?
- How much does it cost to keep a person in prison or on probation?
- How much does it cost to build a prison or a jail?
- How much is spent per capita for the criminal justice system?
- What is the relationship between a country's per capita spending for justice and its crime rate? Between its per capita spending for justice and degree of urbanization?
- What proportion of total government spending goes to policing, courts and corrections?
- How has this proportion changed over the past one or two decades?

3.15 Naturally, even such a long list of questions is not exhaustive and in practice such questions must always be a matter of ongoing review and debate. Requirement analysis must start with the premise that a national system of criminal justice statistics cannot be all things to all users. The analysis should focus initially on areas of consensus; that is, areas where there is widespread

agreement on the need for information; on areas that are practical; and on data series that are feasible.

3.16 In addition to the information priorities identified for crime and criminal justice statistics in a country, it is important to be able to make comparisons to relatively similar countries in the region or the world and to view the national situation in a global context. The questionnaire for the Seventh United Nations Survey of Crime Trends and Operations of Criminal Justice provides a useful checklist for categories of data that are collected in many countries. (For more details on this survey, see chapter VIII.)

D. DEVELOPMENTAL FRAMEWORK

Information requirements

3.17 Information requirements may be classified into four types that cut across all justice components: caseload, case characteristics, resources and qualitative descriptions. These categories may assist a country in deciding priorities and implementation strategies specific to each justice component, organization or agency providing the information. At the very least, they may suggest the need for information standards that cut across all justice components and facilitate a systemic or case flow analysis of the information as well as integration with non-justice data.

3.18 **Caseload data** Caseload data measures the volume of events in the justice system. Caseload data may include annual or some other time frame-specific volume indicators, such as the number of incidents reported to police; the number of charges filed⁵ by police; the number of persons charged; the number of persons appearing in court; the number of court appearances; and the number of admissions to correctional facilities. Caseload statistics enable a cross-jurisdictional comparison of workloads and the disposition of cases.

3.19 Caseload data should be considered the basic building block in developing a national system of criminal justice statistics. They provide the necessary framework for the gathering and interpretation of case characteristics and resource data. As well, these data should promote linkages across justice components and facilitate the creation of flow statistics—the processing of individuals through the entire criminal justice system.

3.20 **Case characteristics data** Data on case characteristics provide more detail on the caseload.

⁵ In some jurisdictions, these are referred to as “charges laid”.

These data include, for example, the types of offences committed, the age and sex of offenders, the types of sentences handed, the magnitude of the sentences, and the ethnicity and education level of inmates. Caseload and case characteristics data enable justice agencies to compare the volume and composition of their workloads and the disposition of cases. These data help target client groups improve the effectiveness and efficiency of current programming through comparative analysis at the subnational level. To a large degree, such data may be developed for each component of the justice system.

3.21 Resource data Resource data quantify the costs of administering the justice system. They include such items as the number of persons employed, the functions of persons employed, expenditures on wages and salaries, operating costs and revenues. Resource data, when combined with caseload data, can provide performance indicators and outline the level of authority and the level of services provided by the various agencies involved.

3.22 Qualitative information Qualitative information describes the criminal justice process, organizational structure, legislative authority, responsibilities and programmes within each component of the justice system. This type of information is essential because it provides the context

within which caseload, case characteristics and resource data can be meaningfully interpreted.

3.23 An example of data elements that may be included in the ongoing collection of baseline crime statistics is given in figure 1. The data elements are organized by justice component and type of information requirement that cuts across the components of the justice system, as mentioned above. It is important to note that information for caseload and case characteristics data come from record-keeping systems on case files while resource data are derived from financial systems. Qualitative descriptions are obtained by compiling information from operational documents or writing them from scratch.

A system approach

3.24 To the extent that the components of criminal justice constitute a system, the output of one agency is the input to another. For example, cases filed by the police with the prosecutor should represent output statistics for the police and input statistics for the prosecutor. Similarly, cases disposed of by the courts should be a judicial output statistic and a prison input statistic. However, a system approach is clearly limited. Each component has some degree, small or large, of independence. Nevertheless, a system perspective can be useful in defining statistical needs and relationships.

Figure 1. An example of information requirements, by justice component and type of information

<i>Justice component</i>	<i>Type of information</i>			
	<i>Caseload</i>	<i>Case characteristics</i>	<i>Resource</i>	<i>Qualitative description</i>
<i>Police</i>				
CONTROL • Person I.D. • Region I.D. • Force I.D. • Population policed	• Calls to police • Incidents reported • Incidents investigated • Officers deployed • Incidents founded • Suspects detained • Crimes cleared by charge • Crimes cleared otherwise • Persons charged • Recidivism rate	• Incident classification (most serious offence) • Type of charge (by criminal code section) • Offender and victim characteristics (age, sex, ethnicity, offender-victim relationship, etc.) • Incident characteristics (type of firearm, level of injury, loss of property, drug/alcohol use, etc.)	• Staff complement and/or strength: by type by activity • Budget and/or actual expenditure: by type by activity • Material profile by type	• Scope • Coverage • Services provided • Facilities • Organizational structure • Component-specific process description

Figure 1. An example of information requirements, by justice component and type of information (cont.)

<i>Justice component</i>	<i>Type of information</i>			
	<i>Caseload</i>	<i>Case characteristics</i>	<i>Resource</i>	<i>Qualitative description</i>
<i>Prosecution</i>				
CONTROL • Person I.D. • Region I.D. • Court I.D.	• Person cases initiated • Case type • Charges initiated • Appeals initiated • Court appearances • Case convictions • Cases disposed of	• Person cases by offence type • Charges by section • Offender characteristics (age, sex, etc.) • Type of appearances • Type of disposition	• Staff complement and/or strength: by type by activity • Budget and/or actual expenditure: by type by activity • Material profile by type	• Scope • Coverage • Services provided • Facilities • Organizational structure • Component-specific process description
<i>Courts</i>				
CONTROL • Person I.D. • Region I.D. • Court I.D. • Type of court	• Person cases initiated • Case type • Charges initiated • Appeals initiated • Court appearances • Court hearings • Case elapse time • Case convictions • Cases disposed of • Recidivism rate	• Person cases by offence type • Charges by section • Offender characteristics (age, sex, etc.) • Type of appearances • Date of hearing • Disposition type • Sentence type	• Staff complement and/or strength: by type by activity • Budget and/or actual expenditure: by type by activity • Material profile by type	• Scope • Coverage • Services provided • Facilities • Organizational structure • Component-specific process description
<i>Prison</i>				
CONTROL • Person I.D. • Region I.D. • Facility I.D.	• Persons admitted • Revocations • Recidivism rate • Average inmate count (on-register and actual) • Releases	• Offence type (most serious offence) • Offender characteristics (age, sex, etc.) • Release type • Time served	• Staff complement and/or strength: by type by activity • Budget and/or actual expenditure: by type by activity • Material profile by type • Capacity by type	• Scope • Coverage • Services provided • Facilities • Organizational structure • Component-specific process description
<i>Non-custodial</i>				
CONTROL • Person I.D. • Region I.D. • Facility I.D.	• Persons admitted • Persons re-admitted • Offender count • Infractions and violations • Releases	• Offence type (most serious offence) • Offender characteristics (age, sex, etc.) • Release type • Time served	• Staff complement and/or strength: by type by activity • Budget and/or actual expenditure: by type by activity • Material profile by type • Capacity by type	• Scope • Coverage • Services provided • Facilities • Organizational structure • Component-specific process description

NOTE: I.D. = Identification number

3.25 In a system approach, it is necessary to link input, process, output and resource data and view them

together rather than separately. Such criminal justice system indicators can be extremely useful to monitor the

demands for criminal justice services, the provision of services, the criminal justice processing of offenders, the links between agencies and between components of the criminal justice system, the effects of the decisions of one component on the other components, and the costs and impact of criminal justice decisions and services. An illustrative tabular summary for statistics on the criminal justice system is presented in figure 2. This illustrative framework indicates that four types of statistical indicators are needed to reflect the operation of the criminal justice system: input statistics (case flow and caseload information); process statistics (how the work is

accomplished); output statistics (what is accomplished); and resource statistics (resources consumed).

3.26 Typically, the statistical series on the administration of justice available in many countries is not the result of systematic planning but more the result of ad hoc and incremental development. Consequently, a country may find it has extensive statistical data on police activities and virtually no data on judicial activities. Similarly, a country's statistical series may cover agency inputs and outputs quite thoroughly but include little on processes or resources. It is important to assess which questions may be met in both the short and long term in relation to overall information priorities.

Figure 2. Illustrative framework for a system approach to criminal justice statistics

<i>Justice component</i>	<i>Type of statistical indicator</i>			
	<i>Input statistics</i>	<i>Process statistics</i>	<i>Output statistics</i>	<i>Resource statistics</i>
<i>Police</i>	<ul style="list-style-type: none"> • Calls for police service • Criminal incidents reported to police • Suspects • Suspects detained 	<ul style="list-style-type: none"> • Incidents investigated • Officers deployed • Incidents founded 	<ul style="list-style-type: none"> • Crimes cleared by charge • Crimes cleared otherwise • Persons charged • Cases filed with the prosecutor 	<ul style="list-style-type: none"> • Staff complement • Authorized strength • Budget/expenditure
<i>Prosecution</i>	<ul style="list-style-type: none"> • Person-cases initiated • Charges initiated 	<ul style="list-style-type: none"> • Court appearances, by type of court hearing 	<ul style="list-style-type: none"> • Person-cases disposed, by type of disposition • Number of persons convicted 	<ul style="list-style-type: none"> • Staff complement • Authorized strength • Budget/expenditure
<i>Courts</i>	<ul style="list-style-type: none"> • Person-cases initiated • Charges initiated • Recidivism rate (persons re-appearing) • Appeals initiated 	<ul style="list-style-type: none"> • Court appearances • Court hearings • Case elapse time (first appearance to disposition) 	<ul style="list-style-type: none"> • Person-cases disposed, by type of disposition • Sentences, by type of case • Length of sentence, amount of fine, etc. 	<ul style="list-style-type: none"> • Staff complement • Authorized strength • Budget/expenditure • Average cost per trial
<i>Prisons</i>	<ul style="list-style-type: none"> • Admissions • Parole and probation revocations • Recidivism rate (offenders re-admitted) 	<ul style="list-style-type: none"> • Average inmate count (on-register and actual) • Infractions and violations 	<ul style="list-style-type: none"> • Releases by type 	<ul style="list-style-type: none"> • Staff complement • Authorized strength • Prison capacity • Budget/expenditure
<i>Non-custodial</i>	<ul style="list-style-type: none"> • Admissions • Recidivism rate (offenders re-admitted) 	<ul style="list-style-type: none"> • Average offender count • Infractions and violations 	<ul style="list-style-type: none"> • Releases by type 	<ul style="list-style-type: none"> • Staff complement • Authorized strength • Programme capacity • Budget/expenditure

NOTE: A "person-case" comprises all of the charges against one person.

3.27 For all of the justice components, users want statistics on both prevalence and incidence, that is, on both stocks and flows. For example: for some purposes, users of prison statistics want information on the flow of prisoners—on admissions and releases. For other purposes, users want information on the size of the prison population at a particular time. Thus, the development of criminal justice statistics must take into account statistics on both stocks and flows.

Unit of count

3.28 A formidable obstacle to comparable national-level statistics is the problem of unit of count. Each component of the criminal justice system identifies and records information in ways developed mainly in connection with its own activities. The police may use units such as incidents, charges, suspects, victims and persons charged. The courts generally count cases, charges, convictions and sentences. At the end of the process, prisons count mainly offenders and inmates. Incidents can include one or several offenders charged with one or several crimes committed against one or more victims. Consequently, one incident reported by police will not necessarily produce one court case. Further, a court case may involve one or several offenders charged with one or several crimes committed against one or several victims. Thus, 10 cases disposed of by the courts through sentence to prison do not necessarily equal 10 persons committed to prison.

