6 Elite Appraisals of the NFIP*

Previous chapters dealing with abstract disaster policy preferences, the seriousness of disasters, and the disaster experiences of states and local communities suggest that elite opinion on the management of natural hazards risk is not crystallized and that, at present, hazard policies emphasizing *structural mitigation measures* and *postdisaster relief* are the most popular. And yet, there is at least one federal hazard-management program in force that strongly deemphasizes both structural and disaster relief approaches in favor of nonstructural risk mitigations and hazards insurance—namely, the NFIP. Who supports and opposes it? How viable is NFIP as an approach to the management of flood risk at state and local levels? These are some of the topics addressed in this chapter.

NFIP was instituted in 1968 as a response to the mounting loss of life and property due to flooding. The program is designed to accomplish two major objectives. First, it enables property owners to purchase government-subsidized flood insurance; tenants in eligible communities may also insure their personal property against flood loss. Second, it tries to discourage the unwise use of flood-prone lands. Thus, subsidized insurance is available only to communities that adopt and enforce certain floodplain management regulations. The program is administered by the Federal Insurance Adminis-

*This chapter is based on Marianne Pietras, *Implementation Issues in the National Flood Insurance Program* (unpublished Ph.D. dissertation, University of Massachusetts, 1979).

tration, an agency within the Department of Housing and Urban Development (HUD).

Public reaction to NFIP has been quite varied. One individual's campaign to discourage her town from participation in the program led her to print on her garage, "HUD is out to own Hadley." She also conducted a phone campaign to "inform" homeowners that if Hadley joined the program, they would not even be able to paint their house without the permission of HUD. In a like vein, a Vermont resident described the program as, "just another program the federal government is trying to shove down our throats," and a resident of Pennsylvania opined, "this havoc reaped by the government on private citizens in summary fashion, without proper hearing and notification, is at best unreasonable if not immoral." Yet others have responded quite favorably to the program. The mayor of one city in Massachusetts, in a letter to a legislative hearing on the flood insurance program, stated, "we would like to commend the Federal Insurance Administration in the performance of a most difficult but important assignment." In a similar fashion, the town manager of a town in Maine wrote, "There is no question in my mind that the Flood Insurance Program has saved our merchants from financial disaster after the flood of 1974." He went on to say, "Another advantage is that the National Flood Insurance Program regulations set forth a criteria for proper land use and control measures." (Above quotes are from FIA files.)

Our discussion of NFIP is presented in four parts. First, we summarize briefly the legislative history and nature of the program and discuss the roles of the federal, state, and local governments. Then we present evidence on the reactions of state elites to the program. Since states play a relatively minor role in the implementation of NFIP and the largest share of this burden, by far, falls to the local communities, in the third section, the outlooks and reactions of local elites are discussed. We conclude with an analysis of the problems communities have faced with NFIP and with a discussion of the controversies it has touched off.

BACKGROUND

The insurance industry has long been aware of the need for flood insurance. After the Mississippi River flooded in the late 1800s, one Illinois private insurance firm did begin writing flood insurance. However, its existence was short-lived. A severe flood 2 years later not only bankrupted the firm but also swept away its office. In the mid-1920s, the insurance industry again offered flood insurance. However, the severe floods of 1927 and 1928 forced them to discontinue this coverage. Until around 1952, the insurance industry avoided flood insurance. In 1952, the Insurance Executives Associa-

tion commissioned an engineering study of the feasibility of flood insurance. The report concluded that although flood insurance was feasible from a hydrological standpoint, it was economically infeasible to the private insurance industry.

The federal government, meanwhile, was dealing with the problem of floods in a different manner. The first national program was the Flood Control Act of 1936, which gave authority to the U.S. Army Corps of Engineers to carry out structural projects. Less than a decade after this act was passed, Gilbert White and others noted that "to build dams and dikes without restraining further occupance of the 'protected' floodplain was to invite greater losses upon the occurrence of storms exceeding design limits." Accordingly, White and many others have argued that structural projects must be accompanied by nonstructural measures such as zoning and building codes.

President Truman had proposed a federally subsidized flood insurance program after the severe midwestern floods of 1951 and the Missouri River Basin floods of 1952. Congress turned him down both times by failing to appropriate the necessary funds. In 1953, the government was again being urged to undertake a flood insurance program. As W. B. Lanbeign (1952) wrote,

> The Government stands to gain much from a successful no-loss insurance. It would spare the tremendous public and private handouts that follow every flood, and it would avoid the considerable loss in tax revenues to the Government. Flood insurance would provide the means whereby those on the floodplains would share the major burden of their damages and thereby provide a check on the heedless occupancy of flood hazard land. Flood insurance seems conspicuously needed to give economic stability to threatened areas and to provide a handle by which to grasp the problem of floodplain occupance [p. 330].

There was a lot of talk about alternatives to structural solutions during the 1950s, but little or no action was taken. The 1955 *Task Force Report on Water Resources* observed that although "flood zoning has great verbal support . . . almost nothing has been done about it." It was also during the 1950s that the amount of federal expenditures for flood disasters began to steadily increase (see Table 6.1).

