Chapter 10

How to Make IAs More Ethical

10.1 HIGHLIGHTS

In this chapter we respond to the challenge to make IA processes and outcomes more fair, equitable, and just. We also seek to identify and advance rights (especially those of disadvantaged groups) to ensure that duties are fulfilled, and to address ethical issues (professional ethics and accreditation) and challenges (the determination of significance). These concerns are all ethical. More precisely, they fall under the umbrella of normative (what ought to be), applied (directed toward the resolution of practical problems), and practical (moral questions, the answers to which involve commitments to action) ethics. We also illustrate how ethical concerns can be integrated into IA requirements and processes.

- The analysis begins in Section 10.2 with three applied anecdotes. The stories describe applied experiences associated with efforts to make IA practice more ethical.
- The analysis then defines the problem (Section 10.3—Defining the Problem and Deciding on a Direction), which is an insufficient effort to explicitly and systematically integrate ethical considerations into IA processes and process outcomes. In this section we demonstrate the ubiquitous nature of ethical concerns in IA practice.
- In Section 10.4 we define key terms, describe relevant ethical concepts, and highlight major distinctions. We present examples of procedural fairness principles, distributional fairness principles, and ethical rights and duties. These concepts, principles, and distinctions provide the basis for defining an ethical IA process. We also address the subject of IA professional ethics and consider the issue of professional accreditation.
- In Section 10.5 (Instituting an Ethical IA Process) we detail how an ethical IA process could be implemented at the regulatory and applied levels. In Section 10.5.1 we infuse ethical concepts and perspectives into IA regulatory requirements and guidelines. In Section 10.5.2 we integrate an ethical perspective into an applied IA process. In Section 10.5.3 we highlight the characteristics of an ethical IA process for different IA types.
- In Section 10.6 we address the contemporary challenge of significance determination. We identify key conceptual distinctions and offer good practice guidance.
- In Section 10.7 we highlight the major insights and lessons derived from the analysis.

10.2 INSIGHTS FROM PRACTICE

10.2.1 Are Impact Assessment Practitioners Craftsmen, Tradesmen, or Professionals?

During the Middle Ages, those making their livings in towns mostly identified themselves as craftsmen, tradesmen, or professionals (gender sensitivity was not high in those days). Craftsmen underwent an apprenticeship and acquired through practice the skills necessary to produce specific goods from raw materials—for example, garments, tapestries, metal items, jewelry. They were skilled at making things, and to protect special interests those of similar occupations grouped together in guilds (e.g., tailors, blacksmiths, goldsmiths). These guilds regulated who would be deemed a master in a particular craft, and also established performance and quality standards. Buying and selling the goods made by crafters, as well as farm produce and forest products, was the prerogative of traders. Expertise in commercial transactions was developed through experience and success was closely associated with developing networks to match supply with demand. Those who did not make or sell things, but provided services based on knowledge and extended formal education, were known as the professionals—lawyers, physicians, clergy, engineers. Groupings of individual professionals styled themselves Institutes or Associations and decided on appropriate training and entry criteria to protect society from unqualified persons.

A professional seeks to make a living by exercising particular expertise, so there is obviously a personal interest in obtaining work both to support oneself and family as well as employed staff. A client employs a professional in order to meet a specific need of their own—this might be to cure an illness, design a house, or defend a legal action. The client expects the professional to earn the agreed fee by acting in their (the client's) best interests. The professional also

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expects to make a living by providing a service that meets the need of the client. The nature of the marketplace is such that a professional who is perceived by a client not to be acting in their best interests will forfeit the business. It has nevertheless become recognized that scientists, teachers, journalists (the so-called information professionals) must have a primary allegiance to the accuracy of the information they disseminate and that this must take precedence over a client's desires if a tension occurs.

For many professionals, two common ethical dilemmas arise (1) deciding between one's personal interest and the interest of one's client, and (2) deciding between serving the desires of a client and serving the needs of society. Most professional associations or institutes deal with the first problem by having professional codes that require the client's interest to be placed ahead of personal considerations. They require that conflicts of interest be declared and that the basis for professional remuneration should be formally agreed and accord with the norms of the profession. The second problem is not as easily resolved when a client's desires and societal needs are not aligned. The question then arises: Is the practitioner undertaking impact assessments (IAs) in a different position to other professionals with respect to meeting a client's desires?

The term "sweetheart report" has been used to categorize impact assessments that are deemed favorable to a developer's interest at the expense of societal interests. And since the inception of environmental impact statements—as mechanisms to inform decision makers as to the likely consequences of proposed actions, so that decisions can be taken in society's best interest, sweetheart reports have been a problem. Conventional wisdom is that "he who pays the piper calls the tune," so no matter how impartial an impact assessment practitioner attempts to be, this perception persists. The fact that very few impact assessments hostile to a development are made public feeds the "sweetheart report" perception. It is illogical for the proponent of a project to appoint a professional who will not add value to the activity. However, value can be added by "planning with nature" and ensuring that no ecosystem services are lost, by optimizing project design to ensure sustainable operation, by reducing public opposition to a project, or by reducing bureaucratic delays due to missing data. All impact assessment practitioners should seek to give their clients value in one or more of these ways—not by producing biased sweetheart reports.

Various mechanisms have been proposed to ensure that impact assessments are fair and unbiased. One that has not found favor is that the proponent of a project should not appoint the professional team undertaking the impact assessment. Project proponents reject this approach because this undermines the client–professional relationship and is not conducive to trust and openness. The generally favored mechanism is that of third-party review of an impact assessment before it is passed to the relevant decision maker. This, in turn, is not without its problems. Who appoints the reviewers? Who remunerates them? What professional competency should they have? The wide variation that is occurring around the world with respect to review of impact assessments is unfortunately not conducive to public trust. It is clearly in the interest of all impact assessment practitioners that mechanisms be sought to assure decision makers and the public that sweetheart reports are not acceptable to the profession and are not the norm. Unfortunately, many countries are failing to regulate the quality and ethics (as opposed to the content) of impact assessments.

All impact assessment professionals need to remember that the profession grew out of social demands that environmental parameters need to be considered alongside technical and economic factors when decisions that will affect communities are made. Accountability to society as much as to a client is thus implicit in our professional activities. Impact assessment professionals have a primary allegiance to the accuracy of the information they disseminate and must be regarded as information professionals rather than service professionals. They must also be committed to the promotion of sustainability, the freedom of access to information, and the right of citizens to have a voice in decisions that affect them.

Practicing personal integrity and ensuring professionally competent reviews that promote sustainability should be the norm for all environmental professionals. It needs to be clear to the uninitiated that impact assessment practitioners are not craftsmen intent on producing good-looking reports made to regulatory specifications. Neither are they traders making money through their knowledge of the network of supply and demand for impact assessments. Greater attention must be given to promoting the professionalism of impact assessment practitioners.

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10.2.2 Making the Attribution of Significance to Social Impacts More Rigorous

Social impact assessments (SIAs) with no significance methodology, community impact assessments with insufficient analysis, and SIA identification lacking cohesion with approaches used by other environmental specialties were commonplace results when I became an SIA practitioner in the mid-2000s—after 10 years of rural development experience.

SIA follows the normal impact assessment methodology—establishing the baseline, predicting impacts, attributing significance to impacts, and identifying mitigation and enhancement measures. The first SIA chapters I reviewed were almost completely baseline, either scantily or verbosely. Impacts were identified as positive or negative with little commentary, analysis, or justification.

At that time, the main sources of readily available SIA guidance were the International Association for Impact

Assessment's (IAIA's) *International Principles for Social Impact Assessment* and the World Bank's *Social Analysis Sourcebook: Incorporating Social Dimensions into Bank-Supported Projects*.

The IAIA's 2003 *International Principles* identified why principles were needed and presented a useful definition of SIA. It conceptualized social impacts, identified SIA activities, and elaborated core values, principles, and guidelines. The WB's 2003 *Sourcebook* identified five entry points for social analysis at the project appraisal stage and for social assessment throughout the life of the project. Neither mentioned attribution of significance.

After having skimmed through other EIA chapters, it was staggeringly apparent that SIA was an afterthought, written at the end of a study, or by someone who happened to have been involved in some basic consultation. The science of SIA was not present. There was no cohesion relating significance of social impacts with significance of impacts in other chapters. The overall impression was that the socioeconomic chapter was the least objective and systematic of the various disciplines. Ways to address this impression became a priority.

Other EIA chapters used magnitude and value/sensitivity criteria for the attribution of significance. Ensuring a human element was essential. The number of people affected was an obvious criterion, but not the only one; other magnitude criteria including duration, spatial extent, likelihood/probability of the impact occurring and reversibility seemed worthwhile. Soon, the concept of reversibility was dropped, not only because it is very unlikely but also because many of the projects had poor socioeconomic conditions where reversibility would not be desirable.

Magnitude criteria recently used are: **Determination**

- ***Major adverse/beneficial***. A probable impact that affects the well-being of groups of many people or business entities within a widespread area beyond the project life.
- ***Moderate adverse/beneficial***. A possible impact that will likely affect either the well-being of a group of people or business entities beyond the local area of influence into the wider area of influence or continue beyond the project life.
- ***Minor adverse/beneficial***. An impact that may affect the well-being of a small number of people and/or households or businesses, or occurs exceptionally, mostly within the project area of influence and does not extend beyond the life of the project.

For sensitivity criteria, looking at what could be used to describe a group as sensitive, it was questioned what are projects trying to prevent, preserve and contribute to? Vulnerability seemed a logical concept. The next question was: vulnerable to what?

For developing countries, and recognizing the universal acceptance of the Millennium Development Goals (MDGs) movement, vulnerability to impoverishment risks made sense. Impoverishment risks identified by Michael Cernea are landlessness, joblessness, homelessness, marginalization, increased morbidity and mortality, food insecurity, interruption of education, loss of access to common property, and social disarticulation. In the United Kingdom and other developed countries, the discourse on "social exclusion" prevention outcomes seemed parallel to poverty eradication goals. Social exclusion has been identified as what can happen when people or areas face a combination of linked problems such as unemployment, discrimination, poor skills, low incomes, poor housing, high crime, bad health and family breakdown.

Sensitivity criteria also need to include acknowledgement that the ability to deal with change differs temporally and contextually. The ability of people to absorb changes caused by projects depends on their demographic profile, current life load, and access to resources that support adaptation, among other factors.

Sensitivity criteria recently used are:

- ***High***. An already vulnerable social receptor with very little capacity and means to absorb proposed changes or with very little access to alternative similar sites.
- ***Medium***. An already vulnerable social receptor with some capacity and means to absorb proposed changes or with little access to alternative similar sites.
- ***Low***. A nonvulnerable social receptor with limited capacity and means to absorb proposed changes and with some access to alternative similar sites.

Like other disciplines, the SIA magnitude and sensitivity criteria are combined using a matrix to determine the category of impact as "major," "moderate," or "minor" significance or "insignificant." Impacts are also identified as adverse or beneficial.

Clients have accepted this more objective approach to attributing significance for SIA impacts. Readers of the socioeconomic or community chapters understand its logic. Assumptions embedded in the various criteria can be referred to in discussions regarding SIA impact significance.

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10.2.3 Recognizing the Significance of Small Projects—Smaller Does Not Mean Insignificant

Often attempts to "expedite" IA processes focus on eliminating small project assessment. There are thousands of so-called small projects for which conducting an impact assessment is often portrayed as a bottleneck clogging up the "approval" process. If these projects were all actually small in scale and very likely not to cause significant impacts, alone or cumulatively, such as a window installation in a government building, or a new picnic table in a national

park, one could make the case that there would be few, if any, adverse environmental effects. But the term "small projects" is often a misnomer, disguising the scope of many quite large projects that clearly have the potential to negatively impact the environment. For example, here are some projects with complicated environmental interactions that were considered "small" under the Canadian Environmental Assessment Act:

- A small mine project that requires many kilometers of new access road and sends industrial runoff into an aquatic ecosystem.
- The installation or replacement of a culvert that has the potential to alter water-level regimes and aquatic species movements between large areas of wetland.
- A single small bridge across a stream in a remote natural area that opens up several hundred kilometers to resource extraction and public activity.

Assessment of the significance of the environmental effects, including cumulative effects, of projects like these appears to be expendable when there are pressures for a more streamlined approach to IA approval processes in the interest of accelerated economic development and improved IA efficiency. The federal government in Canada recently rushed to abandon the environmental review process for small projects even though it had concluded that most small project reviews do not take an unacceptably long time to complete. In analyzing some 18,056 small project assessments, the Quality Assurance Program also found that 90% of the projects that underwent a screening level assessment appeared "unlikely to cause more than minor adverse effects." This type of data is often quoted to falsely attest to the fact that these projects do not need IA. However, it should be noted that these determinations of minor adverse effects are made *after* the assessment process has been completed and mitigation measures have been identified through that process. These figures do not address the question of whether the project would have had significant environmental impacts in the absence of an environmental assessment. The data do demonstrate that having a meaningful environmental planning and review process is an effective tool leading to thousands of better projects across Canada 90% of the time.

Knowing the environment is a very complex system with a myriad of links and interactions and that small project impacts can also be synergistic, it is surprising that there is often a lack of willingness to consider the significance of small disturbances, or the accumulation of seemingly unrelated disturbances, that small projects can have, and that can result in significant implications for the natural environment, human health, and in many cases the stewardship (or not) of financial and natural capital in our economy. To ask people to be less vigilant about the environmental effects of the majority of proposed projects because of their scale or that they do not seem to have major environmental effects is like asking accountants to cancel thousands of financial audits just because a number of them contained no discrepancies.

We feel there are ways to create efficiencies in the assessment of small projects, rather than eliminate them, to ensure that their impact significance is determined. One approach could be the expanded use of a class IA process so that truly small and routine projects can be grouped together in a single advance assessment. This approach has, for example, been applied to numerous municipal infrastructure and business license projects in national parks in Canada. In these cases, the assessment of routine projects is simplified to a questionnaire with strategic questions that can be completed quickly followed by the implementation of recognized environmental practices associated with the specific type of project. Another approach could be the use of standard environmental operating procedures to ensure that routine projects apply mitigation measures. Such procedures have been developed in Canada, for example, by the Department of Fisheries and Oceans for projects that may affect wetlands and, if used in appropriate circumstances identified through IA, they can ensure a quick and efficient environmental review.

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10.3 DEFINING THE PROBLEM AND DECIDING ON A DIRECTION

The three stories point to the ethical nature of IA in different ways. The first story is concerned with IA professional ethical issues and dilemmas. The remaining two stories address the contemporary challenge of significance determination in two different ways. One is concerned with good practice approaches to interpreting the significance of social impacts. The other addresses the issue of the propensity to assume that smaller projects are, by definition, insignificant. The three stories provide a partial and preliminary sense of how IA processes and outcomes can become more ethical. A more detailed exploration of the potential role of values and ethics in IA requirements and practice, however, is required.

