



Sustainable Water
Integrated Management (SWIM) -
Support Mechanism



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Water is too precious to waste

UNESCO-IHE
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Area monitoring, citizen complaints & community involvement for better compliance with water and environment legislations

Area monitoring by regulating authorities

- Area monitoring is another method for regulating authorities to use for monitoring compliance, although much less used than regular & self-monitoring.
- It consists of using ambient monitoring or remote sensing to monitor water & environment conditions on large scale (lakes, reservoirs, watersheds, in the vicinity of facilities or over a large areas)

- **Area monitoring can be used:**

1. To assess the overall impacts of certain activities such as building dams, storage capacity, water quality, lakes morphology, etc.
2. to assess trends at a macro scale (increase in turbidity, erosion, eutrophication, plume delineation, stratification, chlorophyll, etc.
3. to define the fate, transformation, transport and distribution of pollutants in the water bodies (oil spills, macrophytes, sedimentation, etc.
4. to provide data useful in assessing potential health impacts, risks assessment & communication
5. to provide a screening device for identifying potential violations particularly where compliance problems may be found.

Advantages:

- Area monitoring is very useful in detecting possible violations without entering the facility.
- It also determines whether permits & discharge regulations are providing adequate environmental protection.
- However, this source of information can also be difficult to establish causality. It is difficult to obtain precise information that can be used as credible evidence in courts of law.
- Area monitoring includes 1- ambient monitoring, 2- remote sensing & 3- over-flights.

1. **Ambient monitoring** is to determine quality of water bodies & its suitability for various uses including environmental flows. It is most useful when a source is the only significant polluter in the investigated area or when its wastewater discharges have a characteristic composition that serves to fingerprint them.
2. **Remote sensing** techniques are not widely used as a regular monitoring technique. It can be used to detect CC impacts on water resources, provide snap-shots on the general state of environment, etc.
3. **Over-flights** can be used to monitor illegal discharges, crop patterns, groundwater reserves, desertification, flood & drought management, etc.

citizen complaints & community involvement

- The public complaint process is one of the most common mechanisms for public input for the enforcement of water & environment legislations.
- It usually allows any person to file a complaint with the regulating agency regarding activities that are causing water degradation or environmental harm.
- The government is then required to look into the matter & provide a response within a relatively short period of time.

- In developed countries, citizens are also allowed to go a step further by taking legal action to enforce water & environmental laws, either under specific provisions in environmental laws, or in accordance with administrative or civil codes.
- Citizen complaints can be used to unveil & expose non-compliance's that are not detected by inspection or self-monitoring. However, this source of information is often sporadic, non-consistent & sometimes unreliable.

- It might be worthy to develop -with the assistance of NGOs- programs to encourage citizen involvement by providing a financial reward for any citizen complaint that leads to a conviction of non-compliance.
- Citizen complaints are based on the fact that citizens know the country's land & natural attributes more intimately than regulating agency inspectors ever will.
- Their large number makes them more pervasive than the largest enforcement government agency; & seeing citizen as part of the enforcement team helps shield the regulating agencies from isolation.

FACTORS AFFECTING COMPLIANCE WITH WATER & ENVIRONMENT LEGISLATIONS

1-Deterrence:

- The phenomenon of people changing their normal behavior to avoid a sanction is called deterrence. Enforcement deters violators from violating again, and it does deter other potential violators by sending a message that they too may experience adverse consequences for their noncompliance.

- Conceptually, deterrence will be very effective pending the fulfillment of the following preconditions:
 - If environmental violations are very likely to be detected.
 - If the official response to violations is swift & predictable.
 - If the response includes a proportionate sanction.
 - If the regulated parties perceive that the first three conditions are serious facts.

2- Economics:

- The regulated community will be more likely to comply in case (1) where enforcement officials can demonstrate that compliance will save money, or (2) when the government provides some form of subsidy for compliance.
- To eliminate any economic gain reaped by violating water & environment regulations, the monetary penalty for violation would, ideally, at least equal the amount the facility would save by not complying. This deters deliberate economic decisions not to comply & help treat compliers and non-compliers equally.

Two Questions:

1. Do we have modalities for the elimination of economic gains resulting from noncompliance to water & environment regulations in our countries?
2. Do we have clear methodology for penalty calculation?

3-Institutional Credibility:

- Each country in the SWIM-SM Region has its own social norms concerning water & environment compliance. These norms derive largely from the credibility of the laws & institutions responsible for their implementation.
- A goal on the part of the governments to bring a majority of regulated community into compliance sends a message that compliance is important & helps build a social norm of compliance.

- In some SWIM countries, the history & social norms of **noncompliance** can be attributed to one or more of the following reasons:
 1. The enacted environmental laws are unenforceable due to defects in their design or development.
 2. The institutions responsible for enforcement are lacking the political power.
 3. The implementing institutions do not possess adequate resources for the enforcement of water & environment legislation.
 4. Regardless of their environmental performance, some production sectors or corporate with heavy contributions to the national economies are considered to be beyond the need to comply with certain regulations.
 5. Some large-scale national development projects with significant socio-political ramifications are politically exempt from complying with some of the ratified water & environment laws.

4- Social Factors:

- In SWIM-SM the personal & social relationships play a pronounced role in the implementation of environmental legislation.
- Some regulated facilities comply with water & environmental requirements out of their genuine desire to improve the quality of life.
- Corporate managers of publicly owned facilities particularly in small communities fear a loss of prestige that can result if information about noncompliance is made public.
- Enforcement official's objectivity is often compromised when he becomes too friendly, exceedingly permissible, and adequately familiar and possibly influenced by the facility's personnel and operations.