3.29 Clearly there is value in linking key police decisions to court decisions and court decisions to release decisions. In this way, for example, the “funneling” process in criminal justice can be measured. How many crimes lead to charges? How many charges to prosecutions? How many prosecutions to convictions? How many convictions to prison sentences? And how many prison sentences to various types of release? Some common units of count are essential to permit the measurement of flow from one component of the system to the next, a capability that is very desirable because it enhances data analysis possibilities and provides a powerful data quality verification capacity.

3.30 At the same time, each component must recognize its own unique information needs in the light of its unique role and goals. It seems that there is room for many units of count, but only some of these are relevant for an integrated system.

3.31 It is therefore crucial that designers of criminal justice statistical systems consider including, in addition to any other units they may need, a person-based unit of count for each component. Since the “person” is the only unit of count that has continuity throughout the criminal

justice system, it permits the measurement of flow through the system. For police agencies, it means collecting data on “persons charged”; for the courts, it means collecting “person-case” data (all charges against one person); and for prisons, it means collecting data on “persons admitted”. Further, if each component also agreed to use the same “person identifier”, it would be possible to perform record linkage, and other analysis, which have the potential to improve vastly our understanding of the dynamics of the criminal justice process. Including person-based data as one of the primary units of count also has the advantage of improving comparability because the definition of person does not vary within components.

3.32 While the issue of counting procedures may appear to be a technical one to be resolved by formal prescriptions, decisions on counting and classifying do have profound implications for the usefulness of the data produced. For example, how are police to record criminal incidents? If a single offender commits a variety of crimes in one “incident”, how many offences should be recorded for statistical purposes? If, as in many countries, only the most serious offence is counted for statistical purposes, the result is to deflate incidence statistics and at the same time inflate the proportion of serious to non-serious incidents. The problem is aggravated when statistics are used in an index, such as an index of the crime problem. How is seriousness to be counted? Quite apart from technical solutions, decisions on what and how to count, as well as formal rules, procedures and training, must be a central part of the planning process and must reflect the needs of users.

The use of a standard offence classification scheme

3.33 Every statistical system has several fundamental requirements. One of these is a person-based unit of count; another is a standard classification of criminal offences. All criminal offences that can result in a formal charge against an accused must be classified by some type of consistently applied coding system that identifies each offence uniquely. Such a standard classification scheme allows the collection of meaningful and comparable information about criminal activity. A standard offence classification scheme is one of the most important requirements of a national system of criminal justice statistics.

3.34 In developing detailed information requirements for each justice component, it is extremely important to develop a comprehensive offence classification scheme that is acceptable to all components. Aggregate data-collection programmes need standard offence categories in order to collect basic caseload information. Even unit record data-

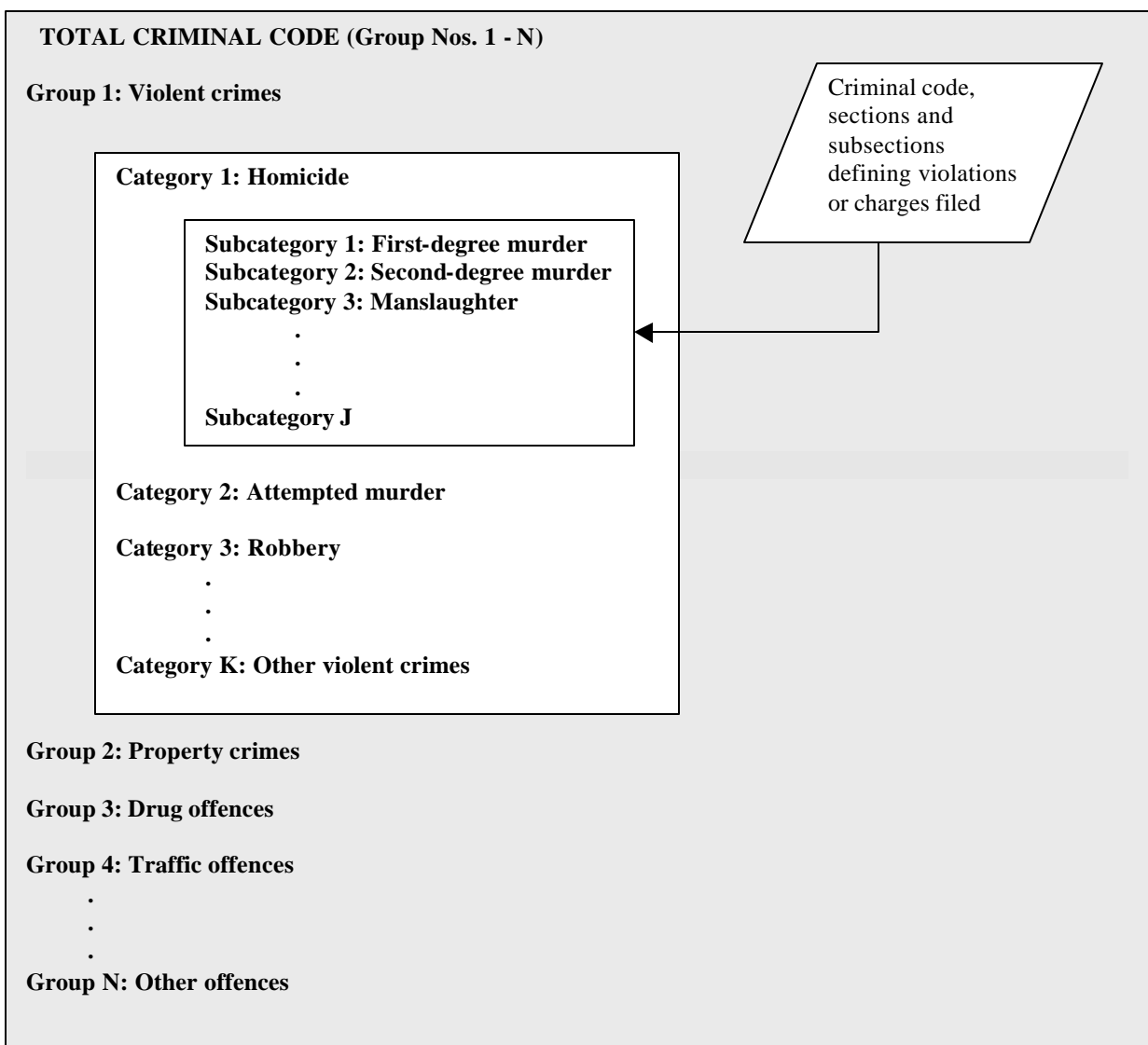
collection programmes that usually collect offence information at the most detailed level possible need some method of summarizing offence information for presentation purposes. In all cases, a hierarchical offence classification scheme is indispensable. Such a scheme can address the need for the following:

- (a) eventual cross-component integration and case flow analysis of the data;
- (b) flexibility to organize the data in a more meaningful fashion from an operational perspective in each justice component;

- (c) sufficient detail to reorganize data to meet ad hoc requests for information;
- (d) flexibility to accommodate changes in the country's criminal code(s).

3.35 Figure 3 suggests a basic structure for a hierarchical offence classification scheme that may be adapted to a country's criminal code and information priorities. In the illustrative example, the offences are classified into N major groups, each group into categories, and each category into subcategories.

Figure 3: Example of a hierarchical offence classification scheme



E. DEMOGRAPHIC, SOCIAL AND ECONOMIC INFORMATION REQUIREMENTS

3.36 Social statistics in any field are most useful and informative when they are linked to statistics in other fields. This is no less true of criminal justice statistics. Even rudimentary analysis requires data from non-justice statistical series. For example, if analysts wish to determine the extent to which increases in crime can be accounted for by increases in the population, they will obviously require population data. Hence, to calculate a crime rate (e.g., offences per 100,000 population), population data are required. Criminal justice statistics are the most useful if they can be linked to statistics that describe the social and economic context, the environment within which the criminal justice system operates.

3.37 The potential list of statistics on the social and economic context is very long, but access to such data is necessary in order to develop crime and criminal justice indicators, provide a context for understanding crime data, and facilitate criminal justice planning, administration, policy analysis and research. Perhaps most important, any attempt at causal analysis, at examining the relationship between crime and development, or at developing and evaluating innovative strategies of crime prevention requires extensive contextual data describing the changing social and economic environment in which crime and responses to crime occur.

3.38 Major categories of contextual statistics include the following:

(a) Demographic data such as size of population; age, sex and ethnic composition of the population; numbers of migrant workers and their countries of origin; and numbers of illegal aliens and their countries of origin;

(b) Economic data, especially data on structures of opportunity, such as rates and distribution of employment and distribution of real income, and patterns of consumption of various goods and services as a measure of the quality of life;

(c) Education and welfare data, again as they reveal opportunity structures, such as literacy levels, composition of the work force by level of education, number of single-parent families, and number of welfare recipients;

(d) Health data, such as the number of deaths caused by suicide, disease, accidents or violent means.

3.39 Much work in developing concepts, categories and classifications as well as recording and coding rules for contextual statistics is performed by other agencies in countries, including national statistical offices, with the responsibility for collecting these kinds of data. Criminal justice practitioners and analysts can benefit from this work.

F. IDENTIFYING IMPLEMENTATION PRIORITIES

3.40 The examples and illustrations of data series and data classification given in this chapter are not equally relevant for every country, given the large disparities that exist between countries in the level of development of criminal justice statistics. Furthermore, the information needs and problems confronting justice policy and administration vary from one country to another.

3.41 Criminal justice statistics in most countries are based upon crimes reported to law enforcement agencies. Some countries may have good judicial and correctional data as well, but only a few have developed systems to capture such intricate and complex data as those on the movement of offenders and cases through the justice system; on expenditures of human and fiscal resources; on the characteristics of victims; on the attitudes of citizens towards crime; and on the treatment of offenders.

3.42 An ideal approach to improving a national criminal justice statistics system compares defined requirements to available data, identifies gaps and disparities, and designs and implements series to fill the gaps and correct the disparities. Rarely, however, can such a pure approach be used. Most situations call for a more practical approach, whereby identified requirements are compared to available data to identify those areas where requirements could be met most easily. It is important that such an approach reflect and accommodate systems that are already in place, as well as different priorities within Government and specifically within criminal justice; limited financial and human resources; and concern for the burden placed on the producers of data.

3.43 In situations where a large number of data requirements are identified, an incremental approach to building the statistical system may be the appropriate solution. Good statistics can be costly, and resources are usually scarce. Therefore, it is important to conduct a careful analysis of the requirements to determine—and prioritize—the critical issues to be included in a programme to develop or improve a system of criminal justice statistics.

3.44 A requirement analysis, then, asks to what extent requirements can be met

- (a) through data already collected;
- (b) through data that could be easily modified;
- (c) through new statistical series that would meet a variety of needs and that could be implemented with existing resources.

3.45 Planning of a statistics system should also distinguish between transitory and continuing needs (see box below). The development of a national system is a slow and complex process and should be primarily designed to be responsive to permanent rather than transitory needs. This is not to say that transitory needs are not important, but they cannot be the basis for developing an ongoing statistical series. Transitory requirements can often be best satisfied by special surveys or issue-focused research studies. It is important to avoid the mistake of repeatedly altering an ongoing statistical series to accommodate one-time information requests.