Some critics suggest that IA practitioners and potentially affected groups and individuals are often "talking a different language." The IA practitioners tend to take great pains to demonstrate how the procedures they employ are systematic and consistent; to highlight the many opportunities for public involvement; and to show how overall adverse impacts are minimized. The public stresses that the IA process is unfair. They argue that benefits and adverse impacts are unfairly distributed. They insist that their rights

have been ignored or diminished. They suggest that proponents and regulators have not made clear, verifiable, and enforceable commitments to the public and to the environment. Both parties are frustrated because their "message is not getting through."

Both IA practitioners and the public in IA processes grapple with the values associated with human conduct (Jiliberto, 2002). These values provide the principles and standards applied by each party to assess whether the proposed action and the IA process are "good" or "bad," "right" or "wrong." Ethics is a branch of philosophy that addresses whether actions are moral (i.e., good, bad, right, or wrong). Neither party tends to view their conflicting positions, perspectives, and interests as elements of an ethical debate. However, by acknowledging the ethical nature of IA, the first step is taken toward establishing a framework for accommodating perspective and interest differences.

IA is an inherently ethical activity. It seeks to advance environmental values (Hettwer, 1991; Jiliberto, 2002). It is subjective, moral, and value-full (Mostert, 1996; Finsterbusch, 1995). Value-based interpretations and judgments are made in every IA activity (Enk and Hornick, 1983). Oftentimes IA is perceived as biased, sometimes with good reason (Beder, 1993). The ethical basis for interpretations and judgments is occasionally explicitly presented. Too often it is not. As detailed in Chapters 4 and 5, IA practice tends to be shrouded in the language and pretense of objectivity.

IA is prescriptive, predictive, and interpretative. Uncertainties, ambiguities, and alternative interpretations abound, especially when predicting future conditions (with and without a proposed action) and when determining impact significance. Notwithstanding the inevitable ethical uncertainties and dilemmas, IA seeks to provide a sound decision-making basis. This leaves IA practitioners, at both the regulatory and applied levels, with considerable administrative discretion. Consequently, they have an ethical obligation to justify their positions and actions. They also have a responsibility to seek out and respond to the values and ethical positions of other participants in the IA process.

Issues of procedural fairness are inherent to the IA process. The IA process must be perceived as fair, from multiple perspectives, if it is to be accepted as legitimate (Laws, 1996; Firth, 1998). Procedural fairness is both an end in itself (consistent with democratic decision-making values) and a means of reducing public dissatisfaction and of enhancing the potential for public acceptance (Lawrence et al., 1997; Kasperson et al., 1988).

The proposals assessed through IA result in temporal (e.g., exacerbating historical inequities, adverse effects on future generations), spatial (e.g., inequities in the distribution of costs and benefits and of services and facilities), and social group (e.g., disadvantaged groups bearing a greater share of the burden of adverse impacts) inequities (Interorganizational Committee, 1994). They also contribute to changes in the distribution of political power. The potential for distributional inequities tends to be a particular concern when siting LULUs (locally unwanted land uses) and when assessing the social and environmental justice implications of proposed actions (e.g., legacy issues, pace and scale options, community and environmental resilience) (Hermans and Knippenberg, 2006; Gibson, 2011; Liu, 1997; Morell, 1984).

IA is a form of applied research. Hence there is a need for IA practitioners to apply ethical research standards and to consider the ethical dimension of different forms of social inquiry (Chase, 1990; Fuggle, 2005b). Procedural ethical principles and standards come to the fore in public consultation and in joint efforts with stakeholders to negotiate mutually acceptable solutions. IA practitioners, as environmental professionals, also should comply with the ethical standards of professional organizations such as the National Association of Environmental Professionals (NAEP) and the IAIA (IAIA, 2010). The extent to which such codes of conduct should be formalized (i.e., accreditation) and independently audited is a subject that has engendered considerable debate and discussion within the IA practitioner community (Montague, 2004; Morgan et al., 2012; Pisani and Sandham, 2006; Reinstein, 2010).

IA is one among many instruments for advancing sustainability and for furthering the cause of environmental and social justice. Social equity has been identified as a key element (some would say a prerequisite) of social sustainability (Boyce, 1995; Gardner and Roseland, 1989; Leith, 1995; Weaver et al., 2008). The unequal distribution of environmental hazards has become a major public policy concern (Weinberg, 1998; Albrecht, 1995). The recognition that the proposals assessed through IA requirements can exacerbate such inequities has resulted in initiatives to integrate environmental justice concerns into U.S. IA requirements.

IA does not operate in a vacuum. It is inevitably influenced by "the rights revolution," by debates concerning the role of justice in public policy, and by alternative characterizations of human and natural environmental relationships (Ignatieff, 2000; Chase, 1990; Etzioni, 1995; Rawls, 2001). Often these debates are or could be framed in ethical terms. Applied fields, such as IA, environmental management and planning, increasingly draw upon ethical theory to more systematically and explicitly explore and apply ethics in public policy (Harper and Stein, 1992; Finsterbusch, 1995; Beatley, 1989).

It is evident from the above that ethics is and should be a central attribute of IA practice. The question then is how best to proceed from the recognition of the role of ethics in IA to its full integration into the IA process.

10.4 SELECTING THE MOST APPROPRIATE ROUTE

10.4.1 Definitions

Ethics is a branch of philosophy concerned with the moral rules, principles, and standards that govern conduct. Ethics

depend on values. IA is a prescriptive field of practice. Therefore, *normative ethics* (which seeks to arrive at moral conduct standards) and *applied* or *practical ethics* (which study specific practical problems and involve a commitment to action) are especially relevant. Moral obligations represent the kind of "ought" statements, which tell us how to behave within a framework of valued social norms and conventions (Jasonoff, 2003). They guard against arbitrary and unreasonable decision making (Jasonoff, 2003). This chapter focuses on integrating ethical principles and standards into the IA process.

Judging from the criticisms of IA practice, the ethical concepts—equity, fairness, justice, rights, and duties—seem especially pertinent. *Equity* concerns treating people impartially (i.e., treating everyone in the same way). *Fairness* involves treating people reasonably, consistent with moral rules or standards. *Justice* is concerned with moral rightness (an end). Justice also involves determining rights and administering rewards and punishments (a means). *Rights* are the expression of values to which people have a moral and sometimes legal claim. *Duties* or responsibilities represent a moral and sometimes legal obligation from one person to another.

As illustrated in Figure 10.1, these five ethical concepts are highly interrelated. Each concerns moral principles and standards of human conduct. Each involves judgments regarding right or wrong behavior. Equity, justice, and fairness are commonly used interchangeably. Although their meanings clearly overlap, there also are distinct differences. Equity, for example, could be viewed as a subset of fairness (i.e., equity is not the only standard of fairness). Fairness, in turn, could be considered a subset of justice (i.e., fairness is not the only standard of justice). Justice determines and enforces rights and duties. It also represents a means to achieve equity and fairness. Rights can be a precondition to fairness, justice, and equity. Duties implement rights, fairness, justice, and equity. There are equity, justice, and fairness rights and duties.

Integrating ethical concerns into IA practice involves considering the potential role of equity, fairness, justice, rights, and duties in both the IA process (i.e., a procedural focus) and in outcomes from the process (i.e., a substantive or distributional focus). Ethical concerns can take many forms in IA practice. They can be issues, objectives, principles, criteria, standards, decision rules, or requirements. They can be integrated into methods, into planning and decision-making processes, and into organizational structures and procedures.

10.4.2 Distinctions

Ethics, even when limited to normative applied ethics, is a diverse field of theory and practice. Therefore, it is necessary to be selective regarding potentially relevant ethical distinctions, sub-fields, and concepts. Table 10.1 lists several examples of potentially relevant ethical concepts, sub-fields, and distinctions. Key characteristics and potential IA process implications are identified.

Table 10.1 demonstrates that the IA process is a forum within which practical ethics are expressed and applied. The IA process applies (or should apply) both professional and research ethics. Multiple ethical standards, principles, and decision rules are available for assessing proposed actions and for conducting IA processes. It will sometimes be helpful to apply a plurality of ethical principles, standards, and decision rules. The preferences for and the manner in which ethics are applied will vary depending on the value systems of process participants. Ethical perspectives and positions, as with values, change and evolve. Making the evolving ethical perspectives and principles of IA process participants explicit can reduce confusion and sometimes ameliorate conflict.

Ethical trade-offs and dilemmas are highly likely with multiple perspectives, values, participants, and potential ethical principles and standards. An ethical analysis should seek to identify and address ethical issues, trade-offs, and dilemmas.

Ethical principles and standards can be applied to both procedures and proposed actions. They also can be applied to individual process activities (e.g., research, significance interpretation, consultation, communications). Ethical principles and standards are likely to vary by discipline (e.g., social, political, ecological, sustainability) and by perspective (e.g., feminist, traditional knowledge). Substantive ethical principles and standards can only be determined after analyzing the potential distribution of effects over time, over space, and among social groups (e.g. by undertaking environmental justice analysis). Measures will often be necessary to prevent and offset procedural and substantive distributional inequities. Efforts to address substantive fairness and equity issues are likely to be inhibited if participants perceive the IA process to be unfair.

Part of an ethical analysis involves making the rights and duties of participants explicit. Rights extend beyond process participants to future generations and to the environment. Rights will often conflict. It is, therefore, necessary to identify and assess the implications of conflicting rights. Duties are not limited to proponents. They extend to regulators and to all process participants. Interpretations of "appropriate" duties will likely vary among participants. These varying interpretations also need to be explored.

An ethical analysis can build from ethical codes of practice, applied research ethical principles, natural justice principles, and efforts to integrate social and environmental ethics into corporate planning. Practice-based precedents, such as environmental justice initiatives and the application of substantive equity principles could be particularly relevant. Many useful concepts, principles, and distinctions can be culled from applied ethics literature, especially efforts in directly related fields of practice such as environmental management and planning. Varying conceptions of the role of ethics within broader integrative frameworks and

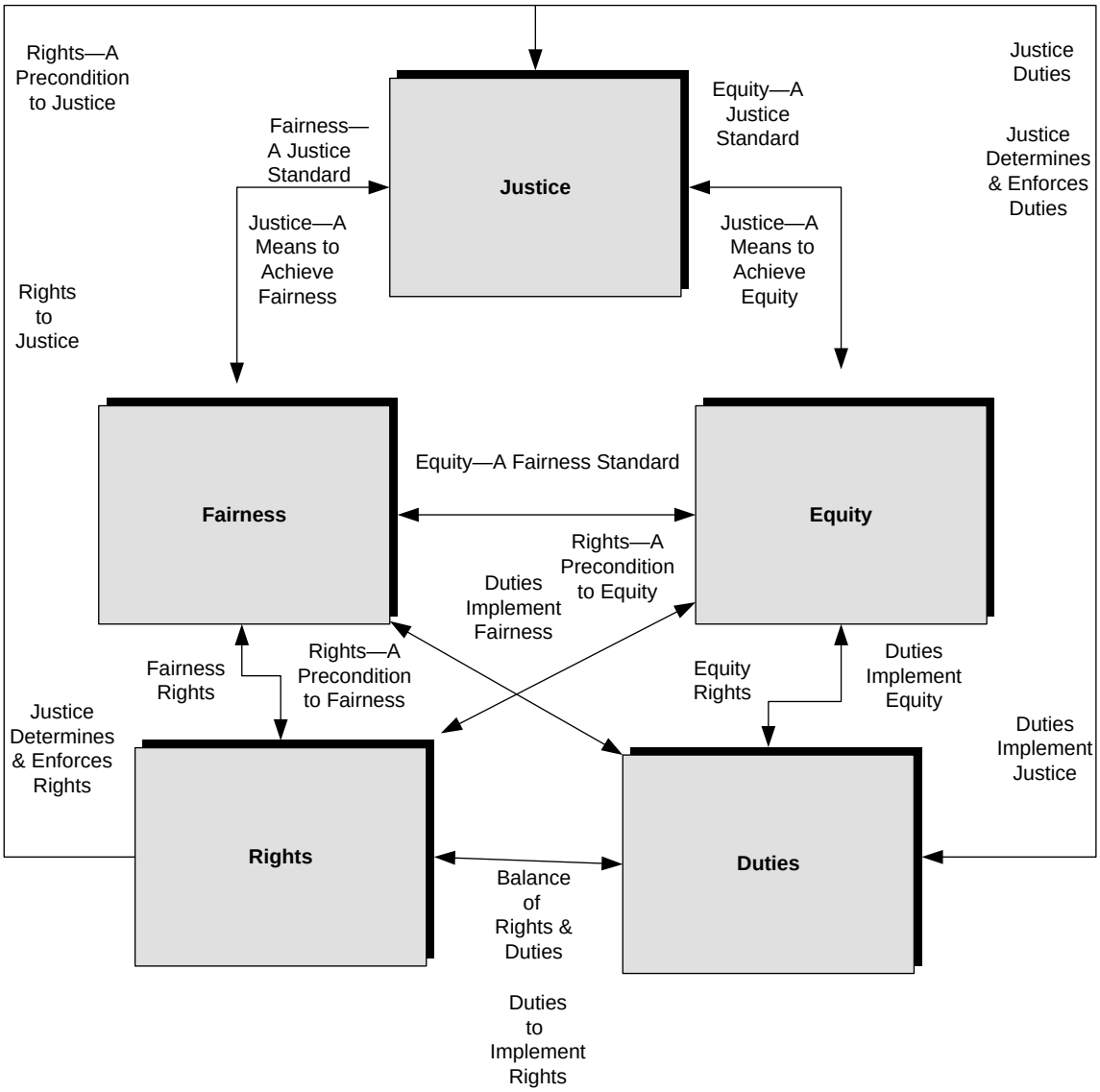

Figure 10.1 Examples of interactions—justice, fairness, equity, rights, and duties.

concepts, such as sustainability, could be especially instructive to IA process management.

10.4.3 Procedural Fairness

Procedural fairness is concerned with the fairness of the IA regulatory requirements and the IA process. It includes both how consultation with interested and affected parties is undertaken and how choices are made (Kasperson et al., 1988; Lawrence et al., 1997). Minimum standards for procedural fairness are addressed through natural justice principles (Morrison-Saunders and Early, 2008). Procedural fairness principles and standards can pertain to the rights of participants and to the duties and responsibilities of proponents, government regulators, review bodies, IA practitioners, IA team members, and process participants. Natural justice is owed to those likely to be adversely affected by a decision (Morrison-Saunders and Early, 2008). Procedural justice or fairness can contribute to the legitimacy of proposed actions (Karjalainen and Järvikoski, 2010).

IA regulatory requirements should, consistent with natural justice and procedural fairness principles, include provisions regarding such matters as adequate notice, reasonable opportunity to make representation, clear statements of actions, reasons for actions, adequate notice of right of review or appeal, and full disclosure (Morrison-Saunders and Early, 2008). All interested and affected parties have a right to effectively participate in the IA process. They also may see it as their right to be involved in designing and adapting the IA process. They are likely to be particularly concerned with timely access to all relevant information and analysis, and with timely (e.g., prior to major decisions) and adequate (e.g., sufficient time to formulate, review, and respond) involvement provisions.