In 1955 the Mid-Atlantic and northeastern states were hit by Hurricanes Connie and Diane, and federal expenditures for flood relief jumped from $8 million in 1954 to $31 million in 1955. Consequently, during 1955–1956, the Senate Committee on Banking and Currency held hearings on the subject of a federal disaster insurance program. They concluded that the private insurance companies would not write flood insurance because of the virtual certainty of the loss, its catastrophic nature, and the difficulty of making such insurance self-supporting. For its part, the private insurance industry was

TABLE 6.1

Total Federal Flood Disaster Relief Subsidies for Public and Private Sector Recipients[a]

Year	Total Amount	Year	Total Amount
1949	62,000	1963	29,242,000
1950	1,962,000	1964	121,188,000
1951	1,421,000	1965	157,078,000
1952	3,689,000	1966	162,941,000
1953	5,643,000	1967	50,887,000
1954	8,611,000	1968	90,408,000
1955	31,430,000	1969	220,859,000
1956	45,437,000	1970	243,080,000
1957	37,703,000	1971	224,783,000
1958	24,677,000	1972	1,787,001,000
1959	23,076,000	1973	354,016,000
1960	8,215,000	1974	229,480,000
1961	23,720,000	1975	138,107,000
1962	57,618,000	1976	371,365,000

[a]These figures are not corrected for inflation.

Source: Report submitted to the Department of Housing and Urban Development, Policy Development and Research, by the Joint Venture titled, "History of Federal Expenditures on Pre- and Post-Disaster Assistance Relating to Property Acquisition," March, 1978, pp. 9-10.

supportive but not entirely enthusiastic about a federally sponsored effort. The ensuing legislation, the Federal Insurance Act of 1956, was passed but never funded.

There were various efforts to implement the 1956 legislation in subsequent years. Senator Harrison Williams, Jr. of New Jersey, chairman of the Subcommittee on Securities, introduced bills in 1962, 1963, and again in 1965 calling for a study of the need for and plausibility of federal disaster insurance. New legislation amending the 1956 Act was reported from the committee and passed the Senate, but did not become law.

The devastation of Hurricane Betsy in 1965 resulted in the passage of the Southeast Disaster Relief Act of 1965. This act directed the secretary of HUD to report on alternative programs of financial assistance to the victims of floods and other natural disasters, including alternative methods of federal

disaster insurance. This report, entitled "Insurance and Other Programs for Financial Assistance to Flood Victims," was submitted to Congress in September, 1966. The major conclusion was that a federal flood insurance program was feasible, although the report ruled out an all-industry program: Federal subsidy of the program was deemed essential. Thus, the report recommended a cooperative federal-private industry risk-sharing program that would maximize private participation but use government subsidies to make the insurance available at reasonable rates and require the implementation of land-use management techniques to mitigate the flood risk.

At about the same time, another report was submitted to Congress by the Task Force on Federal Flood Control Policy, recommending that federal policy move in the direction of a federal flood insurance program. This report also emphasized the land-use management aspects of such a program. Industry support for a national flood insurance program was also building. A 1965 report by a subcommittee of the National Industry Flood Insurance Committee, for example, recommended a flood insurance program for structures with one to four dwelling units.

This support from the private insurance industry and the favorable findings of government studies led, in 1967, to the introduction of legislation to establish a national flood insurance program. The hearings for the program produced mostly favorable responses. As Senator Long, (Missouri), stated,

> The need for flood insurance has increased in recent years. With the expansion of urban areas into floodplains, property losses have risen. Congress has enacted special assistance measures in recent disasters, but this solution is not completely satisfactory. *These relief measures do not encourage improved land use to avoid future losses* [U.S. Senate, 1967: p. 3]

Others were less enthusiastic. Ellie Schill, a representative from the National Association of Homebuilders, said,

> It should be recognized, however, that a great deal of buildable land is open to the possibility of flooding at some time. This program will have to be very carefully administered to avoid eliminating from development much land that is highly valuable and otherwise well-located for housing [U.S. Senate, 1967, p. 161]

The bill for the NFIP failed to pass in 1967 but was resubmitted and passed as the National Flood Insurance Act of 1968.

LEGISLATION RELEVANT TO THE NATIONAL FLOOD INSURANCE ACT OF 1968

program, individuals are eligible to purchase insurance only if their community is participating in the program. Until 1969, however, communities were subjected to lengthy rate-making surveys before becoming eligible. Also, most communities did not have sufficient floodplain data on which to base the required land-use regulations. Consequently, only three communities (Fairbanks, Alaska; Matairie, Louisiana; and parts of Alexandria and Arlington, Virginia) became eligible during the first year and only 20 insurance policies were written. This problem was solved with a 1969 amendment that authorized provisional eligibility during an emergency phase pending the completion of federal floodplain mapping studies. During the emergency phase, insurance could be purchased, but the unpopular topic of floodplain zoning was deferred until the mapping studies were complete. Communities could thus enter the emergency phase and make citizens eligible for insurance by satisfying very simple requirements.