5- Psychological Factors:

- One of the major factors observed in the SWIM-SM & common to human nature is fear of change. Any new required way of environmentally friendly production is always assumed to be risky at the least.
- Many people particularly in the public sectors in some SWIM-SM countries tend to naturally resist the perceived effort it will require to comply with water & environment regulations.
- The general insufficiency of financial incentives to compensate for the extra efforts & lack of serious punishment for noncompliance are major factors promoting the persistence of this negative attitude.

6- Knowledge & Technical Feasibility:

- In many cases, the regulated parties in some SWIM countries do not simply know that they are subject to water & environment regulations.
- Some do not usually understand what steps they have to take to achieve compliance.
- Some do not have access to the necessary technology to prevent, monitor, control, or clean-up pollution.
- This barrier can be removed if the national or local competent enforcement authorities are providing education, outreach & technical assistance to the regulated parties.

HOW TO ENHANCE COMPLIANCE WITH WATER & REQUIREMENTS?

- Compliance promotion is defined as any activity that encourages voluntary compliance with water & environmental requirements.
- Promotion alone (**carrot alone**) is often not effective.
- Enforcement (**stick**) is important to create for regulated community clear incentives to make use of the opportunities & resources provided by promotion.
- Enforcement alone is also not as effective as enforcement combined with promotion (**carrot + stick**).

- **How can we promote compliance?**

1- BY EDUCATION, INFORMATION DISSEMINATION & TECHNICAL ASSISTANCE

- Education, information dissemination & technical assistance lay the groundwork for voluntary compliance & are essential to overcome barriers of ignorance or inability that lead to noncompliance.

Means of Providing Information & Assistance to the Regulated Parties:

- Publications
- Training Programs
- Conferences
- Hot-lines
- Technical Assistance: 1) Trained personnel
2) Inspectors
3) Special Assistance Programs
- Cooperative Arrangement (central treatments)
- Media Announcements (generic not focused)
- Universities

2- BY BUILDING PUBLIC SUPPORT & PARTNERSHIP

- The public can be a powerful associate in promoting compliance. They alert officials to undetected cases of noncompliance & create a social culture of compliance.
- NGOs may also become involved in enforcement by detecting noncompliance and where the law allows, taking legal action against a violator.

3- BY PUBLICIZING SUCCESS STORIES:

- Positive publicity about a firm's compliance success can enhance its reputation and public image.
- This sort of promotion is usually carried out by the complying firm that usually sponsors these publicity campaigns through paid advertisements in newspapers and television.

4- BY DEVELOPING ECONOMIC INCENTIVES

- Economic incentives might include:
 - Fees
 - Tax Incentives
 - Subsidies for Complying Facilities
 - Facility or Operator Bonuses
 - Promotion Credits
- Banking and insurance industries are becoming increasingly aware & directly involved in enforcement, by requiring assurance of compliance with water & environmental regulations, before they would issue a loan or insurance policy to a facility.

5- BY BUILDING FOCAL POINTS IN REGULATED FACILITIES

- Environmental audits as a part of environmental management systems are internal evaluations by corporate, conducted on a voluntary basis to verify compliance with legal requirements as well as internal policies.

Enforceability of water & Environment Requirements

- Ideally, in order to be enforceable, requirements should fulfill the following provisions:
 1. Are clear and understandable
 2. Accurately define what sources or activities are subject to the requirements.
 3. Precisely define the requirements and the conditions for any exceptions or deviation from these requirements.
 4. Clearly define how compliance is to be determined by specifying test methods & procedures.

5. Clearly state deadlines for compliance.
6. Are flexible enough to be constructively adapted through individual permits or licenses without jeopardizing their credibility.
7. Are based on control & monitoring technologies that are available, affordable and reliable.
8. Are drafted clear enough to be the basis of criminal prosecution (considered as the most serious enforcement action).

how to Enhance Enforceability of water & Environment Requirements?

I- By Improving the Climate for Compliance

Two simple practices as follows:

1. By demonstrating value through recognized scientific methods to illustrate that a requirement will produce measurable water quality & environmental improvements.
2. By demonstrating options & feasibility through provision of technical information on means & technologies that will produce compliance.

II- By Identifying the Size of the Regulated Community

- The size of the regulated community could influence the program's ability to successfully enforce the requirements.
- The larger the community, the more difficult effective enforcement will be.
- In such a case, it is advisable for the regulating authorities to focus and regulate the smallest link in the chain (manufacturer, distributor, users, etc.) to achieve the desired environmental performance with minimum effort.

III- By Analyzing the Ability to Comply

- Both economic & technological factors determine how great a burden the new requirement will pose to the regulated community.
- Factors to be considered include the type of facility, equipment required for compliance and monitoring, cost of changes in practice, long-term economic impacts, cost for self-monitoring-reporting, feasibility & reliability of the required technology, etc.

IV- By Involving the Regulated Community & Other Stakeholders in Developing the Requirements

- This participatory approach helps in the creation of support & reduced resistance & conflict. It also made requirements more practical & therefore more enforceable & it publicized the requirements at an early stage, which set the floor for compliance.

V- By Involving Enforcement Official

- It is often the case that enforcement officials were only requested to enforce the requirements without providing them with the proper legal or technical aspects associated with the issued regulation.
- This common practice has deprived the regulating authorities from the non-compliance lessons learned by enforcement officials in enforcing earlier requirements.

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Thank you
for your attention

Merci pour
votre attention



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