Permanent needs refer to the type of information needed to support the ongoing management, planning and evaluation functions of the criminal justice system (e.g., caseload, case characteristics, and resource data). **Transitory needs** usually relate to ad hoc questions that arise when developing or revising justice policies. The answer moves the process forward but the information will not be collected again.

G. FURTHER DEVELOPMENT : CRIMINAL JUSTICE INDICTORS

3.46 Given the impracticality, indeed impossibility, of making all criminal justice statistics comparable, increasing emphasis is being given to defining certain core issues where it is most necessary and feasible to produce consistent and comparable data. A core of criminal justice indicators is a response to the most important and enduring questions for administration, planning and policy-making in criminal justice. Among national and international agencies, awareness of the importance of criminal justice indicators for understanding and monitoring the relationship between crime and economic growth and development is growing.

3.47 Broadly speaking, social indicators, including indicators of crime and criminal justice, help Governments to assess and monitor the conditions, circumstances and trends of well-being in populations and the social impact of public expenditures and policies. Thus, indicators of crime and criminal justice, in the context of social indicators, help to identify and monitor social problems and disparities.

3.48 Another type of indicator, often referred to as a performance indicator, is used to measure the efficiency and cost-effectiveness of public expenditures and the performance of government institutions. Statistical requirements for social and performance indicators typically go beyond the information that is routinely collected in administrative records and also demand the integration of criminal justice statistics with other social and economic databases, thus requiring common classifications between criminal justice statistics and other social and economic statistics.

3.49 In sum, agreement on the development of key indicators can be considered as a next level in the development of a system of criminal justice statistics.

IV. COLLECTING CRIMINAL JUSTICE STATISTICS

4.1 Methods and approaches for data collection and processing follow, in part, from the information requirements introduced in chapter III: they must flow from user needs. At the same time, decisions on data collection must take into account social and cultural demands, past practices and the organizational structure of the criminal justice system in the country. Some major factors or constraints in determining the best and most practical method for data collection are addressed in chapter IV. They include available resources; information flow; and technical considerations related to data collection as part of record keeping and operational information systems, such as problems associated with deriving statistical data from operational systems, an aggregate versus unit record approach, and a complete count versus a sample approach to data collection.

A. AVAILABLE RESOURCES

4.2 Chapter III emphasized the importance of establishing clear priorities for data needs, given that the funds available for statistical development are often limited. This is no less true in the selection of data-collection methods. User requirement analysis defines the potential benefits of particular data sets. The next step is to define, as accurately as possible, the likely cost of collecting such data. Factors to be considered include the current state of statistical development, the availability of in-house expertise, and the availability of information technology.

4.3 In this context, cost must be a major consideration in the evaluation of alternative strategies. Some of the typical ambiguity in cost-benefit analyses can be reduced through an incremental approach that makes extensive use of various pretests and studies, including the following:

(a) **Feasibility studies** to determine whether necessary information is easily retrievable from existing records;

(b) **Pretests** to determine whether particular forms or survey questions provide the information anticipated in the form anticipated;

(c) **Pilot studies** to test the value of large-scale series or surveys by first testing the implementation of small regional or local prototypes;

(d) **Methodological studies** where some investment is made explicitly to design and test cost-effective data-collection procedures.

B. INFORMATION FLOW

4.4 Most information about the activities of the criminal justice system is initially recorded on some type of manual form. In automated environments, key pieces of information are later captured for storage and manipulation in an operational information system. The format of information storage is important because it determines the process needed for transferring information to a national data-collection programme.

4.5 In a manual environment (where all or most information is stored on paper), information is usually transferred to the national data-collection system through the use of questionnaires or data-collection forms, which contain a number of boxes asking for different types of information. Normally, each respondent keeps track of the required information using tally sheets and forwards the results to a statistical office on a regular basis. For unit record or incident-based data collection (see aggregate and unit record approaches to data collection in section C below), the respondent fills out a separate form for each new case or incident. In either case, the process involves manually recording information from operational records and forwarding it to a statistical office on paper forms.

4.6 In automated environments, the transfer of information to a statistical office is quite different from the manual approach. Automated environments have all or most of the required data stored in a computer system, usually designed to support major operational activities. To transfer data from the operational system to the statistical office, two main options are available. The first option is to write a computer program that can produce paper reports (summarizing the various data elements) that can be sent to the statistical office. The second option is to write a program that searches the operational system for the needed information and automatically captures and stores all required data in an electronic file. These machine-readable data can then be sent to the statistical office on tape, diskette or electronically via the Internet. The second option is much more efficient because it eliminates the need to capture the data a second time at the statistical office.

4.7 Some locations will be mixed environments. That is, they will have some information needed by the national collection programme stored in automated systems, while other information will be available only in paper form. In these locations, a combination of the above described data transfer methods can be used.

4.8 Figure 4 illustrates how the various types of criminal justice information (i.e., caseload, case characteristics and resource information) flow from police operational systems to a national statistical office. It shows how data can be tallied from manual environments and forwarded directly on paper forms, or captured by an automated system and then transferred to the statistical office in machine-readable form. Information on caseload and case characteristics is almost always included in police operational systems and consequently can feed directly into the national data-collection system. Resource information is less frequently available in operational systems and must often be collected from separate financial, human resources or inventory control systems. Qualitative descriptions are also obtained separately, often by compiling information from several operational documents or writing them from scratch.

C. TECHNICAL CONSIDERATIONS RELATING TO RECORDS AND OPERATIONAL INFORMATION SYSTEMS

4.9 The criminal justice system of a country gathers, generate, maintains and disseminates vast amounts of data in the form of records of events, victims, offenders, circumstances, processes, dispositions and decisions. Such data are the raw material for ongoing decisions on individual cases and are typically organized in some type of system to serve administrative purposes. These systems are generally referred to as operational systems.

4.10 The term “information system” in the criminal justice system is commonly used to refer to anything from a file box containing the names of suspects to monthly management reports on the incidence of crime to case-docketing lists used by the courts. For the purposes of the present *Manual*, “information system” applies to any process used to capture, store, analyze and disseminate information on the crimes, victims, offenders, circumstances, processes, decisions and dispositions that constitute the business of the justice system.

4.11 An operational information system is designed to facilitate decision-making on individual cases for use at the operational or line level of an agency and to monitor the functioning of the agency. Statistical systems, in contrast, are concerned with aggregations and combinations of data rather than specific crimes, offenders or dispositions. To illustrate this difference, it is useful to compare a criminal history operational system with a criminal history statistical system. In the operational system each offender is fingerprinted and a listing of each arrest and disposition associated with the offender is tied to the fingerprint record. The users of such a system are generally involved in making operational decisions on specific individuals. What characterizes an

operational information system is the specificity of the questions asked and the individually distinct information required. In the case of a criminal history statistical system, the system is concerned with aggregate information in order to answer such questions as the average time between arrests of persons arrested for burglary, the proportion of individuals arrested for burglary who are subsequently convicted of burglary or the average sentence for burglary, whether arrests for burglary are increasing in proportion to arrests for all other kinds of crime.

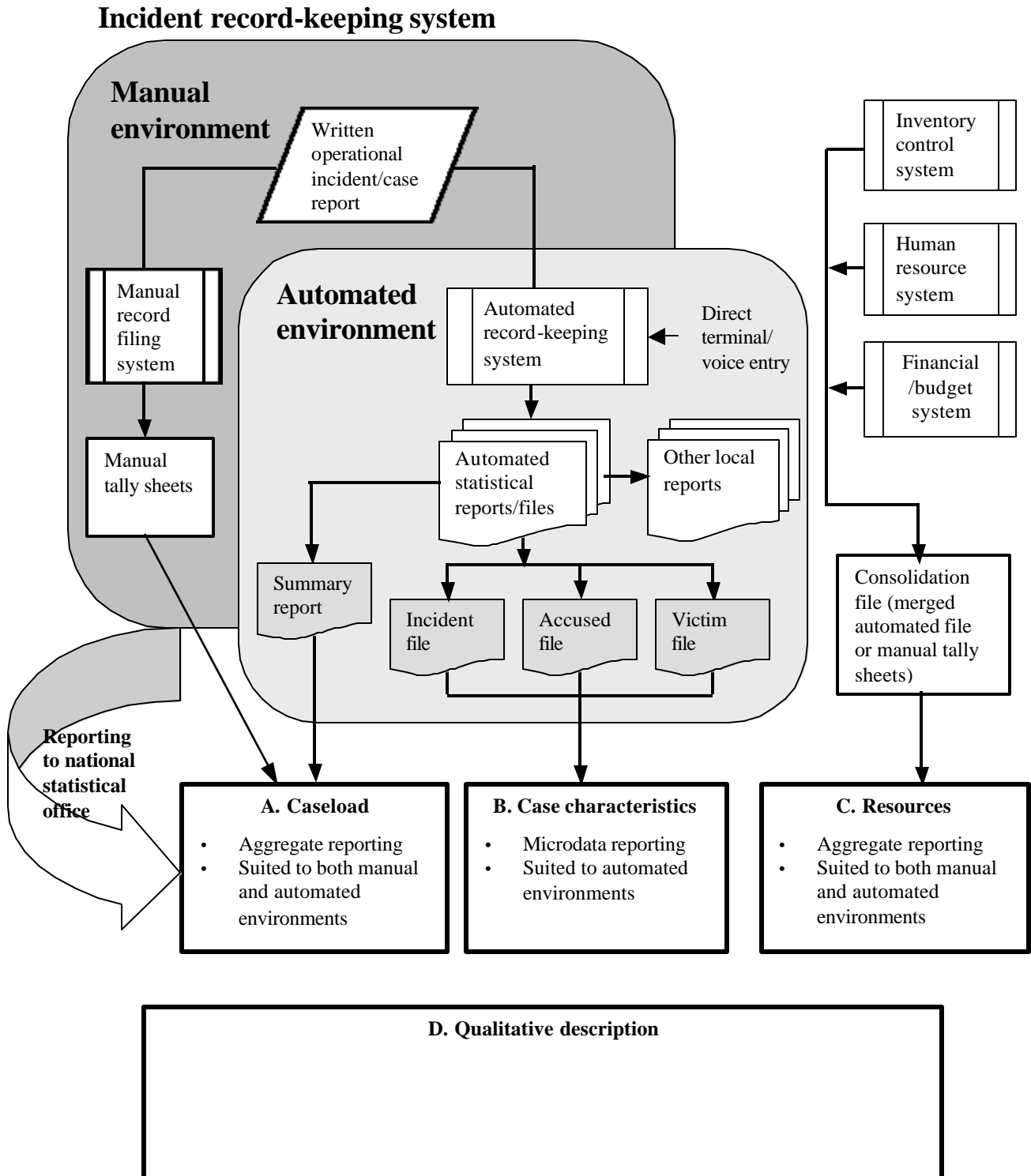
4.12 A very basic piece of information collected in a criminal justice operation system is the specific geographical location or jurisdictional identity of an event. For example, street addresses associated with a particular crime and the court location that sentenced the offender are preserved (i.e., geo-referenced). With this information, digitized maps can be constructed within a geographic information system (GIS) to serve as tools for the analysis of crime. Integrating GIS in crime statistics applications would allow better management, faster retrieval and improved presentation of crime data. In addition, it would facilitate the production of spatially referenced crime information for any specified configuration of geographical units.

Issues related to deriving statistical data from operational systems

4.13 The quality of statistical series built upon existing operational information systems reflects the quality of those operational systems and their administrative records. Bad records produce bad statistics. One of the greatest obstacles to the development of criminal justice statistics has been the inadequacy of administrative records and systems. However, even good operational systems, that is, those that meet administrative needs, may not contain the kinds and amount of information necessary for good statistics.