Another problem with the 1968 act was that it was entirely voluntary in regard to both community participation and the individual purchase of flood insurance. To address this problem, the Flood Disaster Protection Act of 1973 (PL 93-234) significantly amended the 1968 legislation. Section 102(a) of the 1973 act requires that flood insurance be obtained for all federally funded construction in a flood-hazard area. If a community refuses to participate when the opportunity arises, then they are denied all federal funding for flood-zone projects. Likewise, Section 102(b) forbids all federally supervised, approved, regulated or insured banking institutions from extending any mortgage loans on properties in flood-hazard areas unless flood insurance is acquired for the property. Individuals in communities that fail to participate were denied mortgage loans for property in the flood-hazard areas. The main reason for amending the act in this manner was to make it very difficult for communities to opt not to participate in the program, and to this end the amendments were undeniably successful. By June, 1975, 9877 communities were enrolled in the program, up from 2856 enrolled communities as of 1973

In 1975, Congress began hearings to examine the progress and problems of NFIP. At these hearings, much criticism of the sanctions imposed by the 1973 legislation was voiced; many saw NFIP and the 1973 amendment as the first mandatory federal land-use control act. Senator Thomas F Eagleton (Missouri), who had introduced a bill to remove the 1973 sanctions, put it this way:

> The way it stands now, the agency (FIA) wins either way If a community refuses to come into the program, it will not be able to build in the designated flood areas because no federally supervised bank or savings and loan and no federal agency will be allowed to extend construction assistance. If, on the other hand, a community agrees to participate in the flood insurance program, it must adopt the HUD land use and building standards which effectively rule out altogether new construction in the flood prone areas. Either way, FIA wins. It is Catch-22, or in this case Catch-22,000 (the number of flood prone communities) [U S Senate, 1975 p 4]

Others, such as George Bernstein, an attorney and former Federal Insurance Administration Chief, strongly opposed the removal of the 1973 sanctions He based his testimony on two fundamental principles of the flood insurance program: First, "that most people do not voluntarily buy property or casualty insurance, no matter how essential it may be to their safety and well-being; and second, that loss mitigation and prevention standards must be legislated and enforced, or losses will continue to increase [U.S. Senate, 1975]. According to Bernstein,

> We have seen enough postflood legislation involving 1 percent loans and $5000 forgivenesses to be disabused of the seductive idea that those who profess their independence of Washington are willing to go it alone in times of disaster
>
> Nor can we be so naive as to believe that if there are a large number of uninsured losses in the aftermath of the next severe flood, the Congress will be able to withstand its own tendency toward compassion and the blatant pressures that will be generated in the devastated community for relief, regardless of the fact that these very supplicants for Federal aid could have protected themselves through available insurance, which was already subsidized by the Federal government to the extent of almost 90% of its cost.
>
> To be blunt, the current Flood Insurance Act not only prevents a raid on the Treasury, but it also insulates the Congress from having to deal with a situation where the uninsured status of the majority virtually necessitates the handouts that are the dismal history of uninsured flooding. [U S Senate, 1975, pp 48–49]

An amendment to remove some of the 1973 sanctions was attached to a major housing bill in the fall, 1977. A *New York Times* editorial (October 12, 1977) suggesting that Carter veto this amendment had no effect. If the amendment were passed, the *New York Times* predicted, "the nation is apt to see a flurry of construction whose recklessness will become apparent only when the next flood disaster strikes. Then we will know who had been truly pointed-headed ["The Pointy-Headed Flood-Plains Laws," October 12, 1977: p. A24]." Nonetheless, the bill was passed and, as a result, the sanction denying mortgages to nonparticipants in flood-hazard areas (Section 102[b]) was removed from the program

Another change in the NFIP involved the role and participation of the private insurance industry Under contract to the NFIA, the National Flood Insurers Association, a group of 132 insurance companies, was responsible, through 1977, for actually providing the flood insurance and for maintaining the associated records. The entire program was thus a cooperative federal-private venture During 1976 and 1977, however, the government became displeased with the National Flood Insurers Association's performance, and

the contract with NFIA was terminated. Today, the NFIP is entirely a federal venture.

COMMUNITY PARTICIPATION

A community may enter NFIP in either of two ways (see Figure 6.1). First, the community may apply to the Federal Insurance Administration on its own initiative by contacting the State Coordinating Agency, the Flood Insurance Specialist for the HUD region in which the community is located, or the Federal Insurance Administration in Washington. The program is then explained to the community in detail. Both the benefits and regulations of the program are pointed out. If the community still wishes to join, it must submit an application to the Federal Insurance Administration that includes a history of flooding in the community, any maps delineating the flood-prone areas, documentation of the community's legal authority to control land use, and a list of any measures already taken to reduce flood hazard. Before being admitted to the emergency phase, a community must meet the following minimum floodplain-management standards:

> A community must: 1) require building permits for all proposed construction or other development in the community and 2) review the permit to assure that sites are reasonably free from flooding. For its flood prone areas, the community must also require: 1) proper anchoring of structures, 2) the use of construction materials and methods that will minimize flood damage, 3) adequate drainage for new subdivisions, and 4) that new or replacement utility systems be located and designed to preclude flood losses [Questions and Answers—the National Flood Insurance Program, March 1977].