Table 10.1 Potentially Relevant Ethical Concepts

Concepts	Key Characteristics	IA Implications
Practical Ethics	Addresses specific moral questions; answering a question involves making a commitment to action	IA must grapple with moral questions and involves a commitment to action
	Can entail an appeal to a relevant moral rule, the questioning of the relevant moral rule, the justification of general moral rules, or the resolution of moral dilemmas (when same action falls under two different but acceptable rules)	The decision rules that guide IA decision making, because they are value-based, are arguably relevant moral rules
		IA decision rules (moral rules) can be appealed to, questioned, and justified
		IA often involves conflicting values and moral positions; frequently, it is necessary to choose between or seek to reconcile conflicting moral rules (i.e., resolving moral dilemmas)
	Moral reasoning normally involves clear definitions, the evaluation of arguments, the analysis of social institutions, the collection of historical data, and assent to a series of prescriptions for action that the reasoning supports	The IA process is arguably a form of moral reasoning; hence IA practice can benefit from the insights and lessons of practical ethics
Deontological Ethics	Applies absolute or foundational normative standards, duties, or principles of moral conduct (irrespective of consequences)	Participants in IA processes often judge proposed actions based on absolute standards (e.g., nuclear power or clear-cutting unacceptable)
	Duty based (e.g., duties applicable to every situation)	Absolute standards can be useful in screening
		Also helpful in understanding basis for stakeholder positions and in determining proponent duties
Teleological or Consequentialist Ethics	Normative principles of choice	Implicit in much of IA practice
	Rightness or wrongness of an action depends on the consequences of the action (total good consequences outweigh the total bad consequences)	Tendency in IA to focus on minimizing the negative rather than on comparing total good versus total bad or on maximizing benefits
	Utilitarianism is a form of teleological ethics (the public good is the sum of all preferences or the greatest good for the greatest number)	Once explicit, can recognize limitations with utilitarian approach and potential benefits of applying other normative standards
Rawlsian Ethics	Right to extensive system of basic liberties (restrictions to liberty for sake of liberty of others)	Explicit consideration of distribution of costs and benefits by social group
	Equality of opportunity	Rationality contested; IA within a world of discursive and deliberative democracy
	Protect resources for future (just savings)	A moral rule consistent with focus on environmental and social justice (maximize utility of worst off)
	Greatest benefit to the least advantaged	Combines consideration of social justice, liberty, and resource protection
	Lowest cost to least advantaged	
Libertarianism	Elevates individuals and their rights above all others	Tendency, especially for public proposals, to assume that greater "public interest" should always prevail over individual rights
		Points to need to consider, and, to the extent practical, minimize losses of individual rights and freedoms
Natural Justice	Legal principles that collectively constitute procedural fairness in administrative decision-making	Natural justice principles should never be compromised in IA
	Applies to a person with rights at issue	IA should specifically address need for natural justice when new information arises that may be significant for decision-making
	Legal examples—right to ruling free of bias, right to a fair hearing, right to due notice, right to be heard when might be adversely affected, right to know case against, right to judgment based on evidence, how evidence was used is communicated	IA-related examples—adequate notice, reasonable opportunity to make representation, clear statement of action, reasons for action, adequate notice of right of review or appeal, full disclosure, unbiased IA analysis
		Natural justice owed to those likely to be adversely affected by a decision
		Should include credible and effective grievance mechanisms

Table 10.1 (*Continued*)

Concepts	Key Characteristics	IA Implications
Environmental Justice Analysis	Occurs when communities or segments of communities bear a disproportionate burden of negative externalities Includes distributional analysis of winners and losers and of benefits and burdens Complex—can ameliorate, generate, or sustain conflicts; inevitably normative and political	Environmental justice should be fully described and analyzed Emphasizes well-being and vulnerability of underrepresented and disadvantaged populations Takes into account cumulative environmental injustices Examples of methodological issues—procedures for selecting populations, choice of variables, health and well-being indicators, spatial analysis (e.g., GIS) and comparison areas, statistical methods, interpretations
Discourse or Communicative Ethics	Seeks to counteract misinformation Seeks to ensure procedural fairness	Recognizes that IA is a dialogue among interested and affected parties Recognizes need to minimize communications distortion and to facilitate procedural fairness
Procedural Fairness or Equity	The fairness of consultation and choice procedures Seeks to enhance democratic decision-making processes	Provides a basis for determining when procedures are unfair and for formulating and applying rules and measures to prevent and offset May require additional measures to facilitate the involvement of traditionally underrepresented groups and organizations
Critical Ethics	Focuses on inequalities in the distribution of power and knowledge as a catalyst for action	Recognizes power inequities as component of an ethical analysis; inequities can be exacerbated by proposed action (e.g., centralization of authority) Provides a basis for efforts to reduce and offset political inequities
Communitarian Ethics	Focuses on the normative values of and control by local communities Normative values arise from the community	IA proposals can inhibit or enhance local empowerment Local control (e.g., voluntary communities) one approach to the siting of "locally unwanted land uses"
Egalitarian Ethics	Stresses the need to treat people equally and for those who receive the benefits to accept the burdens Merit of action dependent on whether the process distributes basic rights and duties justly and equitably	The unequal distribution of benefits and burdens is a recurrent issue Provides a basis for identifying and, where practical and appropriate, preventing or offsetting inequities
Distributional or Outcome Equity or Fairness	Focuses on the distribution of resources, benefits, and costs over time, over space, and among social groups	Distributional inequities is a recurrent issue Provides a basis for identifying and, where practical and appropriate, preventing or offsetting inequities Consistent with social and environmental justice Seeks just outcomes
Research Ethics	Concerned with the ethical standards applied in natural and social science research	IA is a form of applied research Many research guidelines available A particular concern when undertaking research involving indigenous peoples
Professional Ethics	Concerns conduct of professionals in practice Codes of conduct applied by specific professions such as planners, engineers, scientists, environmental managers, and IA specialists	Many professions involved in IA process Professional codes of conduct facilitate ethical behavior Codes of conduct for environmental professionals conducive to good environmental practice
Environmental Ethics	Concerned with the moral basis of environmental responsibility Extends ethical rights to other organisms and to ecological communities Ecocentric perspective	Ethical responsibilities to environment a central attribute of IA practice Helpful perspective in assessing environmental and impact significance
Feminist Ethics	Focuses on women's issues and women's moral reasoning Emphasizes responsibility, obligation, and care more than rights, rules, and justice	Consistent with a discursive, inclusive, relational, nonexploitive and nonmanipulative IA process Helpful model for integrating ethical with technical Useful perspective on balancing rights and duties in fair processes

(*continued*)

Table 10.1 (*Continued*)

Concepts	Key Characteristics	IA Implications
Sustainability Ethics	Responsibility of current generations to future generations; includes intragenerational ethics Ethics on a global scale Distributional equity—a key element of social sustainability Requires socioecological civility and democratic governance	Provides a framework for integrating ethical with other decision making considerations Extends distributional analysis to include rights of and responsibilities to current and future generations Integrates explicit limits, criteria and trade-off rules Addresses social equity and sustainability links Broadens IA temporal and spatial perspectives Encompasses human and nonhuman needs and wants
Ethical Pluralism	Addresses ethics from multiple perspectives using multiple methods and standards	A range of ethical perspectives, methods, and standards could be used to assess options Conflicting ethical standards and perspectives are possible and can be addressed through the IA process

Sources: Beatley (1989), Bond and Morrison-Saunders (2011), Burdge (2004), Connelly and Richardson (2005), Cronin (1993), Erikstad et al. (2008), Etzioni (1995), Finsterbusch (1995), Forester (1989), Gardner and Roseland (1989), Gibson (2006a, 2011), Harper and Stein (1992), Hendler (1994), Hermans and Knippenberg (2006), Howe (1990), IFC (2009), Jackson and Illsley (2007), Kasperson et al. (1984), Kreig and Faber (2004), Lawrence et al. (1997), MacNiven (1982), McCluskey and João (2011), Morrison-Saunders and Early (2008), Patton and Sawicki (1993), Rawls (1971, 2001), Richardson (2005), Rose et al. (2005), Rowan (2009), Taylor (1986), Walker (2010), Walker et al. (2005).

IA practitioners must avoid conflicts of interest and their analyses must be unbiased (Werling and Turner, 2010). Rights also concern the "ground rules" for participating in and withdrawing from the process. They can extend to how participants are treated, to how their knowledge is incorporated into the process, and to the provision of grievance mechanisms (Smith and Schin, 2004). Procedural rights can vary among social groups. Specific provisions may be necessary to meaningfully involve; to offset procedural inequities; and to respect the rights, knowledge, and perspectives of disadvantaged groups, traditionally underrepresented groups, and indigenous peoples (Booth and Skelton, 2011a; CIER, 2009; IAIA, undated b; Lajoie and Bouchard, 2006; O'Faircheallaigh, 2009; Whitelaw et al., 2009). Sometimes it will be necessary to address historical inequities at the outset before some parties will accept the process and its outcomes as potentially legitimate.

Proponents and IA team members have a duty to establish a clear and understandable IA process. Time frames should be reasonable. The need for the proposed action should be established. Reasonable alternatives should be considered. Assumptions, interpretations, conclusions, and recommendations should be explicit and substantiated. The IA process has a role in redressing procedural inequities (e.g., ensuring that the interests of disadvantaged groups are influential and reflected in outcomes) (Connelly and Richardson, 2005). The proponent and team members, together with the IA process, should be sufficiently flexible to adjust to changing circumstances and to adapt to language and cultural variations. They should respond to the concerns and suggestions of other process participants. They should respect the rights and values of other participants. They are obliged to prevent bias (e.g., burying uncertainty, recognizing role of professional culture), to provide accurate data and analysis, to correct errors, to identify uncertainties and their implications, to comply with regulatory requirements, and to record and fulfill commitments (Duncan, 2008; Morgan et al., 2012). They should seek to remove barriers to understanding and participation. The IA team members should comply with applicable ethical codes of conduct. Grievance mechanisms should be incorporated into the IA process (Smith and Schin, 2004). The IA process and methods should be consistent with good practice standards. The IA process should be monitored and efforts made to enhance its effectiveness.

In exchange for the fulfillment of rights and duties, such as those cited above, all parties are commonly expected to participate in "good faith." They also are accountable for their actions and should maintain contact with and be accountable to their constituents. They should not engage in rhetoric or make sensational charges. Depending on the process, all parties could attempt to reach a consensus or accommodate conflicts.

It may sometimes be advantageous to formalize procedural rights and duties through written agreements. These agreements will likely evolve in conjunction with the IA process. Procedures also may be necessary to address situations where rights conflict, or where there are conflicting interpretations of duties. Appeal procedures may be needed for such matters as the timely provision of all relevant information. A commitment could be made to institute an open, fair, impartial, and independent review at the end of the IA process.

The choice and application of rights and responsibilities will vary among IA processes. A suite of good practice ethical procedural principles could evolve over time. These principles could be adapted to suit individual proposal and environmental circumstances and to meet the needs and expectations of process participants.

10.4.4 Distributional Fairness

Distributional fairness pertains to the distribution of risks, costs, and benefits over space (community/regional/state/provincial distribution, fair/unfair locations), over time (historical inequities, current, future), and among social groups (income, ethnic, indigenous peoples, class, age, other susceptible populations). It can refer to the allocation of services and resources (inter and intrageneration/receipt, fair/unfair distribution, opportunities) (Bond and Morrison-Saunders, 2011). It can concern the extent to which individual liberties and local decision-making powers are reduced or enhanced. Distributional fairness takes into account the fairness of cumulative effects; the carrying capacity; the vulnerability to change of social, economic, and ecological systems; and the overall contribution to sustainability (Dalal-Clayton and Sadler, 2004). It can help legitimize proposed actions (Karjalainen and Järvikoski, 2010).

The aggregation of distributional fairness concerns can take many forms. Total impacts and costs can be compared or net benefits to society can be determined. Both these approaches are consistent with a utilitarian ethical approach. Alternatively, net benefits by social group (e.g., gender analysis, indigenous populations, low-income populations, communities of color) and by geographic area can be determined (Burdge, 2004; Kreig and Faber, 2004; Sharma, 2010; Walker, 2010; Walker et al., 2005). The latter approach is more conducive to identifying and addressing social and environmental injustices. Environmental justice analyses, especially for vulnerable and disadvantaged segments of society, can be undertaken (Kreig and Faber, 2004; Rose et al., 2005; Walker, 2010). Fairness and acceptability determinations can be influenced by the availability of reasonable alternatives, by the potential for avoiding and mitigating inequities, by historical injustices and cumulative burdens, and by applying equity compensation measures and local benefits (Connelly and Richardson, 2005).

Distributional fairness, as with procedural fairness, involves rights and duties. Distributional rights could pertain, for example, to avoiding unnecessary adverse effects, to providing net community benefits, to reducing and mitigating adverse effects, and to compensating for significant adverse effects, which cannot be mitigated to acceptable levels. The rights of potentially affected populations to receive benefits and to avoid impacts could vary depending on the degree of potential harm, on the extent of adverse impacts already incurred, and on the degree to which the potentially affected population is socially and economically disadvantaged (Kreig and Faber, 2004).

IA, at the regulatory level, could require environmental justice analyses and provide guidance regarding the conduct of such analyses (Eccleston, 2008; McCluskey and João, 2011). The proponent and the IA study team have a duty to determine the distribution of costs and benefits and to ascertain the vulnerability of various groups. They should strive for the greatest overall benefits by geographic area and over time (Gibson, 2006a, 2011). They should seek to identify and redress historical and current burdens and hazards, to protect the interests of current and future generations, to accept the burden of proof, to emphasize enhancement, and to bear the full costs of the IA process (Connelly and Richardson, 2005; João et al., 2011; Thérivel, 2010). Benefits and unavoidable risks should be equitably shared and there should be fair access to compensation based on clearly defined and consistently applied criteria. Meeting societal needs should be viewed as a shared responsibility. Some parties could suggest that risks should only be imposed voluntarily, that the greatest benefit should accrue to the least advantaged, and that a community once selected should be assured that it will not be selected for future facilities.

10.4.5 Rights and Duties

A *right* is a claim on others that a person or a group of persons has and is enforced by law, custom, or education (MacNiven, 1982). Rights express and often give a legal meaning to values. They tend to highlight some injustices (e.g., barriers to access to information) and to devote less attention to others (e.g., economic inequities). They protect our right to be equal (e.g., equal protection under the law) and to be different (e.g., minority rights). Privileges are possible within a rights system (e.g., affirmative action). Rights help determine what is right. Rights often conflict. However, rights systems tend to provide a means of adjudicating rival claims. Rights and duties have a reciprocal relationship. Each right entails an obligation (Ignatieff, 2000). The appropriate balance between rights and duties is often highly contentious, with competing claims centered on different notions of justice (Walker, 2010). The IA process is one among many forums within which rights and duties are expressed and applied. SIA has made a particular effort to integrate rights (e.g., fundamental human rights, right to equal justice, right to live and work in an environment conducive to good health) and duties (e.g., polluter pay, cost internalization, prevention, multisectoral integration) into its procedures and practices (Vanclay, 2003).