4.14 In an ideal situation, the operational aspects of criminal justice information should be very closely integrated with the statistical component, with both being part of an overall computerized criminal justice information system. For example, a victim of assault by an acquaintance would provide the incident information at the police station, with a police officer gathering and entering all the relevant data on when and where the crime occurred, as well as information about the offender and the victim. The system could then retrieve a criminal history, if any, for both the victim and the accused, and forward it for further investigation. The system would automatically filter the variables needed for input into the statistical component of the system, which could then undertake further processing of the

Figure 4. Information flow from police operational systems reporting to a national statistical office



data to produce weekly and monthly statistical reports and forward them to the regional level, and so forth. An ideal system would automatically assign an integrated file number that would permit tracing of the case as it moves throughout the criminal justice system. From the police station, a copy of the case file would be forwarded to the local prosecutor and court where the case would be heard. As the case progresses, the court would add relevant operational information to the file, including sentencing information. The file could then be forwarded to the appropriate prison in situations where incarceration was ordered. In both the court and correctional components of the system, the ideal system would filter statistical information from the case files as they are updated at various stages of the criminal justice process. The ultimate goal of a fully integrated criminal justice information system would be to enter case-specific information only once, but in such a way that it would meet the needs of all the users within and outside the criminal justice system.

4.15 As the above describes an ideal situation, it does not actually exist in a real world environment. In many environments, the quality and coverage of criminal justice records in operational systems remain crucial issues in the collection of criminal justice statistics. Field personnel may not fill out records accurately or consistently; differences in definition and recording may occur between individuals, offices, agencies and regions.

4.16 A review of and improvements in the quality of records and operational systems can have direct and immediate benefits in terms of better information and decision-making (therefore, more efficient and effective justice). Since the benefits are often readily apparent, decision-makers are increasingly willing to invest in the improvement of records and operational systems and the training of the field staff responsible for producing and maintaining records.

4.17 The problem of coverage is more difficult to resolve. Operational systems rarely meet all statistical requirements unless they are specifically designed to do so. In some countries, for example, some statistical series are produced through what is called a common database system. In such an approach, the information needs of both operational and statistical users are considered and a single system is developed so that the needs of one do not constrain the needs of the other. This is a common arrangement in computer-supported information systems but there is no inherent reason why this approach should not be used in a manual information system. A major advantage of a common database approach is that both operational and statistical users receive similar training and technical support. Furthermore, data need only be recorded once. The principal disadvantage is that

additional trained personnel are generally required within the agency to operate the information system, and these personnel are responsible for neither operational nor statistical functions.

4.18 More often, statistical systems are derived from operational systems or directly from administrative records. In any case, data-collection decisions require decisions on the operational systems, the relationship between operational and statistical systems, and how and in what form data in an operational system should be submitted to a statistical system. In analyzing this process, planners should consider the following issues:

(a) What is the relative interest of a contributing agency (data producer) in supporting (i) its own operational applications? (ii) the provision of data for national statistics?

(b) What kinds of training, technical assistance and fiscal resources are available to data contributors?

(c) How much raw data can the collection agency handle from contributors?

(d) What system of data collection can best satisfy the need for statistical information, with due regard for the reliability and validity of particular sets of data in the sense of their legal value, for example, sentences upheld and sentences not upheld?

(e) If data are submitted in aggregated format, how will this limit the statistical system's ability to analyze them?

Aggregate and unit record approaches to data collection

4.19 An operational system is concerned with specific cases, offenders and the like, and must have unique identifiers so that the composite information on each case or person can be assembled. Depending upon the data set, this can be done in several ways: for example, criminal identification numbers may be associated with the fingerprints of an offender and all data associated with that offender tagged with that number; or a case file number may be assigned so that all data associated with a particular case can be uniquely identified.

4.20 Research on and development of identification technologies is very important in the design of operational systems since the identification logic is the key to pulling together all the relevant data associated with the particular individual, case or event in question. The identification problems in a statistical system are different. Insofar as the statistical system uses pre-aggregated input, unique identification of individual crimes, cases, or other elements is not an issue. The principal identification problem in a statistical system involves being able to pull

together data sets associated with the same classifications or variables.

4.21 In an operational system, data on the specific geographical location or jurisdictional identity of an event are typically preserved. As in the case of time, geographical or jurisdictional information is commonly used as an aggregation criterion in a statistical system and is more often than not an independent variable. It is important for geographical or jurisdictional aggregations of the operational system to coincide with those of the statistical system. A difference in the geographical/jurisdictional base of either system may complicate the process of deriving statistical information from an operational information system.

4.22 Decisions concerning levels of aggregation are important for every statistical series. The major advantages of collecting aggregate data compared with unit record data are that the amount of information received by the statistical bureau is reduced and that the analysis requirements are reduced because the data are received at the same level of aggregation as that in which they will be reported, usually in tabular form. Another advantage is that aggregate data can sometimes be less expensive to collect and easier to process, especially in a non-computerized environment.

4.23 However, unit record data have several major advantages compared to aggregate data. The level of detail in unit record data is much greater, significantly increasing flexibility in data analysis. Since they permit the cross-tabulation of any combination of variables, unit record data can answer a wide range of ad hoc questions that often cannot be answered with the aggregate data-collection approach. In addition, unit record data greatly enhance the system's capability to verify data quality through validation rules and procedures. With access to each record, it is possible to identify and correct a wide range of data quality problems. When resources permit, the unit record approach to data collection should take precedence over the aggregate data approach.

4.24 In aggregate data collection, the choice of level of aggregation is crucial and depends on several considerations, including the following:

- (a) The level of detail required in the analysis and results;
- (b) The type of database being constructed;
- (c) The data handling capabilities in the criminal statistics bureau;
- (d) The capabilities of the data contributors;

(e) The data collection system, whether centralized, decentralized, or some combination of the two.

4.25 The first consideration, the level of detail needed for analysis, is perhaps the most crucial. If those planning the data collection prepare "mock-up" versions or detailed outlines of the tabulations they intend to produce, they are far less likely to make mistakes in their determination of the appropriate levels of aggregation.

4.26 The scope of aggregation varies depending on the intended uses of the statistics, but two dimensions are almost universally employed: a time frame and classifications based on jurisdiction, bureaucracy or geography. The time frame in an operational system is the time or date associated with specific events, such as the crime, arrest or sentencing. In a statistical system, time is an aggregation criterion, such as the number of crimes reported or number of offenders committed to prison in a given calendar year. For further information concerning aggregate versus unit record data, see section A of the annex.

4.27 In some environments, the option of the combined use of both unit record and aggregate approaches may be desirable and appropriate. For example, unit record data may be centrally collected from local contributors by a provincial or state bureau, while aggregate data are sent from the provincial or state bureau to a national repository for use in the publication of national statistics.

Complete count versus sample data collection

4.28 Another major decision—one with major cost implications—concerning the approach or strategy for data collection is the choice between complete count and sample-based data collection. A complete count is a comprehensive approach that attempts to gather aggregate or unit record data from every potential data provider. In the case of the police component, for example, a complete count approach entails collecting data from every policing agency on every crime reported to the police. In a sample-based approach, data on reported crimes are gathered only from a sample of police agencies that are thought to be a representative subset of the whole. Another kind of sample might gather information on prosecutions for selected time periods thought to be representative of all prosecutions in a year.

4.29 Traditionally, many countries have used a complete count approach to gathering criminal justice statistics, since information on the total incidence of a phenomenon is desired. This approach serves many users because it permits analysis of results for each contributing

jurisdictional or geographical unit within the country, providing both contributors and users with an opportunity to see the results for their particular jurisdictions or areas. This enables them to compare themselves with similar jurisdictions, geographical areas and national averages.

4.30 A complete count approach, however, may not be the best choice in every situation. For example, if statistical planners are only interested in estimates of the national incidence of some phenomenon, sampling may be a cheaper and quicker approach than a complete count. Precision is not always necessary in order to answer some types of questions.

4.31 In the past fifty years substantial progress has been made in sampling techniques, which in some circumstances permits statisticians to derive accurate estimates of the totality of the phenomenon in question quickly and cheaply. Sampling is particularly effective if

time and financial resources are limited, if the amount of information required makes a complete count approach cost-prohibitive and if technical expertise in sampling design is available.

4.32 The major point to be made is that the choice between complete count and sample approaches represents a trade-off. Both approaches are subject to error, both demand quality control techniques and both can be useful depending on the level of precision and detail needed.

4.33 Current practice indicates that complete count data collection is preferred for core statistics such as those on reported crime, courts, sentencing and corrections. In contrast, sample data collection is more appropriate for capturing information that would be impossible to obtain from operational systems, such as statistics on unreported crime and victimization.

V. PROCESSING CRIMINAL JUSTICE STATISTICS

5.1 Regardless of how data are collected, a processing system is required. A well-planned and efficient system of data processing is essential for timely tabulation and analysis. The development of a data processing system requires consideration of processing steps and procedures; personnel and training requirements; equipment and facilities requirements; timetables for each operation; and fiscal resources and requirements.

5.2 Decisions concerning specific steps and procedures should be based on the kinds of analysis intended for the data. If, for example, proposed tabulations are precisely defined before data are processed, the processing can be planned specifically to meet these needs.

5.3 One of the most pressing questions in the area of data processing concerns the role of computers, including microcomputer technology. This is considered later in the chapter. First, the major processes and steps for data processing will be reviewed, including receiving and recording; securing and storing; editing; and analyzing the data.

A. DATA PROCESSING STEPS AND PROCEDURE S

Receiving and recording data

5.4 Data can be received and recorded in various ways. As mentioned above, they can be received on unit record forms or pre-tallied on ledger sheets. In automated environments, machine-readable data may be transmitted directly to the receiving office. Data can be received daily, weekly, monthly, quarterly or in some other batch mode. They may be received in one mode, for example an investigative case summary, and converted into another mode for entry into the information system. They may be gathered by an agency and entered into its own information system or forwarded to another agency to be entered into that information system.

5.5 Too often, the design of recording forms and the documentation of coding and classification rules are treated as trivial or technical matters. As mentioned in previous chapters, decisions on what is recorded and how it is recorded are crucial. It is important to provide clear documentation of rules and procedures as well as formal training of personnel on how to record and edit data.

Securing and storing data

5.6 Whether a file-card box, filing cabinet, ledger or computer is used to store data, an information system must have procedures to store the data; to index the data in the system so that they can be identified and retrieved; to secure the data from physical damage or unauthorized use; and to update, add to, expunge or modify the data.

5.7 Data can be put into the system in a variety of ways, from simply filing a form in a filing cabinet to entering data directly into a computer terminal. Whatever the method used, the filing system must be designed to facilitate retrieval and thus must reflect an understanding of the ways the data are most likely to be used.

Editing and verifying data

5.8 Whether a system is manual or automated, procedures must be established to edit the data. Among these are procedures that allow the identification of inconsistencies. Data may be contradictory (e.g., date of arrest may be earlier than date of birth), atypical (e.g., an offender given a sentence three times longer than the norm for that particular offence) or inconsistent with established law, policy or procedure. While the emphasis should always be on collecting high-quality data, a statistical program must also have guidelines on how to clean data errors and gaps without distorting the original data.

5.9 Editing should also identify any part of a set of data that is missing or that has not been updated in a timely manner. Editing is not complete until inconsistencies, errors and gaps have been dealt with. This means that editing measures must include procedures for “cleaning the data”. This can be extremely time-consuming, as some manual intervention may be required even when computer editing programs are used. Manual intervention may require obtaining new or updated data from a source—a time-consuming proposition while trying to maintain a timely production cycle, but unavoidable in certain circumstances.