The community's application is then processed by the Federal Insurance Administration and a Flood Hazard Boundary Map (FHBM) is drawn, delineating the 100-year floodplain in the community. If the community meets all the requirements, the Federal Insurance Administration notifies them of their eligibility to participate in the emergency phase of the program.

Communities that do not enroll voluntarily are drawn into NFIP by a slightly different route, at the initiation of the Federal Insurance Administration. The Federal Insurance Administration draws FHBMs for these communities and notifies them that they are flood prone. The community then has 6 months to appeal this designation. If the appeal is successful, they forfeit federally subsidized flood insurance; if not successful, they must decide whether or not to participate in the program. Communities that choose not to participate forfeit not only the flood insurance but also any type of federal assistance for construction or disaster aid in the 100-year floodplain.

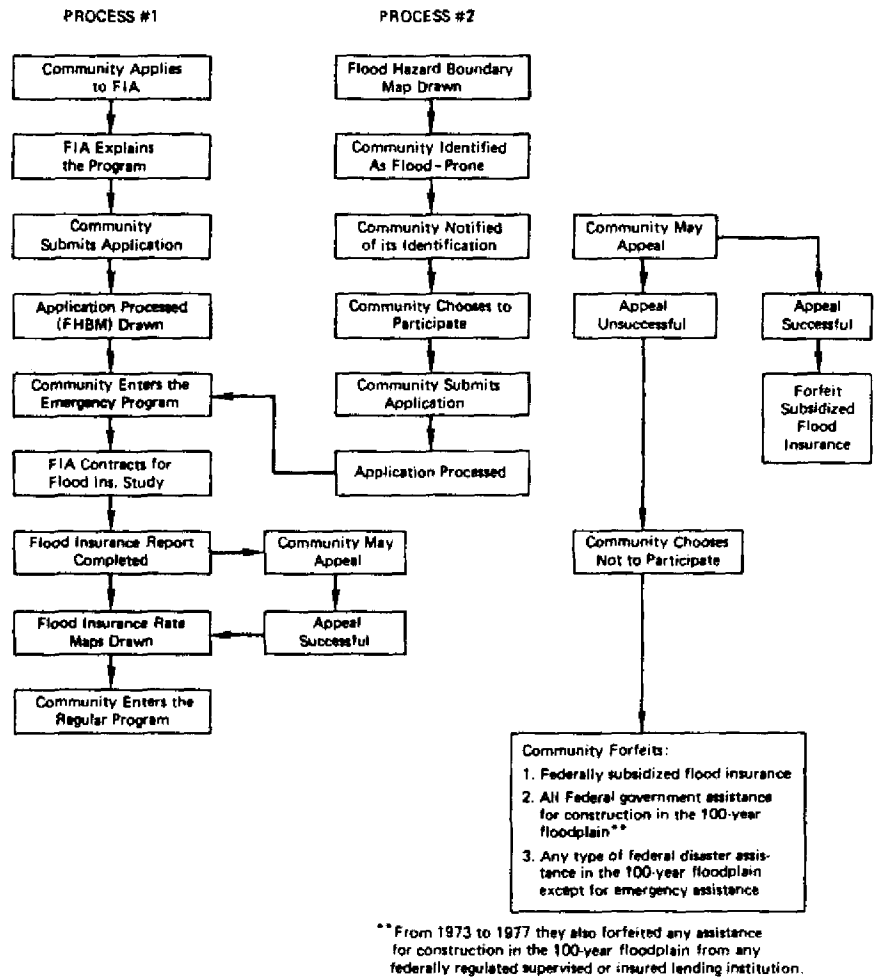

Figure 6.1

If the community chooses to participate, they submit an application to the Federal Insurance Administration; if all the necessary requirements are met, the community enters the emergency phase.

In the emergency phase, limited amounts of insurance coverage are available at subsidized rates for virtually every building and its contents regardless of the risk involved. The limits of the insurance available during the emergency phase and the subsidized rates for such insurance are presented in Table 6.2.

Once a community enters the emergency phase, a flood insurance rate

TABLE 6.2

Insurance Under the Emergency and Regular Program

	Emergency Program (1) FIRST LAYER		Regular Program SECOND LAYER		(2)
	Limit	Subsidized Rates (per $100)	Limit	Actuarial Rates (2b, c & d)	Total Limits of Coverage (2a)
				Based on Degree of:	
Single Family Residential	$35,000	25¢	$35,000	Risk	$70,000
Other Residential	$100,000	25¢	$100,000	Risk	$200,000
Non-Residential	$100,000	40¢	$100,000	Risk	$200,000
Contents, Residential (per unit)	$10,000	35¢	$10,000	Risk	$20,000
Contents, Non-Residential (per unit)	$100,000	75¢	$100,000	Risk	$200,000

Notes:

(1) Only the first layer of coverage is available under the Emergency Program.