An ethical IA process determines and applies rights and duties. As highlighted in Table 10.2, there are various types of rights (rights about). Rights are possessed by different segments of the population (rights of) (e.g., rights of indigenous peoples) (IAIA undated a). Rights address a range of concerns (rights to). Different parties exercise duties (duties by). The duties concern specific subjects (duties about). There are those who benefit from the conscientious application of duties (duties to). Rights and duties are often expressed as principles (e.g., intergenerational equity, precautionary principle, enhancement of marginalized groups, recognition and preservation of diversity) (Vanclay, 2003).

Rights can be possessed by, for example, proponents, communities, indigenous people, consumers, workers, landowners, and governments. Rights can be extended to the

Table 10.2 Examples of Rights and Duties

Rights		
Rights to	Rights About	Rights of
Basic needs	Fundamental freedoms	Proponents
Fundamental human rights	Health and safety	Regions and communities
Information	Democratic principles	Indigenous peoples
Consultation	Community notification and involvement	Consumers
Legal protection	Legal requirements	Workers
Free, prior, and informed consent	Social concerns	Landowners
Liberty	Economic concerns	Interested and affected parties
Equal justice	Equality of access and treatment	Governments
Continued resource use	Minority populations	Future generations
Diversity	Traditional activities	Environment
Coexistence	Resource use	
Privacy	Ecological integrity	
Health and safety	Environmental quality	
Fair treatment	Mitigation and compensation	
Self-determination and consent		
Language and culture		

Duties		
Duties to	Duties About	Duties of
Other governments	Health and safety	Proponents
Indigenous peoples	Environmental stewardship	Governments
Regions and communities	Planning and decision making	IA practitioners
Workers	IA process design and management	Professionals
Knowledgeable individuals	Information access	Researchers
Nongovernmental organizations	Notification	Current generation
Constituents	Consultation	Nongovernmental organizations
Field of practice	Preventing and paying for pollution	Participants in the IA process
Environment	Internalizing costs	
Current generations	Legal liabilities	
Future generations	Research procedures	
	Institutional controls	
	Training and employment	
	Compensation	
	Local benefits	
	Risk and uncertainty management	
	Treatment of rights	
	Treatment of risks and uncertainties	
	Work and living environment	
	Treatment of historical grievances	
	Respect of culture and values	
	Sustainability	

environment and to future generations. There are basic or fundamental human rights and freedoms. Rights can, for example, concern such matters as health and safety protection, the application of democratic principles, compliance with legal requirements, social and economic concerns, the equality of access or treatment, responsibilities to minority populations, the continuation of traditional activities, the mitigation of and the provision of compensation for adverse effects, the protection of renewable and non-renewable resources and the maintenance and enhancement of environmental quality and ecological integrity. Rights can apply to such matters as how basic human needs are to be fulfilled, information is to be shared, consultation activities are to be conducted, decisions are to be made, personal freedoms and privacy are to be maintained, continued resource use is to occur, and safety is to be assured. Rights might concern how parties are to be treated fairly, how their languages and culture are to be protected, how they are to coexist, and how they are to continue to determine their own futures.

Many parties could have duties in an IA process including, for example, proponents, governments, professionals, researchers, nongovernmental organizations (NGOs), and

individuals. The duties could be directed toward governments, communities, workers, NGOs, constituents, fields of practice, the environment, and future generations. The duties could concern how health and safety is to be determined and protected. They could relate to environmental objectives and performance standards, to responsibilities to prevent and pay for pollution, to internalizing costs, and to contributing to sustainability. They might pertain to the design and application of the IA process, including, for example, information generation and sharing, public consultation, research procedures, and respect for culture and values. Duties often extend to organizational obligations regarding such matters as legal liabilities, training and employment procedures, compensation and local benefits procedures and policies, social and environmental performance standards, and risk and uncertainty management standards and procedures.

Additional rights and duties are likely to be needed when indigenous peoples are involved in the IA process. These latter duties could involve such matters as legal duty to consult with indigenous people; respecting self-determination goals and aspirations (i.e., free, prior, and informed consent); respecting treaty rights and indigenous property and resource rights and sovereignty; seeking to preserve the culture, identity and way-of-life of indigenous people; recognizing the uniqueness and cultural heritage of each indigenous group; taking in account indigenous perspectives and worldviews; treating traditional knowledge and western knowledge with the same respect; adapting planning, decision making, and research procedures (e.g., community-led capacity building, land-use planning and resource comanagement); negotiating on a government-to-government basis; ensuring indigenous control of SIA; redressing procedural inequities (e.g., participant funding); and providing compensation and local benefits to help indigenous people advance their own goals (Booth and Skelton, 2011a; CIER, 2009; IAIA, undated a; Landry et al., 2009; Lajoie and Bouchard, 2006; Noble, 2009b; O'Faircheallaigh, 2009; Whitelaw et al., 2009).

10.4.6 Professional Ethics and Accreditation

Ethical issues and dilemmas frequently occur in IA professional practice. They often arise regarding the procurement of IA services (e.g., who appoints? who pays?), and concerning the nature and boundaries of professional competency (Birley, 2007; Fuggle, 2005b). IA professionals must decide whom they are accountable to (e.g., self, employed staff, clients, the profession, society, the environment) (Fuggle, 2005b). They must deal directly and explicitly with value and interest-related issues (Woodward, 2003). On occasion, for example, IA practitioners have been known, because of a higher obligation to their profession and the environment, to ally themselves with NGOs by leaking information (Craik, 2008).

IA practitioners need to stay within the limits of their professional competency (Birley, 2007; Taylor et al., 2004). They must retain their independence, avoid conflicts of interest, and provide analysis and advice based on good practice rather than just regulatory compliance (Morgan et al., 2012; Ross and Thompson, 2002; Werling and Turner, 2010). They need to resist the urge and pressure to "be team players," which, in effect, means the propensity to, for example, minimize direct impacts, ignore or obfuscate indirect and cumulative impacts, and dismiss alternatives, concerns, assertions, and complaints raised by groups and the public (King, 2012). They have an ethical responsibility to keep abreast of and contribute to their field (e.g., by networking with other environmental professions, by ongoing training, through applied research, by keeping up with the IA literature, by participating in the activities of and adapting the resources of professional organizations such as IAIA and the NAEP), and by ensuring that that they fully understand the institutional and environmental context (and associated implications) within which they operate (Reinstein, 2010). They should contribute to "raising the bar" of IA practice, such that the IA knowledge base is enhanced (i.e., theory building), the gap between IA theory and practice is narrowed, the IA approaches and methods utilized are appropriate to the setting, knowledge is effectively shared and actions coordinated (e.g., the use of partnering agreements), and the procedural (e.g., more inclusive and transparent decision making) and substantive ends (e.g., sustainability) of IA are advanced (Morrison-Saunders and Bailey, 2009; Weaver et al., 2008). Table 10.3 (prepared by Richard Fuggle on behalf of the IAIA) provides an overview of the role of ethical matters in IA practice, cites examples of ethical dilemmas and possible solutions, and outlines examples of good practices.

Professional accreditation is an often-suggested mechanism for enhancing the competency of IA professionals. Professional accreditation encompasses such matters as the mandatory registration or certification of IA professionals, the potential exclusive use of professional titles, the potential exclusive right to practice, standing as expert witnesses before courts and tribunals, a code of conduct, the accreditation of institutions of higher learning, accredited training and outreach opportunities, complaints review and professional misdemeanor procedures, formal links to related fields, good practice guidance, knowledge and experience sharing, and government oversight (Reinstein, 2010). The International Association for Impact Assessment (IAIA) and the National Association for Environmental Professionals (NAEP) are part way down this path (e.g., codes of conduct, membership qualifications, promotion of good practices, the promotion of knowledge sharing and outreach, training opportunities). Of particular note, the IAIA formulated and broadly distributed "Guideline Standards for IA Professionals" (IAIA, 2010). Adopted by the IAIA Board of Directors in October 2010, these qualitative performance standards address such themes as code of conduct, education and training, experience, understanding of IA methods, IA study management, sustainable development, IA administrative systems,

and professional development and mentoring for varying levels of IA practitioners and IA administrators.

Professional accreditation is considered desirable because it clearly distinguishes between qualified and unqualified practitioners, and between acceptable and unacceptable conduct standards (Reinstein, 2010). It clarifies the ethical obligations and responsibilities of practitioners (Fuggle, 2005b). It enhances the likelihood that the IA will be conducted by qualified personnel (Taylor et al., 2004). It provides the opportunity for the third-party auditing of the professional system, and of the conduct of individual practitioners (Van Der Vorst et al., 2010). It builds on accreditation models from related fields (e.g., planning, EMS) (Van Der Vorst et al., 2010). It makes it possible for IA practitioners to draw upon the wisdom of an entire profession, as exhibited through conference proceedings, journal publications, newsletters, viewpoints, mentors, training opportunities, and other resources (Looney, 2011; Pisani and Sandham, 2006). It underscores the necessity of continuing education, provides an opportunity for independent oversight, and enhances the likelihood of a higher standard of professional competency (Birley, 2007). For IA practitioners it formally recognizes competency, facilitates career choices and mobility, provides easier access to indemnity insurance, enhances professional credibility, provides opportunities for interaction with other environmental professionals, and assists in providing a due diligence defense (Shippey, 2004). For the environment industry, it fosters professional recognition; contributes to public confidence in the advice provided; harmonizes professional standards;

Table 10.3 Professional Ethics in IA—FASTIPS # 2 (April 2012)

The Social Contract

The social contract between impact assessment professionals, civil society, and decision makers is that impact assessments will be conducted with integrity and will be free from misrepresentation or deliberate bias.

Ethics in IA

Ethical considerations are important in impact assessment, as pressure can be applied to professionals to disregard the tenets that underpin good impact assessment. Good impact assessments enhance the free flow of complete, unbiased, and accurate information to decision makers and affected parties. Impact assessments address broad social and health rights as well as issues of sustainability and biodiversity. Consideration of all pertinent matters and respect for human rights and human dignity must underpin all assessments. Nevertheless, stakeholders (proponents, clients, donors, employers) sometimes want impact assessments to emphasize their position, possibly underplaying or overplaying certain elements. Failure to comply with pressure to sway the conclusions of the assessment may result in losing a contract or future work. The party paying for the assessment may also refuse to meet the costs of work that is necessary for a full and balanced impact assessment, forcing the professional to make an ethical decision. The FASTIPS that follow are intended as a reminder to impact assessment professionals that they have a duty of care to both present and future generations and that the assessments they undertake are to serve the interest of society through facilitating decisions that are equitable, sustainable, and accurate.

Examples of Ethical Dilemmas in IA	Things You Can Do When Faced with Such Dilemmas	Five Important Things to Know	Five Important Things to Do
Impact assessment professionals are faced with an ethical dilemma when - The terms of reference for the assessment unreasonably constrain the study - Pressure is exerted to limit the scope of the assessment or to influence the results - Clients, authorities, or affected parties refuse to engage with a study - Budgetary limitations affect the ability to conduct an adequate analysis or adequately engage all appropriate stakeholders - The time allocated for the assessment is inadequate for a proper study	Do not suppress or hide your sense of unease; discuss the matter with your manager, or if you are the principal, with a trusted and respected colleague or mentor Show the party that is causing the unease a copy of the IAIA Code of Professional Conduct and point out to them how their request, expectation, or assumption is at odds with the ethical code of your profession	**1.** The social contract between impact assessment professionals and civil society and decision makers is that (a) impact assessments will be conducted with integrity and will be free from misrepresentation or deliberate bias, and (b) impact assessments will respect citizen rights to participate in decisions that affect them **2.** An impact assessment professional's beliefs and cultural preferences must not interfere with the fair representation of the potential impacts of policies, plans, programs, and projects. It is also improper to advance private interests to	**1.** Be open and honest with yourself, your clients, and the public. Conduct your professional activities with integrity and professionalism, free from any misrepresentation or deliberate bias **2.** Conduct your professional activities only in subject areas in which you have competence through education, training, or experience. If asked to undertake work outside your field of competence, you should subcontract to, or work together with, other professionals who do have the competence you lack **3.** Take care that your professional activities promote sustainable and equitable actions

Table 10.3 (*Continued*)

Examples of Ethical Dilemmas in IA	Things You Can Do When Faced with Such Dilemmas	Five Important Things to Know	Five Important Things to Do
- There is a request not to undertake certain specific specialist studies - It is suggested that they emphasize or exaggerate, omit, or not disclose certain topics - Requests are made to change words or the emphasis in draft reports that could be seen as a change in interpretation with which the assessor does not concur - They become aware of inaccurate reporting by clients, sub-consultants, government agencies, NGOs, donors, or the public - All or part of their remuneration is conditional on project approval - There is a request to issue either a favorable or critical review of a completed assessment - They are asked to assess a project in which they have a financial or personal interest or that will affect them directly	Do not be tempted to accept a compromise that remains in conflict with your code of professional conduct. Remember, a reputation for integrity and for making accurate honest assessments takes time to build but can be quickly lost	the detriment of the public, clients, or decision makers **3.** Impact assessment professionals should seek sustainable and equitable outcomes from human actions that affect ecosystem and social functions and have due regard to the rights and interests of future generations. As different groups in society experience benefits and harm in different ways, impact assessments should strive to promote equitable access to, and use of resources **4.** Impact assessments must be conducted and implemented in a manner that averts infringement of the human rights of any section of society and does not condone the use of violence, harassment, intimidation, or undue force **5.** Impact assessment professionals must strive for excellence by maintaining and enhancing their own knowledge and skills, by encouraging the professional development of coworkers, and by fostering the aspirations of potential members of the profession	**4.** Refuse to provide professional services whenever you are expected to exclude reasonable alternatives from assessment, favor specific alternatives, omit or distort facts, or bias your analysis to arrive at a predetermined result **5.** Disclose all personal or financial interests that could reasonably raise concerns that there may be a conflict between your private and your professional interests

Further Reading:

1. IAIA Professional Code of Conduct and Ethical Responsibilities (www.iaia.org/about/mission-vision-values.aspx).
2. Baines, J. T., and C. N. Taylor, in F. Vanclay and A. M. Esteves, eds., "Ethical Issues and Dilemmas," *New Directions in Social Impact Assessment: Conceptual and Methodological Advances*, Edward Elgar, Cheltenham, 2011, pp. 96–113.
3. Chadwick, R., ed., *Encyclopaedia of Applied Ethics*, Vols. 1–4, Academic Press, San Diego, 1998, especially chapters by T. Airaksinen (Professional Ethics), R. E. Spier (Science and Engineering Ethics, Overview), M. Jarvela et al. (Environmental Impact Assessment).
4. Fisher, R., "Anthropologists and Social Impact Assessment: Negotiating the Ethical Minefield," *The Asia Pacific Journal of Anthropology* **9** (3), 231–242 (2008) (http://dx.doi.org/10.1080/14442210802251670).
5. Howitt, R., "The Importance of Process in Social Impact Assessment: Ethics, Methods and Process for Cross-Cultural Engagement," *Ethics, Place & Environment* 8(2), 209–221 (2005) (http://dx.doi.org/10.1080/13668790500237336).
6. Vanclay, F., "International Principles for Social Impact Assessment," *Impact Assessment & Project Appraisal* 21(1), 5–11 (2003).