Analyzing the data

5.10 Analysis refers to the broad range of ways in which the data in the system can be arranged. This may involve procedures for arranging them in alphabetical or chronological order, summarizing them through the use of

frequencies, percentages, rates and ratios, preparing more sophisticated cross-tabulations or developing computer simulation models of the entire justice system. In every case, proper analysis requires that an appropriate question, issue or problem be posed to give direction to the analysis; appropriate procedures, methods or logic must be used to conduct the analysis; and analysts with appropriate expertise must be given access to the appropriate data. It is important for administrators and policy makers to understand that simply amassing a database is not analysis. Well-framed questions, access to the appropriate data and staff trained in the subject matter are essential if appropriate analysis is to be performed. See chapter VI for more detail on analysis.

B. DATA SECURITY AND ACCESS ISSUES

5.11 Much of the information held in the files of criminal justice agencies is sensitive, and this raises a number of issues concerning how best to secure the data from unauthorized access and from tampering and abuse. Particularly in the area of criminal justice, procedures to safeguard the security of and control the access to data are necessary to ensure the integrity of criminal justice statistics.

C. TECHNOLOGIES FOR DATA PROCESSING

5.12 As indicated at the beginning of this chapter, one of the crucial data processing decisions involves whether and how to computerize. While nearly all countries have access to computers, computer capacities vary considerably from country to country. Even when computer resources are available in a country, they may not be widely available within the criminal justice system. Despite the great potential of automated data processing, many countries still rely heavily or partially on manual clerical operations. In fact, manual processing usually plays some role even in those countries with advanced data processing capabilities, such as in the preparation of simple hand-tallies to check the consistency of data on preliminary returns.

5.13 The introduction of major administrative computerized systems into government agencies, such as those involved in crime and justice operations and statistics, is a complex and costly process. It may take several years to accomplish. Computerization is likely to be implemented in phases, or circumstances may dictate that computerization be used for only some functions of the criminal justice statistics system. Whatever the circumstances, it is of vital importance to plan the computerization very carefully at all stages of the process.

Mistakes can be very costly and are best avoided by putting great effort into the early stages of planning.

5.14 Each country must develop its processing system in accordance with its needs, its level of statistical development and its fiscal, human and technical resources. As computer technologies play an increasing role in data processing, an overview of the implications of this technology is warranted. The following sections focus on four major issues: local support; organization of staff; selection and use of software; and selection and use of hardware.

Local support

5.15 A crucial factor in the use of computers is the availability of expertise for systems and project management, facilities management, hardware and software selection and maintenance, and programming and analysis. In many countries local resources may be unavailable to provide such expertise and support for the necessary training. This typically means reliance on consulting firms or outside experts who, in the worst case, may have little appreciation of national circumstances and requirements. Intensive training and development of in-house expertise, especially in programming and analysis, are crucial for carrying out an ongoing programme of automated statistics processing.

Organization of staff

5.16 Computerization creates new responsibilities and tasks that must be either integrated within the existing organization or supported by an outside organization. An automated data processing system usually requires at least two levels of technical personnel: systems analysts who determine the computer operations, software and hardware that are necessary to meet the processing and analysis requirements; and programmers who prepare specific programs necessary for data processing. Despite the increasing availability of software packages, in-house programming capabilities are necessary to tailor them to meet specific needs and to create new programs if necessary. Trained system and programming staff are currently in high demand in all areas, both public and private. They are often difficult to find and more difficult to keep owing to the vastly increasing job market for these kinds of skills world-wide. A programme of criminal justice statistics may need to look to national statistical services for support.

5.17 In systems that rely on mainframe computers, the technical staff is usually placed in a central unit responsible for managing and maintaining the system. When skilled programmers are scarce, they too are often

placed in such a central unit and isolated from subject-matter specialists and planners. Difficulties in communication often result, producing inefficiencies in data processing and analysis. Technical staff may not be sufficiently sensitive to criminal justice issues and the requirements of criminal justice administrators and practitioners who, in turn, may be insufficiently aware of the capabilities of computers in meeting their needs.

5.18 The advances in microcomputer technology in the last two decades have made decentralization much easier than in the past. New, more accessible and user-friendly software packages have also made it easier for subject-matter specialists to acquire a greater awareness of what computers can do to meet their needs. In all cases, attention to coordination and communication between subject-matter and technical staff is essential.

Selection and use of computer software

5.19 The development of application programs for use in the processing of criminal justice statistics requires an extensive amount of time and technical expertise. With the greatly increased availability of commercial software packages for various applications, an attractive alternative to the development of custom-made programs is to use such readily available software. However, since it is rare that a package or packages will satisfy all data processing requirements, some customization and additional programming are almost always required. Nevertheless, the use of appropriate software can substantially reduce the development costs and programming burden, even when some customization is required. Thus, the acquisition of packaged software for record-keeping, data editing and tabulation can be particularly beneficial in countries with a limited budget and a shortage of trained systems personnel.

5.20 With the increasing number and diversity of packages, a major issue is the selection of appropriate software. Mistakes in software selection can severely reduce the value of the results. Thus, it is important for the data processing staff to learn about and keep up-to-date, as much as possible, on available software packages prior to acquisition. Assessing the appropriateness of any package requires answers to four basic groups of questions:

(a) **Capabilities** Is the package designed to meet the specific needs in question? Has it been successfully used for the application in question? Is there documentation on results of tests or other user responses? Are the package's statistical and numerical capabilities adequate to deal with the amount of data in question?

(b) **Hardware requirements** Will the package work on existing equipment and configuration?

Has the package been successfully used on comparable equipment?

(c) **Support** Does proper documentation exist for use by technical staff? Are training and instructional aids available? Is there ready, ongoing access to expertise on the package? Is the program maintained by a reliable and accessible organization?

(d) **Ease of use and cost** Is the program easy to learn? Is it inexpensive to run?

5.21 The burden of proof should rest with the vendor. If at all possible, no decision should be made before actual tests are run on existing equipment with the participation of both technical staff and subject-matter specialists.

Selection and use of computer hardware

5.22 Chronologically, deciding on computer hardware and other equipment should be the last decision to be made. It is advisable to invest in hardware depending on the defined system functionality requirements, not the reverse. For a criminal justice statistics system, the computing equipment needed depends in large part on the level of the statistical programme in question, on the amounts and kinds of data to be processed, and on the types of analysis required.

5.23 The purchase and installation of a computer system can be an expensive and long-term process. If a bureau of criminal justice statistics has no acceptable computer system, it might well, as a first step, explore the availability and appropriateness of computer facilities in other government agencies, as well as the possibility of renting time on university or commercial computers.

5.24 As indicated, the centralization of computing facilities has often been seen as a way of reducing costs and making efficient use of scarce human resources. In some ways large, expensive mainframe computers made centralization inevitable. The advent of powerful and relatively inexpensive microcomputers together with the introduction of open platforms has allowed greater flexibility in considering the degree of centralization of operations. The choice of a computing system can now more easily reflect the organization of the system of criminal justice statistics and its degree of centralization. In a decentralized computing system, it is particularly important to ensure the compatibility of hardware and software acquired. Incompatible equipment and software can hinder the ease of compiling comparable national data.

5.25 If a new system is contemplated, the primary decision to be made is the choice of computer system

concept: centralized mainframe solution, centralized client/server solution or decentralized solution. In addition, many of the same kinds of questions asked about software packages equally apply. Among the major ones to be considered are the following:

(a) The system's capacity in relation to the specific needs in question;

(b) Compatibility with existing equipment;

(c) The manufacturer or vendor's ability to provide service, technical support and training;

(d) The manufacturer's global market share and presence in the country;

(e) The cost.

VI. ANALYZING, EVALUATING AND DISSEMINATING CRIMINAL JUSTICE STATISTICS

6.1 Evaluation, analysis and dissemination of criminal justice statistics are essential components of a criminal justice statistics system. Analysis and dissemination raise again the primary issues in the design of criminal justice statistics: Who are the users and what are the uses of criminal justice statistics? Evaluation of the statistics and their dissemination can help to improve the quality of the data; evaluation can also encourage continuing development towards meeting the requirements of users with timely, valid and reliable statistics from the criminal justice statistics system.

A. DATA ANALYSIS

6.2 Plans for the analysis of data should be developed at the earliest stage possible because these plans will help to specify the kinds of data required. The plans for analysis are themselves shaped by the requirements of users, the level of the statistical programme, and the availability of computing resources. Well-specified analysis plans also help to demonstrate to the intended users of criminal justice statistics the value of those statistics.

6.3 Analysis should normally be limited to presentation and technical interpretation of the data. While users often want interpretive analysis of the policy implications of statistical findings, a bureau of criminal justice statistics may jeopardize its credibility and perceived objectivity by performing this type of analysis. Therefore, policy analysis and data interpretation may be more appropriately performed by subject-matter specialists under the guidance of statistical experts.

Descriptive statistics

6.4 Given the current state of criminal justice statistics and the prevalence of simple unit of count programmes, analysis of criminal justice statistics tends to be limited in many countries. Much of the analysis is in the form of simple descriptive statistics such as frequencies, percentages, rates and rates of change. These simple statistics, as explained below, can answer many basic questions. For example, how many crimes were reported in a given year? What percentage of the total crimes reported were property offences? How many crimes were reported for every 100,000 adults in the population? What was the rate of increase in the number of crimes from one year to the next?

6.5 **Counts and frequencies** Often the major output of a criminal justice statistics system is a simple unit count (e.g., of crime) and classification of these units (e.g., theft or murder). When dealing with nominal classification categories (e.g., types of crime, urban or rural, etc.), the arithmetic involves simply counting up the cases in each category. However, when using interval data, data that is distributed along a scale (such as age of offender, income or length of sentence) decisions are needed on how many categories to use and where to establish the cut-off points for calculating frequencies. Sometimes these decisions are only possible after the data have been examined, but some help in establishing categories can be obtained by examining the summary statistics of national statistical services and other agencies. There are obvious advantages in using categories comparable to and consistent with those employed by other statistics-producing agencies. Such decisions on categories to be used in analysis also strongly influence the level of aggregation at which data should be collected and processed.

6.6 **Percentages** Percentages are often used in reporting crime data because they are simple to calculate and are useful for showing the relative proportions of each category within a given class (e.g., violent crime, 6 per cent; non-violent crime, 94 per cent; total crime, 100 per cent). The calculation of percentages is only appropriate if the total number of cases is sufficiently large (as a rule of thumb, at least 50). To avoid misleading interpretation, the actual number of cases is also typically reported along with percentages.

6.7 **Rates** Most programmes of criminal justice statistics have found the calculation of rates to be particularly valuable for describing unit of count data, as rates allow for easy comparison of units across groups and over time. The most common rates in criminal justice, such as crime rates, use population data as their base.

$$\text{Crime rate} = \frac{\text{Number of crimes}}{\text{Total population}} \times 100,000$$

6.8 The calculation of rates requires deciding on which unit of count to use as the numerator and which to use as the denominator. For example, to calculate the incarceration rate there is a choice between various numerators such as number of inmates on specified dates, number of admissions over a specified period or

number of prison sentences over a specified period. There is also a choice of various denominators such as total population, adult population, population at risk or convicted population. These decisions must be shaped by the intended uses of the data but are also constrained by the data that are available.

6.9 Rates of change Calculations of rates of change are useful for monitoring the extent of change in crime and official responses to crime. The calculation is quite simple but requires time series data or data for at least two periods in time. For example, if the prison services of a country had 50,000 inmates in a given year and 65,000 inmates in the following year, the rate of growth would be:

$$\text{Rate of growth} = \frac{65,000 - 50,000}{50,000} = 0.30,$$

or 30 per cent per year.