(2) a. Full coverage is available under the Regular Program for all structures in the community.

b. New construction and substantial improvements are charged actuarial rates for all coverage.

c. All existing structures are charged actuarial rates for the second layer of coverage and have the option of paying either the subsidized or actuarial rate for the first layer, whichever is lower.

d. The maximum actuarial rate for 1-4 family residential structures is 50¢ per $100 of coverage under certain conditions.

SOURCE: The National Flood Insurance Program (March 1977).

study is planned. The rate study is a detailed engineering and hydrological study used to determine the actuarial rates to be charged for the insurance. Federal agencies such as the U.S Army Corps of Engineers, Soil Conservation Service, Tennessee Valley Authority, National Oceanic and Atmospheric Administration, the U.S. Bureau of Reclamation, and the U.S Geological Survey are given preference for performing these studies if they have information on flooding in the particular community, express an interest in doing the study, and have the necessary resources; otherwise, a private contractor (i.e., engineering firm) is selected. As a result of these detailed topographic

and hydrologic studies, a flood insurance rate map (FIRM) is drawn. This map includes detailed information on floodway elevations, floodway locations, and zones of different risk within the 100-year flood boundaries It also includes a delineation of the 500-year floodplain. This map is used to determine where flood insurance is required and what rates are applicable.

Once the flood insurance rate study is completed, the proposed flood elevations are publicized. The chief executive officer of the community is notified, the elevations are published in the *Federal Register*, and a specific notice is published twice in a prominent local newspaper, allowing local citizens to determine if they are affected by the proposed flood elevations and, if so, to what extent For a period of 90 days after publication of the second newspaper article, individuals may appeal the proposed flood elevations through their community officials. The community then reviews any individual appeals and decides whether or not to submit a community appeal. If a community decides to appeal, all individual appeals are consolidated into one appeal. The sole basis for appealing flood elevations is information showing that they are technically or scientifically incorrect. Therefore, all appeals must be accompanied by adequate supporting data. If a community does not make an appeal, individual appeals may be sent to the Federal Insurance Administration, along with a statement of the community's reasons for not appealing. The Federal Insurance Administration resolves these appeals by consulting with local government officials, submitting conflicting data to an independent scientific body, or scheduling an administrative hearing conducted by an administrative law judge.

Once the appeal is resolved, final flood elevations are published. For the next 60 days, aggrieved citizens or communities may further appeal the proposed elevations to the U.S. District Court. Pending a decision by the court, the designated flood elevations remain in effect and the community must adopt floodplain regulations based on these elevations in order to maintain eligibility for the flood insurance program. The court's final ruling is binding on both the community and the Federal Insurance Administration.

Individuals who feel that their property has been incorrectly designated as hazardous may challenge that designation by submitting technical data the Federal Insurance Administration. If the challenge is upheld, a map amendment is issued, removing the property in question from the designated flood-hazard area.

The community has 6 months following the appeals period to adopt floodplain management measures and regulations based on the FIRM study. Minimum criteria for these measures are specified in the National Flood Insurance Program Regulations, Section 1910.3.

The most basic requirement is elevating new or substantially improved residential floors, including the basement, to or above the 100-year flood-

plain elevations. Floodproofing, however, is an allowable alternative to the elevation of nonresidential structures.

Sample ordinances designed by the Federal Insurance Administration are sent to the communities. When the community adopts a satisfactory ordinance, they are allowed to enter the regular program. In the regular program, actuarial rates are charged, and increased amounts of flood insurance become available to citizens of the community (see Table 6.2).

Once in the regular program, the community is expected to enforce its floodplain regulations. The Federal Insurance Administration does monitor the behavior of communities in the program, but these efforts are rather limited (General Accounting Office, 1976). The Federal Insurance Administration reviews community floodplain regulations to insure that they comply with Federal Insurance Administration minimum standards. Title 24 of the Code of Federal Regulations (Section 1909.22) also requires that communities in the program submit annual reports to the Federal Insurance Administration. In addition, the Federal Insurance Administration relies on complaints from private citizens, newspaper articles, and complaints from special interest groups to learn about possible violations. Communities have been suspended from the program for not enforcing the regulations.

THE ROLE OF THE GOVERNMENT

All three major levels of government play some role in NFIP. The federal government, of course, administers the program, subsidizes the insurance, and is otherwise concerned with all policymaking matters related to the program. Local communities, in turn, have the primary responsibility for implementing the floodplain-management regulations and seeing that they are enforced. The role of the states is rather more diffuse: They *must* delegate to the local communities the authority to regulate land use and they *may* help in administering or implementing the program, but most states play only minor facilitative roles.