Prepared by Richard Fuggle, with significant input from Frank Vanclay, Rita Hamm, and Charlotte Bingham (www.iaia.org) for International Association for Impact Assessment.

promotes the export of professional practice; promotes environmental knowledge and awareness; advances ethical and competent environmental practice; helps define minimum education, experience, and core competency standards; and encourages members to meet those standards (Shippey, 2004).

IA professional accreditation, however, is not without potential drawbacks, uncertainties, and dilemmas. Professional accreditation may hamper IA quality and effectiveness if the necessary resources (e.g., training programs) and infrastructure are not in place. Valid questions can be raised regarding whether professional accreditation is in the public

interest because it raises professional standards or it could be argued that it inhibits competition and unduly restricts practice. The nature of IA, as a field of theory and practice, also raises issues. For example, does an amorphous, interdisciplinary field that encompasses multiple IA types, varies greatly depending on context, is far from settled regarding good practice standards and effective outcomes, and is evolving rapidly lend itself to formal practice requirements and standards (Morgan et al., 2012)? What roles should proposal type and regional/local experience assume in accreditation? How should accreditation requirements be varied for different IA types, and from country-to-country (Pisani and Sandham, 2006)? Should IA accreditation be connected to other forms of environmental management or subsumed under the umbrella of broader environmental management organizations? These issues have been faced, and addressed in varying ways by other interdisciplinary fields of theory and practice—planning, for example. To hold back from scrutinizing and, where appropriate, applying accreditation procedures creates the potential to inhibit the credibility and professionalism of IA practitioners and challenges the relevance of IA as a potentially effective environmental management tool.

10.5 INSTITUTING AN ETHICAL IA PROCESS

10.5.1 Management at the Regulatory Level

The four jurisdictions (the United States, Canada, Europe, and Australia) all address ethical issues, as highlighted in Table 10.4, although rarely as explicit ethical principles and obligations. They tend to spell out (in varying levels of detail) the IA process-related responsibilities of the proponent and government. All four jurisdictions require the interpretation of the significance of impacts and offer guidance regarding significance determination criteria and procedures. They generally address public procedural rights to the extent of including minimum public notification and access to information and public involvement requirements. These requirements are not generally portrayed as rights. There has been a general move in each of the jurisdictions to facilitate the involvement of disadvantaged groups, and to take into account the rights, knowledge, culture, and traditional activities of indigenous people.

Overall, the regulatory approaches in the four jurisdictions fall well short of the measures described in the previous chapter sections. There remains some latitude for more specific procedural and distributional fairness provisions. Such provisions might have a "harder edge" if they were described in terms of rights and duties, perhaps along the lines of and extending from the Australian legislation. The approaches employed for consultation with indigenous peoples in Canada, the United States, and Australia could be compared. It could be worthwhile to adopt a more formalized approach to equity impact assessment and to access to information, decision making, and justice rights, as has occurred in Europe. It might be advantageous to formalize the requirement to undertake a fairness distributional analysis, as has occurred in the United States. Such distributional analyses could be more broadly defined. As IA requirements move toward a greater emphasis on sustainability, it could be necessary to introduce specific provisions concerning the rights of future generations. The stress placed on local benefits in northern Canada seems to have the potential for broader application.

Some potentially interesting ethically related measures, introduced in individual jurisdictions, are worthy of review for potential application elsewhere. Examples include environmental justice requirements (United States), scientific and information integrity requirements (United States), participation funding (Canada), public access rights to information, public participation and justice (Europe), the treatment of the rights of future generations (Australia), and an auditing of professional environmental practice role by government (Australia). The issues surrounding IA accreditation, codes of conduct and the auditing of quality of practice, as raised in Australia, Europe, and the United States, are clearly worth further exploration. The ethical implications of measures to make IA requirements more efficient and focused in all four jurisdictions should be carefully scrutinized for ethical implications.

The approaches being applied in the four jurisdictions offer some worthwhile insights regarding significance determination approaches. The Australian approach points to the value of each regulatory level explicitly and systematically identifying its environmental priorities. The European and American approaches point to the need to explicitly identify significance criteria and procedures, while maintaining sufficient flexibility for contextual adjustments. The Canadian and European approaches underscore the need to focus on those settings and types and scales of projects likely to induce significant adverse effects. At the same time, they point to the potential dangers of equating proposal scale and type with significance, and the potential inconsistencies and gaps in application associated with selective definition of effects and potential participants, the assumption of equivalency among IA levels, and a high degree of discretion in the application of IA requirements.

The broader application of ethically related measures, applied in individual jurisdictions, could, on first inspection, be very appealing. However, each measure should be fully evaluated for effectiveness. Care should be taken to ensure a match between approach and context. But there is a danger in too much precision at the regulatory level. The interested and affected parties vary among proposals and settings. IA processes frequently involve a negotiation of procedural and distributional rights and duties. These negotiations occur both between proponents and regulators and among interested and affected parties. It could be worthwhile, in many cases, to formalize such negotiations. In this way, confusion can be minimized and conflict contained. The establishment

Table 10.4 Positive and Negative Ethical Examples at the Regulatory Level

United States	Canada	Europe	Australia
(+) Detailed IA-related environmental justice requirements and guidelines; requirements pertain to the potential for disproportionately high and adverse impacts on minority populations, low-income populations and Indian tribes (+) Individual departmental environmental justice strategies (US DOE, 2007) (+) Required to investigate the direct, indirect, and cumulative environmental justice effects on communities (+) EPA—agency created mapping tool aimed at identifying "environmental justice" hot spots (McArdie, 2012) (+) Executive orders address notice, consultation, and coordination with Indian tribal governments, environmental justice, and the protection of children from health and safety risk (+) Required notice to Indian tribes when effects may occur on reserves (+) A recent Presidential memorandum and follow-up guidance stress the need for scientific integrity in government activities (+) Requirement—full and fair disclosure of significant direct and indirect environmental impacts (+) Significance determination on a case-by-case basis considering context and intensity; regulations define context and specify intensity factors (e.g., unique environmental characteristics, risk and uncertainty, quality of environment, cultural or historical significance, endangered species or habitat, cumulative effects, controversy, legal compliance)	(+) EA and panel must consider likelihood of significant adverse environmental effects (+) Participant funding for designated projects (+) Guidance and extensive sponsored research on significance in EA (+) Requirements, guidelines, and related sponsored research stress the need to promote coordination and communications with aboriginal people; to assess impacts on the traditional use of land and resources by aboriginal people; to fully consider heritage impacts; to take into account aboriginal traditional knowledge; to respect aboriginal rights, values, and worldviews; to facilitate the meaningful involvement of aboriginal people; and to consult with aboriginal people on policy issues (+) Provides for assessments by band councils (+) IA requirements in the northern territories of Canada stress the need for proposed actions to optimize benefits for northern residents and communities (+) Local benefits guidance (EISC, 1999) (+-) Decision making takes into account potential for significant adverse effects and if such effects justified (−) Potential for procedural and outcome fairness being undermined by such measures as limiting involvement in National Energy Board hearings to interested parties (directly affected or having relevant information or expertise), the elimination of the mediation option,	(+) Proposed Project Directive (PPD)—when determining whether significant environmental effects likely should identify relevant criteria and information; required to take into account Annex III criteria; state how taken into account; reasons for requiring or not requiring an EIA; specify mitigation measures and make available to public (+) PPD—more detailed criteria should be taken into account when determining significance of environmental effects (e.g., projects affecting valuable natural resources, proposals for environmentally sensitive locations, projects with potentially hazardous or irreversible effects) (+) PPD—requirement that developer shall ensure environmental report prepared by accredited and competent experts or verified by accredited and technically competent experts and/or committees of national experts; qualification determination by Member States (+) PPD—requirement that if it will have adverse environmental effects must consider with authorities whether report should be modified, and need for additional mitigation/ compensation (+) PPD—Annex IV provisions—description of likely significant effects should cover direct and indirect, secondary, cumulative, transboundary, short, medium, long-term, permanent and temporary, positive and negative effects; measures to prevent, reduce, and where possible, offset significant adverse effects and proposed monitoring measures, including postproject analysis of adverse environmental effects (+) SEA—required to assess likely significant adverse effects and reasonable alternatives; criteria for determining significance provided (Annex II)	(+) Several requirements to accommodate the traditions, needs, and knowledge of indigenous people; reference made to promoting a cooperative approach with aboriginal people (+) Stresses that native title rights will not be affected (+) Addresses the rights (including principles of ecologically sustainable development and the rights of future generations) and duties of various parties (+) Explicitly defines matters of national environmental significance; detailed requirements and guidance are provided for each matter of national environmental significance (Australian Government, 2009a) (+) Policy statement—significant impact guidelines (+) Act lists principles of ecologically sustainable development including explicit reference to intergenerational equity (+) Recent review of the Australian legislation recommended that the Australian government, in consultation with the environmental and planning consulting industry, develop an industry code of conduct for IA consultants and audit (Australian Government, 2011d) (±) Government did not see code of conduct as necessary; cross-referenced Certified Environmental Practitioner Program (Environmental Institute of Australia and New Zealand—a professional body of environmental

(*continued*)

Table 10.4 (*Continued*)

United States	Canada	Europe	Australia
(+) Desirability is stressed for IA training and the accreditation of environmental professionals, through the National Association of Environmental Professionals (NAEP) (Eccleston, 2008) (+) Guidelines for ensuring and maximizing the quality, objectivity, utility, and integrity of information disseminated by federal agencies (+) Final guidance clarifying appropriateness of findings of no significant impact	substitution/equivalency provisions, discretionary scoping provisions, the assumption that small projects will have no significant impacts, a selective definition of the effects (within areas of federal jurisdiction only), and the discretion to approve projects, even with significant adverse effects, if justified	(+) European Commission has instituted requirements to facilitate public access to information, public participation in decision making, and public access to justice (+) Guidance documents address the need to take into account fundamental rights and to consider the implications of rulings of the European Court of Justice (EC, 2010, 2011a; Stec, 2003; UNECE, 1998) (+) Some individual jurisdictions in Europe (e.g., the Greater London Authority) have instituted equality impact assessment requirements aimed at preventing discrimination against vulnerable and disadvantaged populations	practitioners); agreed with auditing recommendations—will develop guidelines for the publication of auditing reports (+) Review suggested that consideration be given to how the code is to be enforced and that the government assume an auditing role; government agreed to develop guidelines and to publish auditing reports (+) Environmental offsets draft policy and discussion paper (Australian Government, 2007b,c)

Sources: Stec (2003), UNECE (1998).

of general ethical "ground rules" at the regulatory level could expedite proposal-specific discussions and negotiations. Also, consistency with natural justice standards and principles should be a basic requirement. However, the parties also must have sufficient latitude to come to agreements and accommodations, which best match local circumstances, and are consistent with the needs and aspirations of the participants. The auditing of proposal-specific experiences in treating ethical concerns could help identify recurrent issues where direction and guidance from the regulatory level did or could facilitate the IA process.

10.5.2 Management at the Applied Level

Figure 10.2 is an example of an ethical IA process. Figure 10.2 and the process description that follows incorporate many ethical IA elements. IA process managers and participants can "pick and choose" the relevant and appropriate elements.

Start-Up The process begins with an overall study design. The study design incorporates a preliminary public and agency consultation plan. This step ensures that the IA process is structured and focused. Consideration is given to redressing past grievances and injustices (a historical equity issue).

A concerted effort is made to identify ethical issues and conflicting ethical perspectives and positions. The analysis is based on both secondary source reviews and discussions with interested and affected parties. An initial overview of applied ethical literature is undertaken to identify pertinent concepts, theories, and distinctions. These analyses contribute to study design refinements and to scoping the IA process.

Ethical Foundation Once the start-up activities are completed, the emphasis shifts to identifying procedural fairness principles (to guide and structure interactions with stakeholders) and distributional fairness principles (to guide the analysis of distributional effects). The procedural fairness principles address such concerns as timely and complete access to information, the fair treatment of participants (including assistance to disadvantaged groups), the right to fully participate in planning and decision making, the removal of participation barriers, and access to an open, fair, impartial, and independent review process. The distribution fairness principles concern such matters as undertaking a distributional analysis (with a particular emphasis on adverse effects on and benefits to minority, low income, indigenous and other susceptible populations), assessing the fairness of cumulative hazards (including the consideration of social and ecological carrying capacity), and instituting measures to manage equity-related impacts (mitigation, compensation, local benefits, monitoring).

Methods for determining distributional differences are formulated. The rights and duties of each major participant in the IA process are identified. The principles, methods, rights, and duties are refined and adjusted based on stakeholder discussions. Ethical research rules and professional standards are formulated for environmental and ethical specialists. These rules and standards refine and adapt professional and disciplinary codes of practice. Measures

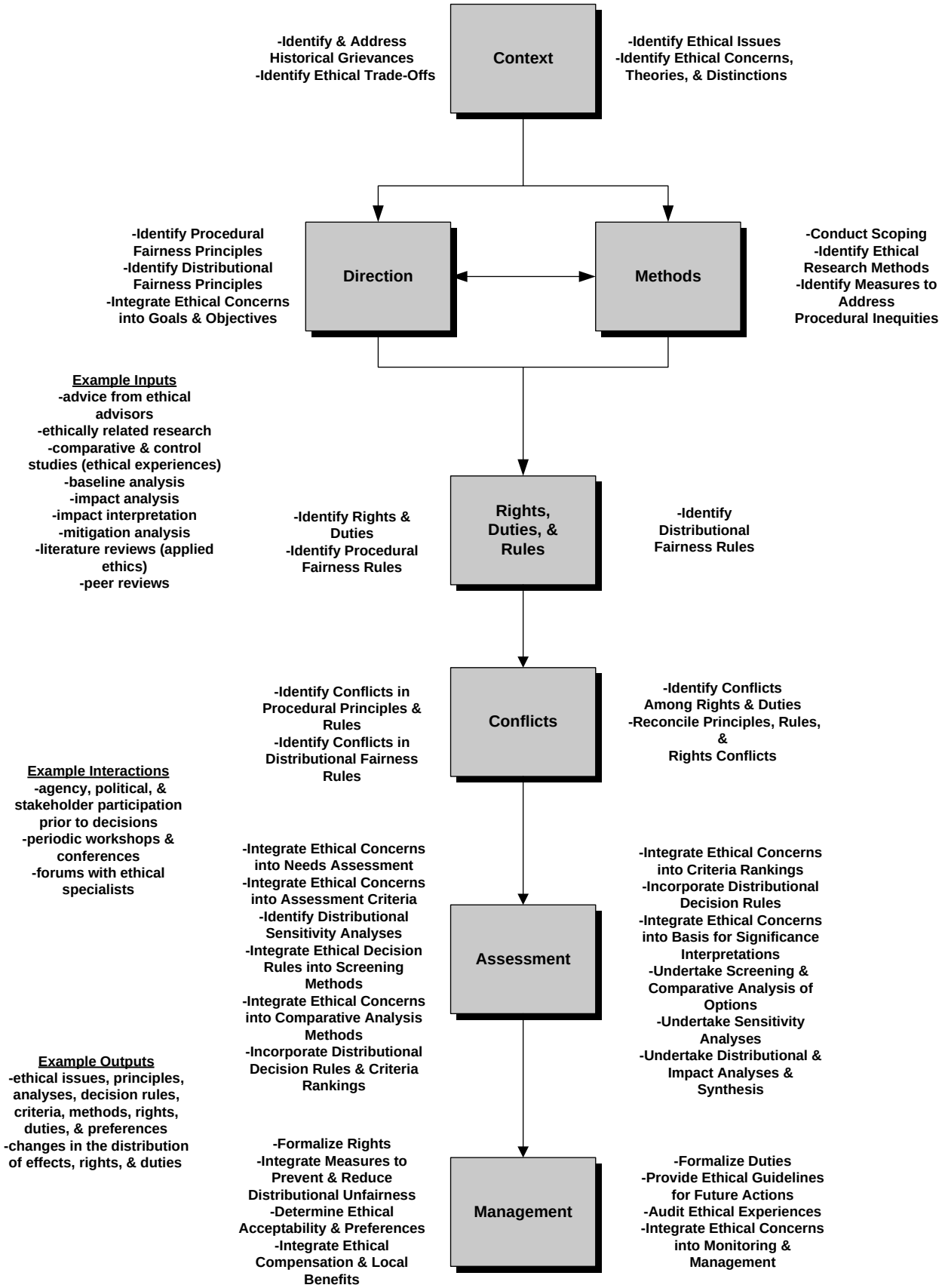

Figure 10.2 An example of an ethical IA process. Adapted from Lawrence (2005b).