Tabulations

6.10 To the extent that the statistical system permits linking data, cross-tabulations of two or more variables are among the most important outputs. Tabulation plans require decisions such as the data series to be used, the variables that are to be cross-classified and with what classification and values. These plans are normally formulated using table outlines designed to answer the major questions of analysis.

Other analytical techniques

6.11 Other more sophisticated techniques of analysis, such as derived indices, correlation and regression, and estimation and weighting procedures for the analysis of sample data may be necessary to answer some questions and to handle some kinds of data (e.g., victimization survey data). These kinds of techniques have been made far easier and more accessible with the development of statistical software packages.

6.12 There are dangers, however, in having personnel untrained in statistics use such analytical software to create these types of statistical outputs. It is always important to understand the assumptions underlying these techniques and to ensure that the software is consistent with the design of the survey or data series. For sophisticated analysis, it may be more practical for a bureau to call upon external experts from such sources as national statistical services or universities.

B. DATA EVALUATION

6.13 Every analysis programme must include a technical evaluation of the data collected. This evaluation should consider counts of errors and missing items, verification of calculations, views of subject-matter specialists on the reasonableness of the data and comparisons of the data with other available sources. Problems that cannot be traced or corrected should be made known to the users of the statistics.

6.14 More systematic evaluation is also desirable, especially if technical reviews of the data persistently reveal errors. A full evaluation might include an audit of the field staff's recording and classification of different data elements, as well as an audit of data processing staff procedures. Also useful are assessments of coverage and bias: for example, a few countries have used victimization surveys to assess the coverage and bias of police-reported crime data. A full evaluation might also include record and reverse record checks: for example, victimization surveys have been evaluated by comparing individual answers to official records of the criminal events. Finally, evaluation might include cost-benefit analyses, although few systematic attempts to weigh the benefits of statistical series against their costs are available.

6.15 Again, outside experts and specialists in research and development can be of great assistance in designing and conducting evaluations of statistical series and programmes as well as in evaluating the uses and benefits of the data.

6.16 Evaluations may indicate the need for major, often costly, methodological research and programme development to find ways of improving statistical series. It is only through the inclusion of such self-corrective feedback mechanisms that statistical systems can reach higher levels of efficiency, quality and usefulness.

C. DATA DISSEMINATION

6.17 The present *Manual* has emphasized the importance of ensuring that criminal justice statistics are useful. Dissemination plans, outputs and products are intended to ensure that the statistics are actually used. Dissemination can take many forms, including informal information sharing, formal publications, responses to specific requests and provision of raw data.

6.18 The dissemination strategy selected should take into consideration the varied needs and skills of users, and

the quality and nature of the data. For example, statistical information is most frequently disseminated through statistical reports and publications. Statistical tables are typically the major output of the analysis of data and a major component of such reports. Some users, however, prefer brief, readable, non-technical summary statements. Often the use of visually appealing charts and graphs helps users to see the implications of statistical data more easily than statistical tables. Similarly, specialized reports designed to meet the particular needs of specific user groups help to ensure that they easily find the data they require.

6.19 Dissemination through published reports is only one of many dissemination techniques and should be supplemented, as much as possible, by responses to specific requests for information, special tabulations, direct access to computers through remote-access terminals and the release of data tapes and disks. Such approaches are often expensive and demanding of human resources; thus, many statistical agencies charge users the costs of preparing the requested material.

6.20 In recent years, the use of the Internet as a dissemination vehicle has grown tremendously. Dissemination by Internet is a cost-effective method of reaching a wide range of users and saves time once the system is in place. Investment in this dissemination vehicle is usually modest, relying heavily on the expertise of a team of designers and programmers. Government

agencies and statistical bureaus are increasingly going this route to reach the general public, while users increasingly expect to obtain the information they need on the Internet. Initially, basic and widely demanded information can be made available on the Internet while specialized or detailed tables and data requests continue to be fulfilled through published reports and the other dissemination methods mentioned above. Thereafter, Internet dissemination can be expanded incrementally to meet wider user demands, depending on the technical capacity and resources available.

6.21 To enable users to interpret the criminal statistics correctly, the methods used in the collection, processing and analysis of data, as well as their limitations, if any, should be disseminated with the data. In some cases, however, it may be preferable to present such technical information in appendices or separate technical reports in order to allow persons with the interest and skills to review the technical issues without imposing those issues on readers with no interest or technical training.

6.22 It is beneficial to both producers and users of criminal justice statistics if data producers released a list of products to be disseminated with a time frame. This would allow producers to plan their activities and allocate resources according to the scheduled outputs, while at the same time allowing users to plan their actions accordingly.

VII. THE ROLE OF VICTIMIZATION SURVEYS AND OTHER DATA SOURCES

7.1 Not all criminal justice statistics needs can be met through administrative and operational information systems. It is widely recognized that a sizeable portion of criminal events are not reported to the police and that certain types of information relevant to crime and criminal justice are not readily available from the criminal justice system. These limitations of official records as a source of statistics for describing crime and its characteristics have prompted criminologists and researchers to seek alternative sources for measuring and understanding crime.

7.2 Two major efforts in this regard are victimization surveys and self-report surveys. These techniques use questionnaires or interviews with samples of individuals who answer questions concerning whether they have been victimized by crime or whether they have performed certain criminal acts. The crime victimization survey, in particular, has emerged as an important vehicle for collecting information on citizens' direct contact with crime and the criminal justice system. The victimization survey and other alternative sources of data for studying crime and aspects of crime are presented below.

A. VICTIMIZATION SURVEYS

7.3 The launching of victimization surveys in a number of countries, as well as internationally,⁶ has demonstrated the value of these surveys as a complementary data source for police statistics. Victimization surveys usually reveal a higher incidence of crime than those found using statistics of crime reported to the police. Part of the reason for this result is that not all people report victimization incidents to the police. Victimization surveys can provide a great deal of information on criminal incidents that is not usually available in police records. In addition, such surveys can offer insights into public perceptions regarding the different components of the justice system. However, while they can provide extensive and intensive information, victimization surveys are generally expensive and require a high level of technical expertise. For example, to produce reliable estimates at the subnational or local level, sampling strategies can become quite complicated, and sample sizes may need to be quite

large. Furthermore, victimization surveys are most useful if they are conducted regularly, even annually if possible.

7.4 Victimization surveys are large-scale studies that ask randomly sampled members of the population about their experiences with crime. Generally, victimization surveys consist of two parts. First, all respondents (whether they have been victims of crime or not) are asked questions from a "screening questionnaire". In addition to supplying social and demographic information about themselves, respondents are questioned about their fear of crime and attitudes toward the criminal justice system. More importantly, the screening questionnaire is used to identify those respondents who experienced one or more of the types of victimization that are of interest.

7.5 A detailed series of questions about the victimization incident comprises the second major part of the interview. Victims may be asked about the location and circumstances of the crime or about their relationship to the offender. They may also be questioned about any financial loss or physical injury they might have sustained. Information may also be gathered about whether or not the victim reported the crime to the police or took any other action in the aftermath of the victimization episode.

7.6 Besides measuring different types of offences, some of the current issues that victimization surveys are being used to address are hate crime, family violence, violence against women, senior (elder) abuse, stalking, bribe requests, perceptions of the criminal justice system (police, criminal courts, prison system, parole system) and public perceptions of crime (fear levels).

Methodology

7.7 As in most surveys, victimization surveys collect data from the target population with reference to a specific time period. The target population stipulates the persons that are to be included and excluded from the survey. Victimization surveys usually include persons aged 15 and over, 16 and over, or 18 and over depending on the information requirements of the survey.

7.8 Victimization surveys typically employ sample survey methodology. The topic of sampling technology is too extensive to take up in the present *Manual*. However, it is covered in textbooks on sampling and in other United Nations publications. The choices are

⁶ The International Crime Victim Survey (ICVS) was launched in 1989 by the Ministry of Justice of the Netherlands, and subsequently (1991) further developed with the involvement of the United Nations Interregional Crime and Justice Research Institute (UNICRI). To date, more than seventy countries have taken part in this project at least once.

numerous, and techniques can be complicated when coverage is national or over some otherwise large area. For such surveys, it is advisable to obtain the advice of a qualified survey statistician.

7.9 A method that may be used in victimization surveys is the area-based stratified sample design. First, the geographical area that is being surveyed (target geographical area) is divided into strata or geographical areas that are relatively homogeneous. Within each stratum, a random sample of households is then selected. Finally, either all eligible persons or a sample of those eligible in the selected households are interviewed. A variation to this design is the use of cluster sampling, whereby each stratum is subdivided into clusters, and a sample of clusters selected from each stratum. All or a sample of households in each selected cluster are then selected; and from each household, all eligible persons or a sample of eligible persons are interviewed. An alternative to area-based sampling is the use of electoral registers as a frame from which sample persons are drawn.

7.10 Some victimization surveys select households using the random digit dialling technique. A random sample of telephone numbers is selected from each stratum. With this technique, households without telephones are automatically excluded from the survey. This technique is therefore unsuitable for countries with low levels of telephone ownership.

7.11 In victimization surveys, data collection is carried out using a structured questionnaire. A typical interview lasts between 15 and 30 minutes. Traditionally, victimization surveys have used paper and pencil questionnaires. However, new technologies now allow questionnaires to be administered using computer-assisted telephone interviewing (CATI) for telephone interviews or computer-assisted personal interviewing (CAPI) for personal interviews. With these techniques, the questions appear on a computer screen. The interviewer asks the respondents the questions and enters the responses directly into the computer. The data capture program allows a valid range of codes for each question and automatically follows the flow of the questionnaire. Built-in edits and fewer processing steps save time and result in better quality data. Computer assistance also helps to standardize the interview process.

Advantages

7.12 Crime victimization surveys offer several advantages. First, results from victimization surveys can show crimes that have not been reported to the police because such surveys collect information directly

from victims of crime about reported and unreported crimes. In so doing, victimization surveys provide an indication of the propensity of citizens to report incidents and information on the repercussions of victimization, as well as on attitudes towards crime and criminal justice. It can provide a more valid estimate of the actual crime rate than official records.

7.13 Second, crime rates derived from victimization surveys are not sensitive to changes in legal definitions or operational policies and procedures in the same way that police statistics can be. For example, crime rates as recorded by the police may show an increase as a result of a broader definition of crime, when in fact there was no change. Likewise, a change recording policy (such as computerization) may increase efficiency and result in a higher number of crimes recorded. Victimization surveys are not sensitive to these types of developments.

7.14 Third, in victimization surveys samples are drawn from the general population and data are collected from both victims and non-victims over a given time period. This allows researchers to compare the two groups and to analyze which social and demographic groups face the greatest risk of victimization and how these risks are affected by particular kinds of lifestyle behaviours such as drinking alcohol or living alone. These data can help in the development of theoretical models that link victim involvement in criminal events to social, demographic and behavioural factors.

7.15 Fourth, victimization surveys permit an investigation of the consequences of victimization and how victims cope with these consequences. For example, respondents may be asked how their victimization experience has affected their attitudes toward crime and the criminal justice system, their level of injury, emotional trauma and the monetary value of a theft or vandalism.

7.16 Finally, victimization surveys are particularly useful in helping administrators of criminal justice and policy makers monitor people's perceptions, concerns and fears about crime and criminal justice. Effective criminal justice policies and programs and relevant criminological theories must address the subjective side of crime and address people's everyday fears and concerns. The fear of crime can be as great a problem as crime itself, and public disenchantment with criminal justice and the agencies of control provides not only an indicator of serious problems, but also a significant challenge to criminal justice. Victimization surveys allow us to go beyond merely counting incidents. They provide data on the costs of victimization, on the

financial losses, on the physical injuries and on the concern and fear victimization may produce.