The Federal Government

The Federal Insurance Administration has the major responsibility for administering the flood insurance program. It serves two major purposes. It provides flood insurance to homeowners and it *encourages* local communities to adopt floodplain-management regulations. To accomplish these tasks, the Federal Insurance Administration must supply the technical material (i.e., hydrological data) necessary to determine the insurance rates and the appropriate land-use measures.

The dissemination of information and data is the primary responsibility of the Federal Insurance Administration, but is not an easy one. One problem is the sheer number of communities that must be informed and educated about the program. The Federal Insurance Administration has 10 regional offices staffed by Flood Insurance Specialists. These specialists serve four major purposes: (a) they aid communities in gaining eligibility for participation, (b) they provide technical assistance for implementing the program regulations and floodplain-management measures, (c) they monitor compliance with the enforcement of those measures, and (d) they represent the program in the consultation process during the flood insurance study as Consultation Coordinator Officer (CCO).

There are several obstacles and limitations that affect the Federal Insurance Administration's ability to carry out these responsibilities. One is that very technical hydrological data must be analyzed and then used in the development of a viable floodplain-management program. This is a complex task, and many local communities do not have the requisite technical expertise. Therefore, the Federal Insurance Administration must give special attention to the varying degrees of technical knowledge existing in the communities.

Another limitation of the program is that the federal government has no land-use management authority: The power of land-use control is vested in the states and, through the states, is delegated to local communities. Therefore, the program must be flexible enough to deal with variations in land-use authority among the various states and communities. Furthermore, the Federal Insurance Administration must deal with a wide variety of legislative and administrative set-ups at the state and local levels.

State Governments

Each state has a Federal Insurance Administration Coordinating Agency, designated by the governor, that coordinates local, federal, and state aspects of the program. (Federal Insurance Administration State Coordinators are included in our state elite sample). If the state has more stringent floodplain regulations than the Federal Insurance Administration, then the flood insurance regulations stipulate that the state regulations must be applied to local communities. According to the Federal Insurance Administration, (n.d.a.), the State Coordinating Agency "has considerable experience in dealing with flood hazards and alternative adjustments to floods, and is particularly sensi-

tive to the interrelationship of flooding problems among neighboring communities." The responsibility of the State Coordinator includes

> —recommending priorities to the Federal Insurance Administration for the order in which studies should be performed
>
> —attending coordination meetings whenever possible and explaining applicable state requirements
>
> —initiating and maintaining long-term communication between local officials and the State on flooding problems and other interrelated issues
>
> —coordinating the overall State efforts in flood plain management so that the actions of one community do not adversely affect other areas
>
> —assisting community officials in interpreting technical information on flooding, understanding the effect of man's actions on flood hazards, and appreciating the costs and benefits of various adaptations to flooding
>
> —helping to disseminate information about the study [Guidebook for Community Coordination During Flood Insurance Studies, undated FIA publication]

Overall, there is no mandated requirement of state participation, so each state has a unique relationship to NFIP. Each state has its own particular flood hazards, land-use patterns, and land-use policies and regulations. Therefore, each state evaluates the program in terms of its own needs. In some instances, the states may be extremely interested in participating to the fullest possible extent; other states may not show any interest at all. In a few cases, of course, special state legislation was necessary so that the local communities could have the power of land-use control; otherwise, state participation is self-initiated and essentially voluntary.

Local Governments

Local communities are responsible for implementing the program, and it is their decision whether or not to participate in the first place. Community officials must also ultimately employ the results of the FIRM study in drafting, implementing, and enforcing floodplain regulations. They also must understand the various rights of appeal in the program. Overall, the Federal Insurance Administration (n.d a.) considers the following to be the specific concerns of community officials:

> —to present the study contractor all information the community feels should be considered
>
> —to disseminate information on the study throughout the community, giving local residents an opportunity to comment
>
> —to become familiar with National Flood Insurance Program requirements

> —to understand the reasons for and technical results of the study, and the right of appeal
>
> —to identify sources of technical assistance through the State Coordinating Agency and the Consultation Coordinating Officer
>
> —to consider flood insurance and flood management as alternatives to costly flood control structures in adapting to flood problems
>
> —to negotiate a floodway delineation with the study contractor and state officials, from among the technically feasible alternatives which meets all acceptable standards [Guidebook for Community Coordination During Flood Insurance Studies, undated FIA publication]

Some communities may have problems with the technical data included in the flood insurance study. When this occurs, community officials can obtain technical assistance through their State Coordinating Agency or the CCO. However, if state involvement in the program is low, it may be difficult for communities to find technical assistance. They may have trouble providing the study contractor with information on past flooding, if no accurate records were kept. Thus, although local communities can be *encouraged* to adopt appropriate floodplain management regulations, it may be difficult for them to implement them.

THE REACTIONS OF STATE ELITES

Although NFIP is aimed primarily at local communities, states who choose to do so can play an important facilitative or obstructive role in implementing the program at the local level. For NFIP, of course, the state must yield authority to regulate land use to the local community. Moreover, since states have other direct responsibilities in various federal disaster policies, they may be assumed to be interested in the NFIP, even though they have very minor mandated roles.