(e.g., participant funding, expert advice) are developed to offset procedural inequities. These measures focus on the needs of disadvantaged groups, organizations, and communities. Ethical considerations are built into the IA process goals and objectives.

The procedural fairness principles, in combination with the measures to offset procedural inequities, lay the groundwork for procedural fairness rules. The procedural fairness rules are jointly determined with stakeholders. They ensure that the dialogue and debate minimize distortion and are fair to all participants. The distributional fairness methods determine the magnitude and nature of distributional inequities over time, over space, and among social groups. Distributional fairness decision rules link the distributional analysis to decision making. They address such matters as minimizing overall adverse impacts to society (especially to the least advantaged), maximizing benefits to society (especially to the least advantaged), and minimizing undue burdens on future generations. Ethical concerns are integrated into such impact analysis activities as needs determination, assessment criteria formulation, and impact significance interpretation factors.

Refinements Conflicts among procedural principles and rules generally occur. Rules and principles are adjusted to resolve or at least accommodate conflicts. A concerted effort is made to reach a consensus among parties regarding changes to procedural principles and rules. Conflicts also are likely among distributional principles and rules and among rights and duties. Again, a consensus among parties is sought. Residual differences are addressed by sensitivity analyses. Methods such as mediation are applied to address conflicting perspectives. A composite list of distributional sensitivity analyses is formulated. Ethical considerations are integrated into screening, option comparison, and criteria ranking methods.

Integrating ethical considerations in assessment methods includes formulating ways to explore ethical concerns, trade-offs, and dilemmas; procedures for assessing choices against ethical goals and consequences (including future generational implications); approaches for assessing individual and cumulative effects from multiple perspectives (a pluralistic approach); methods for combining or modifying options to enhance ethical benefits; measures to prevent and offset inequities and to recognize and reinforce rights; procedures for testing outcomes against varying principles, theories, and methods; and methods for testing choices against ethical regulatory policies, laws, standards, guidelines, positions, and preferences.

Application and Decision Making The options are screened using distributional decision rules. Options remaining after screening are compared taking into account the distributional analysis as well as the ethical inputs to criteria selection and rankings. The ethical distributional analysis extends and refines the impact analysis. Distributional principles and decision rules help determine the need for mitigation and the acceptability of the proposed action. Sensitivity analyses address uncertainties regarding distributional decision rules, the allocation of duties, and the likely effectiveness of ethically oriented mitigation, compensation, and local benefit measures.

Ethically preferred options are selected. Whether the proposed action is ethically acceptable is determined. Net benefits to society are determined. The distribution of costs and benefits among social groups (especially the disadvantaged), the extent to which rights are infringed upon, whether spatial and temporal inequities are ameliorated or reinforced, and whether political inequities are exacerbated or reduced are all considered. Whether the anticipated allocation of duties is appropriate and is likely to result in the adequate management of potential injustices and inequities also is taken into account.

The duties and rights associated with implementing the proposed action (if approved) are formalized and built into terms and conditions. Measures are instituted to monitor the actual distribution of effects, the effectiveness of measures to address inequities, the extent to which rights are maintained, and the extent to which duties are fulfilled. The effectiveness of the IA process in addressing ethical concerns is reviewed. Ethical guidelines are prepared for future related actions.

Inputs, Outputs, and Interactions The process is supported by advice from ethical advisors and peer reviewers and by ethically related research and literature reviews. The experiences of comparable and control communities in addressing ethical concerns are considered. Ethical analyses are combined with other planning and decision-making factors. Ethical considerations assume a pivotal role within broader planning and decision-making activities.

Agencies, elected representatives, and stakeholder groups are highly involved in the ethical IA process, consistent with procedural fairness principles. A variety of involvement approaches are applied. Ethical specialists could formulate the principles, rules, rights, and duties. Modifications could be made based on the comments received. Alternatively, interested and affected parties could take the lead, with ethical specialists providing a support function. A possible middle ground entails the proponent, ethical specialists, and stakeholders jointly integrating ethical concerns into the IA process. Forums and workshops are convened to broaden the range of ethical perspectives. Both specialists and nonspecialists participate in such forums. Depending on the location of proposed actions, it could be especially important to accommodate the ethical perspectives associated with traditional knowledge. Interpretations and conclusions are tested from multiple ethical perspectives.

There are numerous interim documentary outputs (e.g., ethical issues, principles, distribution analyses, decision rules, methods, rights, duties). A clear documentary trail

is provided of how and why ethical concerns were addressed in the IA process. The ethical analyses are expected to contribute to positive changes in the distribution of effects, rights, and duties within affected communities and among affected populations (both human and nonhuman).

10.5.3 Ethical IA Practices by IA Type

Crosscutting Issues Ethical IA practices for different IA types, as summarized in Table 10.5, are all founded on ethical principles, explicitly identify rights and duties, and address issues pertaining to procedural and distributional fairness. As Table 10.5 indicates, there also are important differences in orientation and emphasis. Such differences partly reflect variations in the nature, orientation, and priorities of each IA type. There remains, however, considerable potential to jointly address equity issues for mutual learning and coordinated capacity building. Reforms to IA requirements and guidelines to facilitate more equitable IA processes also could be linked and, at least partially, integrated. The systematic and independent evaluation of the effectiveness of equity-related initiatives, from multiple perspectives, is an essential first step. Care should be taken to respect the valid differences among IA types, and the very different contexts within which ethically related IA measures and procedures have been applied.

Ethical SA Practice Ethical SA practice treats sustainability as the touchstone for each interpretation of appropriate rights, duties, and responsibilities. Procedural fairness, democratization, distributional fairness, and equality of opportunity, although important, are also viewed as means to further the cause of sustainability. Care is taken to maintain a broad and holistic perspective (e.g., intra and intergenerational equity, maximum net gains rather than minimizing adverse effects).

Ethical SEA Practice Ethical SEA practice has focused, as a matter of procedural fairness, on opening up traditionally closed policy and planning processes to broader public and community involvement, participation, and mutual learning. Increasingly, SEA practice has adopted a more substantive ethical orientation, with a greater emphasis on the distributional consequences of policy and planning options, on the promotion of the interests and perspectives of disadvantaged populations, on greater public decision-making influence, and on the role of SEA as a sustainability instrument.

Ethical EIA Practice Ethical EIA practice acknowledges the value-full, political, and distributional nature of project-level EIA. Initially, this meant ensuring procedural fairness by, for example, making decision making more open, transparent, and inclusive through public notification and public involvement opportunities, and by assessing distributional fairness through the explicit and systematic analysis of the distribution of risks and impacts over time, over space, and among population groups. Over time procedural fairness has been broadened to facilitating meaningful involvement, community empowerment, and local autonomy. Substantive fairness has evolved into a proactive effort to redress inequities, maximize local benefits, and facilitate the realization of community objectives. The formalization of rights and responsibilities, through impact and benefits agreements, represents a logical extension of this pattern.

Ethical EcIA Practice Ethical EcIA practice is founded on ethical ecological principles. Citizens are seen as having a right to be involved in environmental decision-making. Society is seen as having a duty to the nonhuman world. This duty is reflected in ethical ecological principles such as the promotion of conservation, the prevention of pollution and ecological degradation, and the securing of ecological sustainability. IA is envisioned as one among many sustainability instruments—hence the need for close interconnections with related forms of environmental management. The driving force behind ethical ecological IA practice is the ethical imperative to operate within ecological limits and to facilitate ecological sustainability.

Ethical SIA Practice SIA has gone the furthest in terms of explicitly integrating ethically based principles, perspectives, and methods into IA requirements and processes. Ethical SIA practice is founded on social ethical principles. Ensuring procedural fairness, especially for the disadvantaged and traditionally excluded populations and groups, is a priority. Community and traditional knowledge are expected to be fully considered and treated with equal respect to scientific and technical knowledge. Systematically assessing the distribution of effects and then redressing inequities, especially for the disadvantaged, is considered essential. In common with other IA types, the orientation of ethical SIA practice has moved from avoiding and minimizing the negative to community-based imperatives such as maximized local benefits, reduced dependence, enhanced quality of life, capacity building, community empowerment, the development of human potential, and the realization of community aspirations.

Ethical HIA Practice Ethical HIA practice integrates equity-related concerns into each step in the IA process. Ethical evidence standards are applied. The distribution of health-related effects is systematically assessed, with particular emphasis on implications for disadvantaged groups and populations. Health-related inequities are reduced or avoided when they are avoidable and unfair. A conservative approach is adopted for considering risks and uncertainties (e.g., application of the precautionary principle). Community-related health priorities, perspectives (e.g., perceived risks), and knowledge are fully integrated. Health-related duties and responsibilities are explicitly identified. Ethical HIA practice seeks to enhance community health, well-being, and resilience (broadly and largely locally defined),

Table 10.5 Ethical IA Practice by IA Type

Ethical SA Practice	Ethical SEA Practice	Ethical EIA Practice
Governed by procedural fairness principles (e.g., transparency, feedback, bottom-up participation, open)	Addresses inter and intragenerational equity	Recognizes values and value conflicts as central to process (rationality as a contested concept)
Emphasizes inter and intragenerational equity; seeks to manage legacy issues	Stresses need to give vulnerable a voice and participation at the policy and planning levels	Seeks meaningful involvement of interested and affected parties; emphasizes shared and decentralized decision making
Presupposes equal right to most extensive system of basic liberties, equality of opportunity, and greatest benefit to least advantaged	Seeks to ensure that disadvantaged groups' interests are influential and reflected in outcomes	Provides for inclusive scoping
Adopts an holistic perspective	Integrates and supports poverty reduction strategies	Integrates pace and scale alternatives
Seeks maximum net gains, enhancement, and value to community	Includes distributional analysis	Seeks positive legacy and enhancements
Ensures fair distribution of benefits and risks	Promotes public participation	Seeks equitable distribution of risks and benefits
Seeks to protect the future	Seeks enhanced governance and development outcomes	Proactively seeks to redress procedural inequities (e.g., least advantaged)
Contribution to sustainability test	Seeks to enable agreement across different beliefs, values, roles, experiences, convictions, roles, experiences, and worldviews	Respects indigenous values, rights, knowledge, positions, and worldviews
Treats sustainability as a higher order societal goal (analogous to democracy, equity or justice)	Seeks to stimulate constructive dialogue and produce common meanings	Integrates procedural ethical principles (e.g., open, initiated early, sustained, transparent)
Requires trade-off justification	Supports an open learning process	Integrates mechanism for grievances for directly affected people
	Integrates an environmental justice perspective; SEA role in redressing injustices and achieving just outcomes	Includes impact and benefits agreements; seeks to maximize local development benefits and opportunities

Ethical EcIA Practice	Ethical SIA Practice	Ethical HIA Practice
Founded on ethical principles (e.g., conservation, no net biodiversity loss, sustainable use of biodiversity resources, net conservation benefit, biodiversity conservation)	Ethical principles at core of SIA (e.g., fundamental human rights, diversity, subsidiarity, present and future generations, health and safety, safe living and working environment, legal protection of rights, equal justice)	Seeks to be responsive to a range of population health concerns and purposes
Biodiversity values integral to process	Consistent with social performance standards	Equity concerns integrated into each IA step (e.g., screening, scoping, impact identification, assessment, recommendations, management)
Seeks net benefits for biodiversity and ecological enhancement	Puts people first; proactively seeks to include least advantaged and historically excluded	Assesses both effects on health of population and distribution of health effects within population (e.g., age, sex, ethnicity, socioeconomic status)
Consistent with strong sustainability	Ensures process procedurally fair	Focuses on impacts (analysis and management) on excluded or vulnerable groups (e.g., age, disease, ethnicity, deprivation)
Goes beyond no net loss and compensation (e.g., restored biodiversity, improved ecosystem services, increased biodiversity security, improved ecological system resilience)	Fully describes and analyzes environmental justice issues, including gender analysis	HIA is gender sensitive; recognizes gender as a major health determinant
Aims to maximize societal benefits	Seeks to reduce disproportionate burdens of negative externalities; burden on vulnerable groups a prime concern	Seeks to reduce health inequities from factors considered avoidable and unfair
Based on right of citizens to be involved in environmental decision making (ecological citizenship); necessitates access to reliable information about ecological problems, their causes, and their consequences	Applies ethical principles to actions of government and proponents (e.g., polluter pay, cost internalization, prevention, precaution, multisectoral integration of social issues)	Integrates precautionary principle
Aims to promote global and environmental justice	Takes into account local and traditional knowledge	Promotes multisectoral responsibility for health and well being
IA seems as an instrument for environmental justice; reflects duties toward the nonhuman world (e.g., prevent pollution and ecological degradation, promote conservation, secure ecologically sustainable development, justify social and economic development)	Ensures community capacity to meaningfully participate; fosters participatory democracy and community empowerment	Distinguishes between voluntary and involuntary risks
		Seeks to foster good health and resilient communities
		Ensures ethical use of evidence (e.g., transparent and rigorous process, best available evidence, all evidence valued, impartial recommendations, evidence supports judgments and recommendations)

Table 10.5 (*Continued*)

Ethical EcIA Practice	Ethical SIA Practice	Ethical HIA Practice
	Maximizes positive effects and quality of life, reduced dependence, greater equity, development of human potential, empowerment, enhancement of marginalized groups and capacity building—all from community perspective Assesses social development needs, and seeks to reduce dependence and enhance, maximize, and equitably share community benefits Applies local content requirements	Clarifies management responsibilities for health mitigation and enhancement; seeks to build capacity of people to become active participants in decisions affecting community well-being