Disadvantages

7.17 The victimization survey has some disadvantages and limitations. First, crimes with a rare occurrence cannot be accurately captured. Second, not all crimes can be captured through this survey method. For example, murder cannot be included, nor can consensual crimes for which there are no direct victims such as drug use and gambling. In fact, the latter are not captured very well through either official data or victimization surveys. Similarly, crimes in which victims are unaware that they have been victimized cannot be well captured in victimization surveys or official data sources. For example, fraud, embezzlement, employee pilferage, price-fixing and the wide range of consumer, corporate and white-collar crimes are not included in victimization surveys.

7.18 Victimization surveys are relatively new and methodologies for specific groups of victims or types of crime are often not well developed. Special methodologies will be needed to measure, for example, victimization of aboriginal or minority groups, white-collar crime, consensual crime and what has been called enterprise crime, which includes organized crime and the crimes of organizations and the State.

7.19 Perhaps the most serious impediment to widespread use of victimization surveys is their cost. Because crime is relatively rare and unevenly distributed, sample sizes must be large, especially if there is an intention to prepare estimates at low levels of aggregation. Obtaining stable estimates of rare crimes through sample surveys also requires prohibitively large samples to be selected from the population. Telephone interviewing, when feasible, can help keep costs down.

7.20 Victimization surveys are subject to a variety of problems common to all forms of survey research. Responses are sensitive to the wording of the questions asked, and ambiguously worded questions can produce unreliable results. For example, questions phrased in layman's terms produce better results than those using judicial terminology. Responses are also sensitive to the techniques used for the interview. Mail-in forms, telephone surveys and in-person interviews may elicit different responses and frequently result in different response rates. Responses and response rates are sensitive to the persistence of interviewers in asking questions and can be sensitive to the passage of time. Less serious events, in particular, may be forgotten, or people may mistakenly import events that happened to

them previously into the study time period, a phenomenon called "telescoping". Victim data are also sensitive to the interpretations and recording decisions made by interviewers in coding victim responses.

How victimization surveys complement police-reported data

7.21 Victimization survey data and police data reveal different facts about crime. They measure the phenomenon of crime in two very different ways and from different perspectives. The choice of which data to use depends on the interests of the investigator, the questions to be answered and the level of analysis desired.

7.22 Victimization surveys cannot replace administrative statistics and will not produce hard operational data for the police. However, a well-planned and executed crime victimization survey, especially if conducted periodically, can complement police-reported data and provide essential information to policy makers and administrators. To maximize their potential use and facilitate comparison with the next survey, it is desirable to retain information on and from victimization surveys, preferably on a centralized and accessible database.

7.23 Joint publication of victimization and police-reported data helps to inform the public about the full nature and extent of crime. Data from victimization surveys can be used to contextualize information from police-reported data. However, this has to be done with great care. The definitions, types and categories of crime and victimization from the two sources often differ widely. These complexities have to be dealt with when using the two sources complementarily.

7.24 The two data sources can also be used to test alternative hypotheses related to criminal activity. Neither police statistics nor victimization surveys alone can provide comprehensive information about crime. However, they can confirm and complement one another. (See figure 5 for comparison of the two sources.) Some combination of improved official statistics and periodic victimization surveys would appear to be the best approach. Together, they contribute to a better overall understanding of crime.

B. SELF-REPORT SURVEYS

7.25 Self-report surveys involve interviewing a sample of respondents on the crimes they themselves have committed. This type of survey is especially important in gathering information on so called victimless

Figure 5. Comparison of police-reported data and victimization surveys

<i>Police-reported data</i>	<i>Victimization surveys</i>
<i>Data collection</i>	
Administrative police records	Personal reports from individual respondents
Complete count	Sample
100 per cent coverage of all police agencies	Sample survey using self-administered, telephone, or face-to-face interview
Data submitted on paper or in machine-readable form	Computer-assisted telephone interviewing (CATI) or computer-assisted personal interviewing (CAPI)
Usually annual	Periodic
All recorded criminal incidents regardless of age of offender or victim	Target population is over a certain age
Counts only those incidents reported and recorded by police	Covers crimes reported and not reported to police
<i>Scope and definitions</i>	
Primary unit of count is the criminal incident	Primary unit of count is the criminal victim (at the personal and household levels)
All crimes contained in criminal code or penal code.	Some types of crimes can not be assessed through victim interviews
“Most serious offence” rule results in an undercount of less serious crimes	Statistics are usually reported on a “most serious offence” basis but counts for every crime type are possible
Include attempted crime	Includes attempted crime
<i>Sources of error</i>	
Inaccurate reporting by the public or inaccurate recording by the police	Respondent error
Non-responding police department	Non-response
Processing error, edit failure	Errors in coding, editing, imputation and estimation
Police discretion	Sampling error
Changes in policy and procedures, legislative changes	Non-sampling error related to coverage

crimes (e.g., drug, gambling, smuggling and prostitution offences) that are not likely to show up in police-reported statistics or victimization surveys. In general, the reliability and validity of such statistics depend to a great extent on the willingness of respondents to report that they committed a crime and on their ability to recall events. For the most part, tests of such studies have found

them to be quite reliable, particularly for less serious offences.

C. CAUSE OF DEATH STATISTICS

7.26 For countries that have a well-developed civil registration and vital statistics system, cause of death

statistics offer an additional source of data for crimes that result in death. When deaths are registered, the cause of death is one of the items asked on the death certificate. Statistics on deaths by cause, therefore, can be a source of information on the number of homicides. These statistics, however, are subject to certain limitations, the seriousness of which depends on the quality of statistics on deaths in the particular country or region. First, the statistics cover only those deaths that are registered and have the cause of death entered. Second, the attribution of cause of death is subject to inaccuracies arising from factors such as ignorance of the real cause and discretion on the part of the person reporting the cause. Third, rules and conventions for defining the cause of death may preclude certain cases of homicide. In summary, unless a country's vital statistics system is known to have a high degree of completeness and accuracy, the use of statistics on cause of death to complement police statistics on homicide should be treated with caution.

D. POPULATION CENSUSES AND HOUSEHOLD SURVEYS

7.27 Population censuses contribute important information for the interpretation of justice statistics. Probably the most widely used data for this purpose are those on population size. The amount of crime is frequently expressed relative to population size, for example as a crime rate per 100,000 population. Formulating the amount of crime as crime rate effectively controls for the differences in population size among regions or for population growth over time. This is useful when comparing incidence of crime among cities or countries, or when examining crime trends over time. However, crime rates can also be affected by a number of other social or demographic factors, such as the age composition of the population; the incidence of low income; unemployment rates; family composition; high school dropout rates; and migration. Data from population censuses and surveys can provide a useful overall context that allows a more meaningful and informed interpretation of criminal justice statistics.

E. OTHER POTENTIAL SOURCES

7.28 In some countries, public and private agencies not thought of as criminal justice organizations also collect a considerable amount of information on specific crimes, offenders and victims. These may include regulatory and social service agencies of the Government as well as private organizations concerned with some aspects of crime and deviance or advocates for particular kinds of victims, for example:

- (a) Insurance companies;
- (b) Tax and customs authorities;
- (c) Trade associations concerned with the theft of trade secrets, unfair pricing or consumer fraud;
- (d) Environmental protection organizations;
- (e) Regulatory agencies concerned with banking and security institutions;
- (f) Security departments of private corporations;
- (g) Alcohol regulation agencies;
- (h) Mental health agencies;
- (i) Victim support organizations (e.g., rape crisis and battered women's centres);
- (j) Hospitals and the medical health community;
- (k) School authorities;
- (l) National security agencies.

7.29 Statistical planners, then, may wish to consider an inventory and review of available statistics maintained by non-justice agencies. It would also be advisable to determine the comparability between data elements and data definitions in such series and those produced by justice agencies, and then to work with non-justice agencies in refining existing statistical series and developing new ones.

VIII. INTERNATIONAL COLLECTION OF DATA ON CRIME AND CRIMINAL JUSTICE

8.1 Although the focus of the present *Manual* is on the development of a national system of criminal justice statistics, it is helpful for national offices involved in the collection of crime statistics to know about efforts to collect crime and criminal justice data at the international level. This chapter introduces the reader to two such ongoing activities.

A. THE UNITED NATIONS SURVEYS OF CRIME TRENDS AND OPERATIONS OF CRIMINAL JUSTICE SYSTEMS

*Historical background*⁷

8.2 In its early years, the United Nations paid intermittent attention to the possibility of developing the collection of criminal statistics at the international level. There were relevant resolutions of the Economic and Social Council between 1948 and 1951, but little seems actually to have been done until the early 1970s, when the present series of surveys were initiated. The Economic and Social Council, in its resolution 1984/48 of 25 May 1984, requested the Secretary-General to maintain and develop the United Nations crime-related database by continuing to conduct the surveys of crime trends and operations of criminal justice systems.

8.3 In the beginning, the surveys covered five-year periods starting from 1970. In the 1980s, the questionnaire was developed and improved with the help of a succession of institutions⁸ in the United States of America, which hosted expert group meetings to consider the results of one survey round and plan an improved version of the next. In the early 1990s, smaller parallel meetings were held at the United Nations Interregional Crime and Justice Research Institute (UNICRI). Most recently, the Government of Argentina⁹ hosted meetings in Buenos Aires (1997, 1999 and 2001), and the Government of the Netherlands hosted a meeting in Veldhoven (1998).

⁷ Summarized from William Burnham, "A short history of the collection of UN crime and justice statistics at the international level" in *Global Report on Crime and Justice*, Graeme Newman, Ed. (New York, Oxford University Press, 1999).

⁸ The hosts included the School of Criminal Justice, Rutgers University, New Jersey, 1981; the Criminal Justice Center, Sam Houston State University, Texas, 1983; and the Bureau of Justice Statistics, United States Department of Justice, Washington D.C., 1986.

⁹ These meetings were organized by the Ministry of Justice of Argentina and the Latin American Crime and Justice Research

8.4 Originally, the rationale for collecting and comparing statistics at higher than the national level was to search for the causes of crime. By the second survey, developed at the Rutgers University expert group meeting, the focus had shifted away from the causes of crime to the operations of criminal justice systems. That focus was more in keeping with the overall mission of the United Nations: one of assisting Governments in the management of criminal justice and, indeed, calling upon Governments to provide an official accounting to the international community of their criminal justice operations.

8.5 However, another problem arose as a result of this new rationale: the survey became highly detailed, requesting data concerning every level and aspect of the criminal justice system. In the second and third rounds the survey questionnaire became excessively large, requesting too much detail, with the result that it became a burden on officials of member countries whose job it was to fill it in. It also became apparent that often no single national government department existed that had access to the variety of information requested, although a number of Governments have since developed whole government departments whose mission is to compile justice statistics (see section B in chapter II). As a result, the fourth and fifth surveys have been reduced somewhat in scope. The sixth survey was shortened by 65 per cent to ease completion, and the seventh survey followed that pattern. Beginning with the sixth survey, the interval between survey rounds was shortened from five to three years.

The utility of the surveys

8.6 The questionnaire for the Seventh United Nations Survey of Crime Trends and the Operations of Criminal Justice Systems, sent out to Governments in April 2001, consisted of a series of questions designed to elicit responses in the form of data, primarily statistical data, on the main components of the criminal justice systems for the period 1998–2000. Inquiries were made on four main components of criminal justice system: police, prosecution, courts, and prisons and

Institute (IIDEJUAL), which was established on 14 February 2000 within the Ministry of Justice and Human Rights of Argentina to conduct research about crime and criminal justice in Latin America.

penal institutions. The list of statistical information sought in the seventh survey is given in figure 6. (See section G of the annex for the full questionnaire.)