More than 92% of the states elites studied had at least heard of NFIP at the time of our survey; 6 3% said they had not heard of it; and the remainder said they didn't know. In general, respondents in states with few flood problems were least likely to have heard of NFIP. Elite knowledge of NFIP is very much higher than levels of knowledge prevailing among the general population (see Chapter 7)

Overall elite opinion on NFIP is quite favorable, with 88% of the respondents ($N = 2166$) expressing favorable or very favorable opinions. Among state respondents, the percentage is 89%. Table 6 3 shows how favorability varies by state, reports the average flood and hurricane seriousness scores, and reports the percentages of respondents who said that the state had **experienced** a serious flood or hurricane in the previous 10 years. There is

TABLE 6.3

Mean State Average Favorability to the National Flood Insurance Program and Selected Disaster Variables (State Elites, N = 461)

	Rank Order[a]	STATE[b]	Favorability to NFIP[c]	Flood[d] Seriousness X̄	Flood[d] Seriousness Rank	Hurricane[e] Seriousness X̄	Hurricane[e] Seriousness Rank	Proportions with 10 Yrs. Experience with Floods[f]	Proportions with 10 Yrs. Experience with Hurricanes[g]
(Most Favorable)	1	NY	1.05	6.13	6	4.22	13	87	91.3
	2	PA	1.13	7 83	1.5	5.92	8	100	66.7
	3	NH	1.35	4.05	9	2.67	13	33.3	4.8
	4.5	NC	1 36	3.44	13	2.72	15	32	32
	4.5	MA	1.36	4.46	13	3.09	15	38.1	45.5
	6	NJ	1.44	5.70	10	4.30	12	86.4	66.9
	7	CT	1.48	4.55	8	4 45	9	52.6	52.4
	8	VA	1.54	5.88	6	3.67	14	100	62.5
	9	CA	1.57	3.26	15	1.30	17	52 4	8.7
	10	LA	1.58	6.00	7	7.75	1	80	95
	11	IL	1.60	4.76	11	1.00	18	85	0
	12	AL	1.63	4.62	11	3.43	15.5	66.7	57.1
	13	FL	1.64	3.73	11	4.65	10	42.3	80.8
	14	CO	1.65	6.42	4	1.42	18	100	0
	15	SC	1.75	2.79	14	1.83	17	25	9.1
	16	TX	1.80	4.54	7	4.76	6	69.2	96.2
	17	MO	1.82	4.74	7	1.17	18	82.6	0
	18.5	DL	2.00	3.35	13	3.22	15	39.8	43.5
	18.5	OK	2.00	4.83	7	1.00	18	72.7	4.3
(Least Favorable)	20	UT	2.04	3.27	14	1.04	17	33.3	0

[a] Rank-ordered according to the state mean opinion of the NFIP.

[b] The number of respondents in each state ranges from 19 to 24.

[c] The mean opinion of the National Flood Insurance Program (1 = strongly favor; 4 = strongly oppose). See table 4-12 for exact question wording.

[d] The mean seriousness of flooding (1 = no problem; 10 = very serious problem). The rank indicated here represents the "assumed" ranking of floods relative to all other problems mentioned. (For list of other problems mentioned, see Chapter 4).

[e] The mean seriousness of hurricanes (1 = no problem; 10 = very serious problem) The rank indicated here represents the "assumed" ranking of hurricanes relative to all other problems mentioned

[f] The percentage of state respondents who stated that their state had experienced a serious flood within the last 10 years.

[g] The percentage of the state respondents who stated that their state had experienced a serious hurricane within the last 10 years.

relatively little variation in NFIP attitudes across states; averages range from 1.05 to 2.04 (where 1 = strongly in favor and 4 = strongly opposed). Thus, most elites in all states are favorable toward NFIP.

Elites in New York are the most favorable. New York's enthusiasm for flood insurance is well-attested to by the state's initial desire to administer the program itself. When the Federal Insurance Administration pointed out that New York could not possibly afford to "cover" flooding upstate and riots in New York City at the same time, however, the state agreed that federal administration of the program was, indeed, best.

Pennsylvania is second in enthusiasm, no doubt largely reflecting the state's experiences with Hurricane Agnes. Our earlier data showed, too, that in the minds of Pennsylvania elites, flooding is tied with inflation as the most serious problem facing the state. Federal Insurance Administration regional directors we interviewed noted that, Pennsylvania has a very active Federal Insurance Administration State Coordinator who has sold local communities on NFIP and has acted as something of a community advocate to the Federal Insurance Administration in turn.

The appearance of New York and Pennsylvania at the top of the favorability listing suggests that the seriousness of a state's flood problem is related to its aggregate opinion of NFIP; this is generally, but by no means universally, the case. Some states with relatively minor flood (or hurricane) problems, for example, New Hampshire, actually rank high in the listing, while other states with very seirous flood problems or with recent experience with serious flooding (or both) come in toward the bottom of the list, for example, Colorado, Texas, Missouri, and Oklahoma.