Sources: Adelle and Weiland (2012), Ahmadvand and Karami (2009), Ayre and Calloway (2005), Binder et al. (2010), Bond and Morrison-Saunders (2010), Bond et al. (2012), Booth and Skelton (2011a), Bredariol and Marini (2003), Brown (2003), Burdge (2004), Cameron et al. (2011), CIER (2009), Connelly and Richardson (2005), Dovers (2005), Égré and Senécal (2003), Esteves et al. (2012), Esteves and Vanclay (2009), Fischer (2011), Galbraith et al. (2007), Gasparatus et al., (2007), Geneletti (2002), Ghanimé et al. (2011), Gibson (2006a, 2011), Gunning et al. (2011), Harris-Roxas and Harris (2011), Harris-Roxas et al. (2012), Harris et al. (2003), Hermans and Knippenberg (2006), Herring (2009), IAIA (2005a,b, 2006a, undated a), IFC (2007, 2008), João et al. (2011), Jackson and Illsley (2007), Karjalainen and Järvikoski (2010), Kemm (2005), Kemm and Perry (2004a), Kende-Robb and Van Wicklin (2008), Khera and Kumar (2010), Kirk (2000), Kørnøv and Thissen (2000), Knaus et al. (2006); Kreig and Faber (2004); Kwiatkowski (2011), Lajoie and Bouchard (2006), Lane et al. (2003), Landsberg et al. (2011), Landry et al. (2009), Mackenbach et al. (2004), McCluskey and João (2011), Melo-Escrihuela (2008), Mindel et al. (2004), Morgan (2012), Morgan et al. (2012), Noble (2009b), O'Faircheallaigh (2009), Parry and Kemm (2004), Rajvanshi et al. (2011), Richardson (2005), Rowan and Streather (2011), Sharma (2010), Simpson et al. (2005), Smith and Schin (2004), Tamburrini et al. (2011), Tetlow and Hanusch (2012), Thérivel (2010), Treweek et al. (2011), Verloo and Roggeband (1996), Villani (2011), Vicente and Partidário (2006), Whitelaw et al. (2009), Utzinger et al. (2005), Wegner et al. (2005), Vanclay (2003), Winds and Voices Environmental Services Inc. (2000).

rather than simply attempting to avoid and minimize health-related risks and impacts (as narrowly and technically defined).

10.6 CONTEMPORARY CHALLENGE—SIGNIFICANCE DETERMINATION

10.6.1 Definition and Rationale

Definition Significance determination is a vital but often problematic IA activity for every IA type. Significance determination in IA practice makes judgments about what is important, desirable, or acceptable. It interprets degrees of importance. It focuses on relevance to decision making. It considers the interplay among impact characteristics and the characteristics of the receiving environment. It varies by context and perspective. It is structured and partially determined by institutional arrangements. It takes place at both the regulatory level and at the applied level. It applies procedures to determine impact significance. It can be defined narrowly or broadly.

Rationale IA practice can never be fully comprehensive. It is always possible to address more potential impacts, interactions, and alternatives over a wider area, for a longer time period, and to a greater level of detail. With no "stopping rule," value-laden judgments must be made and substantiated regarding what should and should not be examined, and to what level of detail. Systematic, explicit, open, and thoughtfully supported significance judgments help ensure that the value-basis for decisions is explicit. They can aid in ensuring that resources are allocated efficiently and effectively. They can help ensure that the many uncertainties associated with value judgments and the prediction of future conditions are effectively managed. They can treat comparable situations in a consistent manner. They can provide a sound technical/scientific basis for decision making. They can effectively integrate community knowledge, concerns, attitudes, values, perceptions, and preferences into decision making. They can ensure that proposed actions and IA processes and outcomes are consistent with and supportive of government policies, plans, standards, objectives, and priorities.

10.6.2 Objectives and Properties

Significance determination in IA practice, if properly undertaken, should identify and seek to achieve both procedural (how significance determinations are made) and substantive (outcomes from significance determinations) objectives or performance standards.

Procedural Performance Standards Examples of procedural significance determination performance standards include (1) focused, (2) efficient, (3) explicit and clear, (4) logical, (5) substantiated, (6) systematic and traceable, (7) appropriate, (8) consistent, (9) open, (10) inclusive, (11)

collective, (12) collaborative, (13) effective, (14) adaptable, and (15) combinations.

Substantive Performance Standards Examples of substantive significance determination performance standards include (1) regulatory compliance and policy consistency, (2) the avoidance and reduction of potentially significant negative impacts, (3) the avoidance and reduction of all negative impacts, (3) the reduction of all adverse impacts considered potentially significant, as defined by significance thresholds, to acceptable levels, (4) net positive impacts (benefits outweigh negative impacts), (5) the public interest (public a net beneficiary), (6) the greatest good for the greatest number (utilitarianism), (7) the greatest good for the least advantaged (distributional equity), (8) local and regional benefits exceed adverse local and regional impacts, risks, and costs (local and regional communities and environment net beneficiaries), (9) issue resolution or management (major points of contention resolved or ameliorated to acceptable levels), (10) consensus among major parties (major parties or stakeholders can reach an accommodation on major points of disagreement), (11) net benefits to the environment, (12) sustainability (contributes to rather than inhibits sustainability), and (13) combinations.

Properties There are several inherent properties associated with impact significance judgments in IA practice. Each property has implications for how significance determination procedures can and should be conducted. Significance determinations, for example, are subjective, normative, and value dependent. They are imprecise. They vary among IA activities and for different types of effects and environments. They are context dependent. They are political and often controversial. They are not the same as the magnitude of change. They involve a process. They are collective. They are complex and difficult.

10.6.3 Significance Determination Processes, Approaches, and Roles at the Regulatory and Applied Levels

General Characteristics Impact significance determination processes vary considerably, depending on the approach and methods selected. However, four general characteristics commonly exhibited in most significance determination procedures include staged, iterative, internal and external involvement, and internal and external support.

Applications at the Regulatory Level Significance determinations occur at the regulatory level in determining triggers for the process; the types of IA requirements, scoping requirements; and the impact significance objectives, principles, thresholds, and criteria applied in legislation, regulations, guidelines (e.g., criteria, scaling levels, process, methods, sources), decision making (e.g., acceptance, rejection, conditions), and judicial review (e.g., legal interpretations).

Applications at the Applied Level Significance determinations occur as part of each IA activity. They take place, for example, during scoping (e.g., focusing on what is important); baseline analysis (valued ecological and socioeconomic components); alternatives analysis (e.g., reasonable, acceptable and preferred choices); the characteristics of proposed actions (e.g., most likely to induce significant impacts); impact prediction (e.g., the choice of impacts, boundaries, methods, criteria and criteria levels, cumulative effects thresholds); impact interpretation (e.g., impact acceptability, impact importance); consultation (e.g., major issues and stakeholders); impact management (e.g., when warranted and if effective); documentation (e.g., rationale for interpretations, assumptions, conclusions, and recommendations); and decision-making (e.g., basis for decisions, proposal acceptability, conditions).

Significance Determination Approaches As highlighted in Figure 10.3, technical, collaborative, and reasoned argumentation are three general significance determination approaches. Under the *technical approach*, significance is broken down into constituent parts and then combined using technical methods. This approach aims to provide a sound technical and scientific decision-making basis. It emphasizes consistency, transparency, and the ability to replicate. It employs thresholds (e.g., legal, environmental, impact), criteria, scaling levels, and decision rules. It relies on expert data, analysis, and knowledge. It uses qualitative and quantitative procedures (often favors the latter). It tends to be expert-centered with agency and public input.

With the *collaborative approach*, interested and affected people jointly determine what is important, why, and to what degree. This approach is undertaken in interactive forums. It involves close connections to broader constituencies. It substantiates interpretations and conclusions through joint reasoning. It is supported by technical analysis and by facilitators. It stresses bottom-up and inside-out decision making. It emphasizes communications, mutual learning, and negotiations. It entails numerous forums and methods. It provides a central role for the public, politicians, and local and regional perspectives, and a support role for technical and scientific analysis.

The *reasoned argumentation approach* has a long legal and academic tradition. It involves reasoned judgments supported by technical and nontechnical knowledge and evidence. It is usually qualitative (with some quantitative support). It integrates technical/community, facts/values, objective/subjective, multiple perspectives, and qualitative/quantitative analyses. It incorporates oral and written arguments. The effectiveness of this approach depends on how the analysis is structured (e.g., choices, disciplines, impact types, study areas, time horizons, project characteristics), the

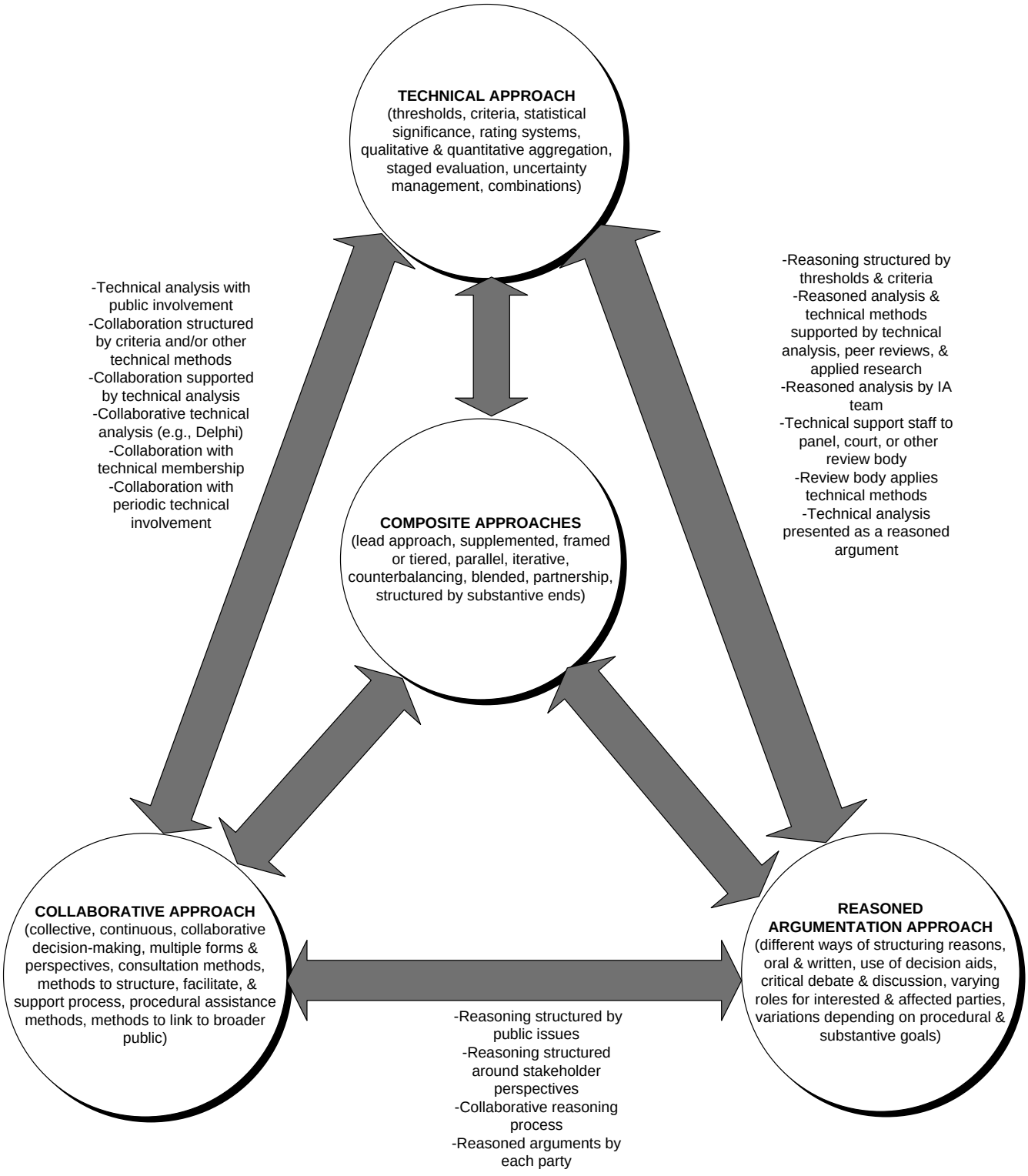

Figure 10.3 Composite significance determination approaches. Adapted from Lawrence (2007b).

adequacy and soundness of the knowledge base, and full and active stakeholder participation. This approach is most evident in summary IA documents and in judicial and quasi-judicial decisions.

Composite and general approaches, which combine elements of the three approaches, can reinforce the positive and offset the negative tendencies of each approach. They can vary approaches to suit contextual variations. Depending on how they are designed or applied, they can be more or less than the "sum of the parts." In addition to these three approaches (together with variations and combination), significance determination procedures can draw upon numerous support methods and a wealth of good general impact significance practices.

As highlighted in Figure 10.4, there are *significance determination roles* for IA specialists, technical and scientific specialists, decision makers, government agencies, and the public. Many significance determination roles involve two or more parties. Coordination among significance determination participants, therefore, is crucial.

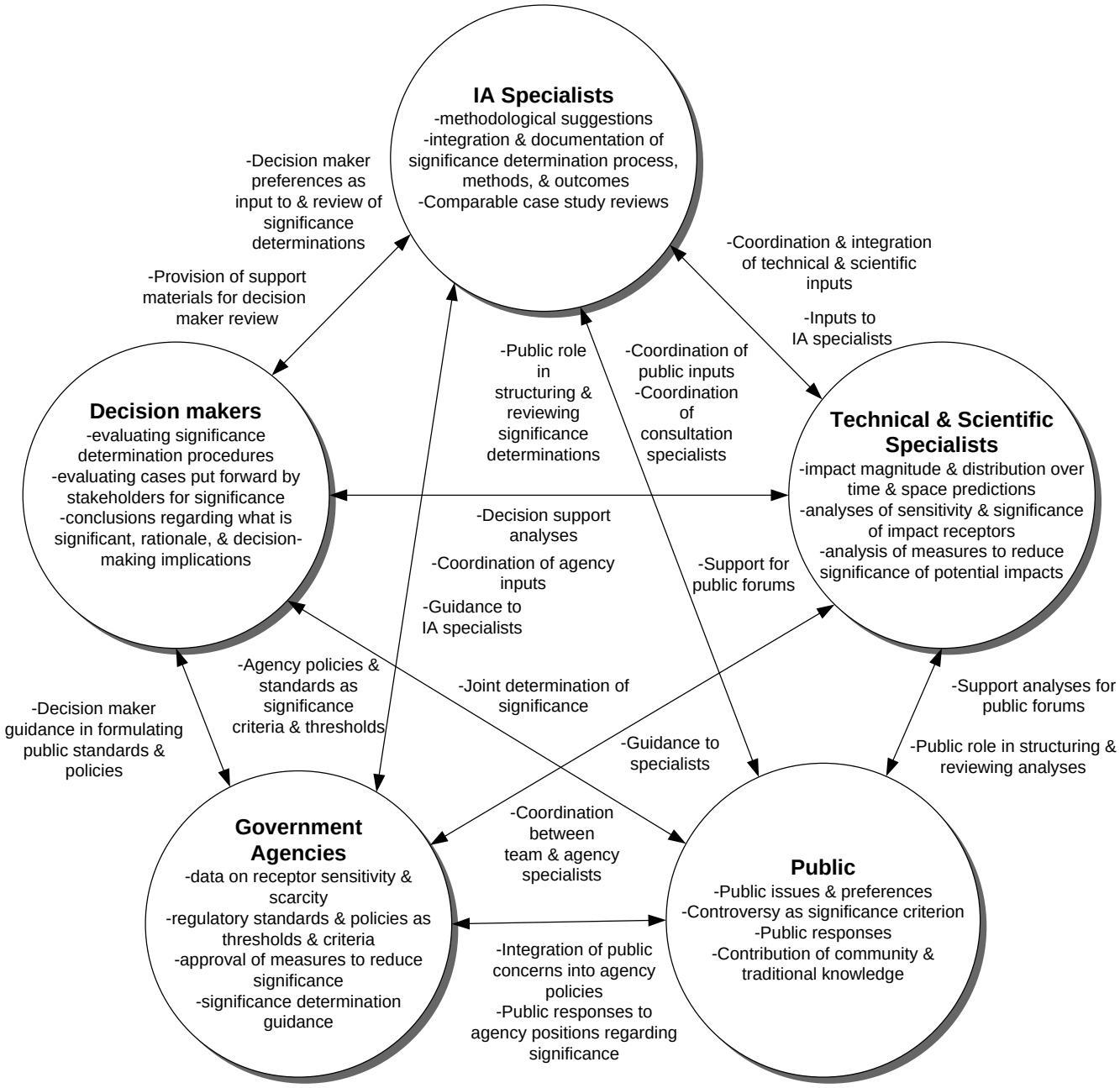

Figure 10.4 Examples of IA significance determination roles. Adapted from Lawrence (2007c).