8.7 The major goal of the United Nations surveys on crime trends and the operations of criminal justice systems is to collect data on the incidence of reported

crime and the operations of criminal justice systems with a view to improving the analysis and dissemination of that information globally. The survey results provide an overview of crime trends and relationships between various parts of the criminal justice system and promote informed decision-making in administration at the national and international levels.

Figure 6. List of statistical information included on the Seventh United Nations Survey of Crime Trends and Operations of Criminal Justice Systems

<i>Justice component</i>	<i>Type of information requested</i>
<i>Police</i>	<ul style="list-style-type: none"> • Police personnel by sex • Total police budget • Number of crimes recorded, by type of crime • Number of persons brought into initial formal contact with the police and/or the criminal justice system, by type of crime • Number of persons brought into formal contact with the criminal justice system, by adult/youth and sex
<i>Prosecution</i>	<ul style="list-style-type: none"> • Prosecution personnel by sex • Total prosecution budget • Number of persons prosecuted, by type of crime; by adult/youth and sex
<i>Courts</i>	<ul style="list-style-type: none"> • Number of judges by status (professional, lay) and sex • Total court budget • Number of persons brought before criminal courts, by disposition (convicted, acquitted, other) • Number of persons convicted, by type of crime • Number of adults convicted of any type of crime, by type of sentence • Number of persons convicted, by adult/youth and sex
<i>Prisons/penal institutions</i>	<ul style="list-style-type: none"> • Number of adult and youth prisons, penal institutions and correctional institutions; number of spaces (beds) available • Staff in adult and youth prisons, by sex • Total prison budget • Number of persons incarcerated on a given day, by category (awaiting trial, sentenced, etc.) • Average length of detention for adult prisoners awaiting trial (time between arrest and pronouncement of guilt or innocence) • Average length of time served in prison by adults after conviction • Number of convicted prisoners on a given day, by adult/youth and sex • Number of persons on probation on a given day, by adult/youth • Number of persons on parole on a given day, by adult/youth

8.8. The most important function of the United Nations crime survey is that it collects statistics of the most official kind. The survey's main purpose is not to measure the exact amount of crime that exists in the world, but rather to provide an accounting of crime and the government response to it. The survey challenges countries to develop national crime and justice recording systems that are systematic, coherent and predictable. The data gathered benefits both the international community and each responding Government. Firstly, information can be used in determining crime trends and problem areas for intervention in the form of technical cooperation. Secondly, the data gathered provide information for such reports as the *Global Report on Crime and Justice*.¹⁰ Thirdly, the data can be used for can be utilized by Governments interested in comparing themselves to other similarly situated States.

Methodological concerns with international crime and justice data

8.9 The data from the United Nations crime survey are compiled from a standard questionnaire sent to national officials by the United Nations Statistics Division. The official respondents then adapt their national-level statistics to fit the categories of crime and justice defined by the survey questionnaire. It should be noted, however, that because the different agencies of criminal justice in a country are often not part of one organization and may indeed be operated almost independently of each other, the ways in which such data are obtained and collated might be very different within each country. The often fragmented way in which the questionnaire may be filled in by different officials from different bureaucracies sometimes introduces inconsistencies and contradictions in the statistics reported within a particular country's survey questionnaire. Therefore, the use of official statistics cross-nationally requires a careful examination of the sources for the statistics of the individual countries.

8.10 Another difficulty for the use and interpretation of statistics from the United Nations crime survey is that they are aggregated from official national statistics of crime and, as such, they constitute political statements by Member States. The crime and justice statistics that a country makes available to the international community have an essential political element, with all the ramifications that this may entail.

8.11 In addition, as many scholars of criminology have argued for a long time now, official data on crime

are fraught with systematic and random error. These data give account only of those crimes that are reported to the police and recorded by the authorities, thus representing an incomplete account of crime committed in society. The unknown amount of crime in any given society—the “dark figure” of crime—is left out of official statistics and has to be measured by alternative means such as victimization surveys (see chapter VII).

8.12 Another factor that should be considered when analyzing cross-national data is the problem of definitions. Different countries may define particular types of crime much differently. Systemic differences in legal standards can have an influence on crime rates quite apart from the actual amount of crime in the society. Furthermore, the definitions used in the international survey questionnaire are of necessity general, making it difficult to reflect in accurate detail the varied legal definitions and recording practices used by countries.

8.13 Official cross-national data are generally available for only a small number of the world's countries. As a result, theoretical formulations based on available international data may be biased towards the more highly developed countries.

8.14 In spite of these and other seemingly insurmountable difficulties in the collection of valid and reliable crime data, official crime statistics at the international level have some value as a measure of crime itself.

B. THE INTERNATIONAL CRIME VICTIM SURVEYS

Historical background

8.15 The collection and compilation of non-official data on crime at the international level started fairly recently. Early efforts to collect information from victimization surveys were made largely by researchers and administrators of developed countries, where the diffusion of such surveys was relatively rapid, while their presence in the developing countries was very small.

8.16 The first round of the International Crime Victim Survey (ICVS) was implemented in 14 developed countries in 1989 by the Ministry of Justice of the Netherlands in cooperation with the British Home Office and the University of Lausanne, Switzerland. The interviews were conducted by telephone using computer-assisted telephone interviewing technique (CATI). In the same year pilot studies were conducted in Indonesia (Jakarta) and

¹⁰ *Global Report on Crime and Justice*, Graeme Newman, Ed. (New York, Oxford University Press, 1999). Excerpts available at <http://www.uncjin.org/Special/GlobalReport.html>.

Poland (Warsaw). The United Nations Interregional Crime and Justice Research Institute (UNICRI) became involved with the ICVS in 1991, when the project was expanded to include developing and countries and countries in transition.

8.17 The second round of surveys was conducted in 1992, with the participation of 13 developed countries, 13 developing countries and seven countries in transition. Since telephone penetration in developing countries was not very high, face-to-face interview method was used in those countries, and the surveys were done mainly in the capital cities. The third round of surveys, conducted in 1996/1997, included twelve developed countries, 15 developing countries and 21 countries in transition. The most recent round of the ICVS was done in 2000. In this round, surveys were conducted in 17 developed countries as well as 16 capital cities in Eastern Europe/Central Asia, four cities in Asia, seven in Africa and four in Latin America.¹¹ At the conclusion of four rounds of the ICVS, more than 140 surveys have been completed in at least 70 different countries.¹²

The utility of the surveys

8.18 The International Crime Victim Survey was organized using a standardized methodology that benefited from experience gained in measuring crime levels and related issues through national victimization surveys. Thus it is able to provide independent and comparative information on victimization experiences, the context of crime and attitudes toward crime and

criminal justice policy, as well as an opportunity to develop and test criminological theories in a wider context. The list of statistical information sought in the 2000 ICVS is given in figure 7. The full questionnaire (face-to-face version) is reproduced in section H of the annex.

8.19 A major advantage of the ICVS is that it is able to transcend the different definitions of crime in each country since the questionnaire constructs its own crime categories which are the same in every country surveyed. Thus it offers better comparative material than results from independently organized national victimization surveys, where differences in design seriously compromise the capacity to compare.

8.20 A number of developing countries have received assistance to develop and implement victimization surveys as an important research and policy tool. Once they have been sensitized to the significance, potentials and limitations of the survey, researchers, policy makers and administrators can make more informed decisions in the management of criminal justice systems.

8.21 The survey shares other well-known objectives of national-level victimization surveys in terms of information gathering on experiences with crime and its level, victimization risk, propensity to report to the police, attitudes about police and punishment, crime prevention, and policy evaluation based on the results of the survey. It is also expected that the experience with the international survey will stimulate development and implementation of national and local surveys.

¹¹ For more information on the ICVS, see <http://www.unicri.it/icvs>.

¹² The results of the ICVS have been published in several reports. A list of these reports is available at: http://www.unicri.it/icvs/publications/index_pub.htm.

Figure 7. List of questions asked in the 2000 International Crime Victim Survey

<i>Victimization in last five years, by type of crime</i>	<i>When (last year)</i>	<i>How often (last year)</i>	<i>Where</i>	<i>Reported to the police?</i>	<i>Details of report*</i>	<i>Reported to others?</i>	<i>Victim support</i>	<i>Seriousness</i>
<i>Household crimes</i>								
Theft of car	x	x	x	x				x
Theft from car	x	x	x	x	x			x
Car vandalism	x	x	x	x				x
Motorcycle/moped theft	x	x	x	x				x
Bicycle theft	x	x	x	x				x
Burglary	x		x	x	x		x	x
Attempted burglary	x		x	x				x
<i>Personal crimes</i>								
Robbery	x	x	x	x	x	x	x	x
Theft of personal property	x	x	x	x				x
Sexual offences	x	x	x	x	x	x	x	x
Assaults/threats	x	x	x	x	x	x	x	x
<i>Additional questions on specific crime</i>								
Theft of car	Was the car recovered							
Burglary	Was something stolen; value of property stolen; was something damaged; value of damage							
Robbery	Was anything stolen; number of offenders; whether offender known; whether weapons used; what weapon.							
Theft of personal property	Whether pick pocketing							
Sexual offences; and assaults/threats	What happened; was it considered a crime; number of offenders; whether offenders known to victim; who was offender; was weapon used; what weapon							
<i>Victimization in last year, by type of crime</i>								
<i>Crime-specific questions asked</i>								
Consumer fraud	Type of fraud; reported to police; reported to others							
Corruption	Who was corrupt; reported to police; reported to others							
<i>Police, crime prevention and protection</i>								
Do police do a good job in local area								
Are the police helpful								
Recommended sentence for burglar, and length of prison detention								
Firearm ownership, type of firearm and reason for ownership								
Security measures against burglary								
<i>Attitude towards crime and security</i>								
Feelings of safety outside after dark								
Feelings of safety at home after dark								
Perceived likelihood of being burgled								
Causes of juvenile crime								
<i>Personal and household information</i>								
Town size				Age and sex				
Household size				Occupation				
Type of dwelling				Years of formal education				
Household income level				Marital status				
Satisfaction with household income				Social (going out) behaviour				

* Including: Why did you report? Why did you not report? Were you satisfied with the way the police dealt with the matter? Why were you not satisfied?

Figure 7. List of questions asked in the 2000 International Crime Victim Survey (cont.)

Additional items in the face-to-face questionnaire

<i>Questions on corruption (if experienced last year)</i>
Who asked for a bribe
Whether reported to the police
Why reported to police
Satisfaction with report
Why not satisfied
Why not reported to police
<i>Opinion on corruption</i>
Whether or not likely that (list of 13 officials) will ask for a bribe
Changes over time in ease of finding the right official who will deal with problem
Changes over time in ease of getting a fair treatment
Changes over time in ease of getting an official to do a favour

Additional items in the African version of the questionnaire

<i>Victimization in last five years, by crime</i>	<i>When (last year)</i>	<i>How often (last year)</i>	<i>Where</i>	<i>Reported to the police?</i>	<i>Details of report*</i>	<i>Reported to others?</i>	<i>Victim support</i>	<i>Seriousness</i>
Car hijacking	x	x	x	x	x	x	x	x
Theft of livestock	x	x	x	x	x			x
<i>Additional questions on specific crime</i>								
Car hijacking	Number of offenders, Whether offender known, presence of weapon, type of weapon, whether weapon used, car actually stolen, car recovered, injury, see a doctor or healer, whether a crime							
Theft of livestock	What kind of animals were stolen, value of stolen animals							

* Including: Why did you report? Why did you not report? Were you satisfied with the way the police dealt with the matter? Why were you not satisfied?