Table 10.6 Significance Determination—Examples of Good Practices

Technical Approach	Collaborative Approach	Reasoned Argumentation Approach	General Practices	Selective Lessons
Integrate incrementally, explicitly, and consistently all decision-making factors Ensure methods clearly defined, appropriate to context, fully substantiated, easily applicable, and sensitive to discontinuities Adjust for differences in impact types (e.g., social), reliability of data and varying public and agency perspectives Allow for degrees of significance Apply to multiple spatial scales and time horizons Use ecological and social/economic evaluations as aid for determining significance of area (e.g., VECs) Consider implications of uncertainties and consequences of being wrong (e.g., precautionary, sensitivity analyses) Reconsider after mitigation, as part of cumulative effects analysis and in terms of extent supports or undermines sustainability	Focus on local and regional issues, tradeoffs and aspirations Seek to involve most directly affected and most vulnerable; offset procedural inequities Ensure membership in interactive forums representative Ensure effective links to broader publics Integrate community, technical, and traditional knowledge View significance from multiple perspectives Ensure open, transparent and inclusive process Fully document rationale for interpretations	Tie into procedural and substantive objectives Systematically integrate all forms of knowledge and data Incorporate relevant distinctions (e.g., choices, perspectives, study areas) Adapt to context View significance from multiple perspectives Guard against advocacy and bias Ensure rationale for significance determinations explicit, systematic and consistent	Recognize that inherently subjective and central to decision-making (what is important) Focus on community and regional issues, values, tradeoffs, and valued ecological and socio-economic components Ensure basis for judgments (e. g. criteria, methods) understandable, consistent, appropriate and fully substantiated; critical importance of how communicated to stakeholders Make effective use of and fully substantiate choice of support methods (e.g., qualitative and quantitative analysis and evaluation, public consultation and communications methods, group interaction methods and procedures)	Use of thresholds and criteria (properly applied) can enhance decision-making (consistent, explicit, informed) Sometimes helpful to define significance thresholds, explicit criteria, decision rules, and related guidance at regulatory level Fertile middle ground between standardized and case-by-case interpretations (e.g., classes of procedures for classes of situations with context-specific adaptations) Some types of impacts tend to be more significant across context types (e.g., health, displacement, impact triggers, community-level impacts, impacts that affect capacity and sustainability, impacts that increase vulnerability and that exacerbate inequities) Sometimes appropriate to acknowledge significant from outset and to focus on acceptability, alternatives, and mitigation Focusing on key issues, questions, themes and linkages can help scope significance determinations Technical approach tends to be more effective as support tool for a collaborative, culminating in a reasoned argumentation, approach

(*continued*)

Table 10.6 (*Continued*)

Technical Approach	Collaborative Approach	Reasoned Argumentation Approach	General Practices	Selective Lessons
			Apply methods to establish local and regional perspectives, values, and aspirations, identify distributional inequities, assess comparable actions and environments, characterize values, explore uncertainties and understand systems interactions Define broadly (e.g., positive, negative, direct, indirect, cumulative, biophysical, socioeconomic) Ensure procedures are consistent and explicit Ensure the direct, early, and ongoing involvement of interested and affected parties Offset procedural inequities Ensure that significance determination culminates in decisions regarding impact and action acceptability	Systematic consideration of uncertainty in significance determinations can be critical Interpretations aided when placed in context of broader socioeconomic, ecological, and sustainability initiatives, regional issues, planning and management, international standards, conventions and guidelines, corporate social and ecological policies, legal requirements and agreements, and research frameworks Traditional knowledge can make a valuable contribution to significance from a community perspective Importance of exploring tradeoffs among study areas in impact significance interpretations Support methods (e.g., sensitivity/vulnerability maps) can be helpful Focus on conflicting perspectives among stakeholders regarding which impacts are more significant and why Systematically consider nature of differences between public perceptions and technical and scientific interpretations regarding impact magnitude, likelihood, and significance Make the proponent responsible for demonstrating insignificance (shift the burden of proof) Adapt approach to problem and context Systematically integrate significance interpretations into impact management

Makes it possible to compare positive and negative effects to determine if in public interest (i.e., net benefits)	Impacts from announcement and planning	More holistic and inter-disciplinary methods	Uncertainty an explicit factor and/or can elevate a significance rating	Alternatives screened and compared for sustainability
Makes it possible to address inequities in the distribution of benefits and adverse effects over time and space (e.g., locally concentrated adverse effects and dispersed benefits, leakage of benefits, "boom and bust")	Behavior altered in anticipation of impacts; process and public perceptions alter impacts	More emphasis on goal setting and impact management, SEA, partnerships, and sustainability strategies	More tentative and cautious interpretations	Shift from minimizing damage to maximizing gains and opportunities (e.g., proposed action as catalyst or impediment or as means for advancing community aspirations)
Makes it possible to better address unacceptable impacts regardless of benefits	Significance varies among groups, communities and sectors	Enhanced role for uncertainty and uncertainty management	Uncertainty potentially a basis for action rejection or management requirements	Proposed actions assessed against likely and desired futures; net contribution to sustainability
Makes it possible for impact management measures to focus on vulnerability concerns (e.g., through community benefits agreements)	Socially determined meaning; dialogue central	Collaboration among parties especially important	Greater weight to uncertainty and harm avoidance; can trigger need for mitigation and monitoring; shifts burden of proof to proponents to demonstrate safe and harm avoidance	Use of ecological and sustainability thresholds and criteria (e.g., undermines or contributes substantially to socio-ecological integrity, contributes to serious or irreversible damage to sustainability foundations, contributes positively in a mutually supportive way to several or all aspects of sustainability)
Actions can be better designed and managed to further community and regional goals and aspirations	Affected by SIA and social science limits	Helps integrate project-level EIA, SEA, CEA, and SA	More stress on population vulnerability, harm avoidance and reduction and uncertainty management	Link dependence of proposed actions on ecological services and biodiversity implications
Sets up significance–sustainability links	Assess significance from community/local perspective		Significance determinations tend to be more open, adaptive, iterative, transparent, and democratic	More emphasis on human and resource resilience, the most vulnerable and links to broader sustainability initiatives; maximizes long-term gains and opportunities for multiple parties
	Recognize that IA subjective and value-full			
	Importance of defining social groups and community resources; community well-being and vulnerability key			
	Public reasoned judgment and collaboration, with technical support, generally favored; filtered through multiple values, beliefs, and perspectives			

Sources: Azcona and Palmada (2011), Baxter et al. (2001), Cloquell-Ballester et al. (2007), Geneletti (2002), Gibson et al. (2005), IEEM (2006), Ijäs et al. (2010), Khera and Kumar (2010), Kirk (2000), Lawrence (2004, 2007a,b,c), Landsberg et al. (2011), Noble (2009b), Ross et al. (2006), Rowan (2009), Söderman and Saarela (2010), Tomlinson (2004), Wale and Yalew (2010), Wegner et al. (2005), Wilkins (2003), Winds and Voices Environmental Services Inc. (2000), Wood (2008).

10.6.4 Good Practices, Selective Lessons, and Future Directions

Objectives for significance determination procedures should be determined early in the IA process, should be broadly defined, should encompass both procedural and substantive aspects, and should be clearly and consistently applied. Care should be taken to avoid unacceptable significance determination approaches. Examples of such approaches include determining significance without substantiation (e.g., professional judgment only), demonstrable bias, serious factual inaccuracies as the basis for significance determination, major factors relevant to significance determination not considered, failure to consider perspectives of major parties, and an approach clearly inconsistent with decision-making requirements (e.g., regulatory requirements).

Significance determination good practices vary by significance determination approach (see Table 10.6). General significance determination good practices and selective good practice lessons are summarized in Table 10.6. Examples of new directions in significance determination include the interpretation of positive effects, the interpretation of social and economic effects, the interpretation of cumulative effects, links between significance determination and the Precautionary Principle, and significance interpretation for sustainability. Examples of significance determination good practices for each of these new directions are summarized in Table 10.6.

10.7 SUMMING UP

This chapter responds to the need to make IA processes and outcomes more fair, equitable, and just. It is concerned with identifying and advancing rights and ensuring that duties are fulfilled. It describes, with three stories, the ethical nature of IA. It provides the conceptual underpinning for an ethical IA process. It describes an ethical IA process as it might be applied at the regulatory and applied levels and allowing for variations by IA types. It addresses the contemporary challenge of significance determination.

Establishing a foundation for an ethical IA process begins with three stories. The first story is concerned with IA professional ethical issues and dilemmas. The remaining two stories address the contemporary challenge of significance determination in two different ways. One is concerned with good practice approaches to interpreting the significance of social impacts. The other addresses the issue of the propensity to assume that smaller projects are, by definition, insignificant.

An overview of major ethically related shortcomings in IA practice is presented. The critics emphasize that insufficient attention is being devoted to the fairness of the IA process; to the distributional consequences of proposals subject to IA requirements; to the rights of participants in the process; and to the duties of proponents, regulators, and other process participants.

The major concerns raised by the critics (fairness, equity, justice, rights, and duties) are all concerned with the moral rules, principles, and standards that govern human conduct (i.e., ethics or more specifically in this case, normative, applied, practical ethics). These terms are each defined. Interconnections are highlighted. Several key ethical concepts are briefly described, together with implications for IA process management. The concepts largely concern situations in which ethics might be applied and alternative ethical standards for judging behavior.

An overview of procedural fairness is presented. Procedural fairness is concerned with both how consultation takes place and how decisions are made. It includes principles and rules pertaining to the rights and duties of process participants. Several examples of procedural fairness rights and duties are presented. Examples of distributional fairness distinctions, principles, and duties are identified. Distributional fairness pertains to the distribution of risks, costs, and benefits over space, over time, and among social groups. It can refer to the allocation of services and resources and to impacts on individual liberties and on local decision-making powers. It considers the fairness of cumulative effects and the relationships to social, economic, and ecological carrying capacity and to vulnerability to change. A description is provided of possible rights and duties. Rights express and give legal meaning to values. Duties entail obligations. Rights and duties can be expressed and applied through the IA process. There are various types of rights and duties. They apply to different population segments and they concern a range of subjects. Some rights and duties are established through regulatory requirements. Others are determined, often through discussions and negotiations, during individual IA processes. The role of professional ethics in IA is described. Examples of ethical dilemmas and potential solutions are provided. Good practice advice is offered. The issue of the accreditation of IA professionals is explored.

IA regulatory requirements in the four jurisdictions identify some proponent and government review duties. They identify minimum public notification and involvement rights. More consideration is being given to measures to facilitate the involvement of disadvantaged groups and to accommodate indigenous rights, knowledge, culture, and traditional activities. Varying approaches are being taken regarding such matters as environmental justice requirements and guidance, access to information, measures to enhance procedural fairness, the provision of local benefits, the treatment of intergenerational equity, and the accreditation of IA professionals. More could be done to address ethical concerns at the regulatory level. The effectiveness of each measure should be fully evaluated. Natural justice standards should be adhered to. A balance should be maintained between greater structure and guidance and the need to make proposal and setting specific adaptations and refinements.

An example of an ethical IA process is described. The process begins by considering historical grievances and by identifying ethical issues and trade-offs. Relevant literature

and experiences are canvassed. These overview analyses provide the basis for identifying procedural and distributional fairness principles and methods. Rights and duties, ethical research methods, and measures to address procedural inequities are addressed. Ethical concerns are integrated into IA process goals and objectives.

Procedural and distributional fairness principles are refined into decision rules. Ethical concerns are integrated into significance determination factors, assessment criteria, and the needs analysis. Conflicts among procedural principles and rules, among distributional principles and rules, and among rights and duties are identified. The conflicts are resolved or accommodated to the extent practical. Residual conflicts are addressed through sensitivity analyses. Ethical concerns are integrated into screening methods, comparative analysis methods, and criteria ranking.

Distributional analysis, distributional decision rules, and criteria rankings are incorporated, where applicable, into the screening of options, the comparison of options and the impact analysis. Ethical uncertainties are addressed by sensitivity analyses. Ethically acceptable and preferred options are selected. Ethical concerns are built into mitigation, compensation, and local benefit measures. Rights and duties are formalized. Ethical concerns are incorporated into monitoring and management. Ethical guidelines are prepared for future actions. The IA experience in addressing ethical concerns is audited.

The IA process is supported by advice from ethical advisors, applied research, and reviews of comparable situations. Ethical concerns are integrated with other planning and decision-making activities. Agencies, elected representatives, and stakeholders participate in identifying and applying ethical concerns. Efforts are made to broaden the basis of involvement and to ensure that multiple ethical perspectives test interpretations and conclusions. The role of ethical concerns in the IA process is fully documented. Lessons and insights regarding the treatment of ethical concerns, as expressed in the literature and practice of various IA types, are considered and adapted.

An ethical IA process systematically addresses the contemporary challenge of significance determination. Procedural and substantive significance determinations are explicitly defined and justified. Unacceptable significance determination approaches are avoided. The significance determination approach adopted is transparent, inclusive, adaptable, and appropriate to the context. Significance determination roles and responsibilities are clearly defined and justified. The significance determination approach is broadly defined, encompassing such matters as positive effects, social and economic effects, cumulative effects, uncertainty management, and sustainability. The significance determination process and methods are consistent with good practice standards.