Texa, in particular, has been very vocal about its dislike for the land-use control aspects of NFIP; the Texas Landowners Association is currently suing the Federal Insurance Administration on the grounds that NFIP is unconstitutional. Similar complaints have been voiced in Missouri, another state that is ranked toward the bottom of Table 6.3 It was Senator Eagleton of Missouri, who introduced the 1977 bill removing some of the sanctions from the program. As of summer, 1977, the Missouri legislature had also failed to pass legislation that would delegate land-use authority to local communities and therefore enable them to participate in the program.

The high rankings of states such as New Hampshire, Massachusetts, and North Carolina—states with low opinions of the seriousness of their hazard problems nonetheless favorable toward NFIP—and the low rankings of states such as Oklahoma, Colorado, Texas, and Missouri, make it apparent that elite attitudes toward NFIP reflect considerably more than a state's aggregate perception of the seriousness of its flood problem Other potentially important factors are considered later in this chapter.

Correlates of Aggregate NFIP Opinions at the State Level

What accounts for the interstate variation in aggregate level of favorability toward NFIP? Table 6.4 presents zero-order correlations between overall state averages on NFIP attitude question, as reported in Table 6.3, and several other aggregated state characteristics. The data reported in the table are for state ($N = 20$), *not* for individual respondents.

Four of the five aggregate disaster-philosophy indications are significantly correlated with aggregate NFIP opinion, all in the expected direction. The higher the support for a free-market hazard-risk concept within the state, the lower the overall opinion of NFIP; likewise, the higher the support for the postdisaster relief approach, the lower the state's opinion of NFIP. In contrast, the nonstructural mitigation approach and the compulsory hazards-

TABLE 6.4

Correlations Between State Average General Opinions of the Federal Flood Insurance Program and Selected State Characteristics (N = 20)

Disaster-Global Policy Measures (see Ch. 4)	r	p
Free Market Position	-.63*	.001
Structural Mitigation	.08	ns
Land-Use Controls	.52*	.009
Compulsory Insurance	.46*	.021
Post-Disaster Relief/Rehabilitation	-.50*	.013
Disaster Seriousness		
Floods	-.51*	.012
Hurricanes	-.44*	.025
Disaster Probabilities		
Floods	-.19	ns
Hurricanes	-.35	ns
Conservatism/Liberalism		
Economic Issues	-.63*	.002
Social Issues	-.50*	.013
Government Regulation	-.39*	.043

*Significant at Alpha = .05

insurance approach are positively and strongly related to favorable NFIP opinions. Of the five disaster philosophy indicators, then, only the one dealing with structural mitigation measures fails to predict NFIP opinions. In general, these findings only imply that support for the NFIP is highest in states where favorable attitudes toward the risk-mitigation concepts contained in NFIP are also highest.

As suggested by Table 6.3, the aggregate seriousness attributed to either the flood or hurricane problem also significantly predicts NFIP attitudes; the more seriously these problems are regarded in the state, the higher the state's favorability toward NFIP. The correlations with estimated return probabilities for floods and hurricanes are in the same direction, but of slightly lower magnitude, and fail to achieve statistical significance.

The three measures of aggregate liberalism-conservatism (see p. 37) are all related to NFIP opinions, in the expected direction. In general, liberal states are more favorable, conservative states less favorable. Thus, states presenting the most favorable attitudinal climate for NFIP are those where (a) hazards problems are seen to be most serious, (b) state elites are generally favorable to nonstructural hazard mitigation, and (c) state elites are generally liberal in political outlook.

Opinions of NFIP, by Elite Position

Table 6.5 shows mean opinions of NFIP by elite position at the state level. The elites most favorable toward NFIP are Small Business Administration representatives, community affairs directors, water resource directors, Civil Defense directors, and insurance representatives: All these groups have significantly more favorable opinions of the NFIP than the overall average. In Chapter 4, three of these five groups ranked at the top of our pro-innovation scale (see p. 79); their favorability to NFIP is thus consistent with their disaster philosophies. Likewise, the least in favor of NFIP are representatives of the National Association of Realtors, Republican leaders, representatives of the National Association of Homebuilders, and disaster legislators. The line-up of opposing and supporting forces on NFIP at the state level, in short, is much the same as for other nontraditional disaster policies that we have considered: hazard specialists and suprastate elites tend to favor them; real estate and development interests tend to oppose them.

Approximately 27% of the variance in NFIP opinions is explained by the regression model in Table 6.6. Neither the respondent's personal disaster experience nor the the state's disaster experience have any effect on NFIP opinion. Favorability to NFIP increases with the respondent's seriousness rating of floods (but not hurricanes), and with the estimated return probabil-

TABLE 6.5

Opinion of the National Flood Insurance Program by Position: State Elites (N = 434) Total Mean Opinion = 1.59

Rank-Order	Position	Mean Opinion of NFIP	Standard Deviation	N
1	SBA	1.09[a]	.294	22
2	Community Affairs	1.20[a]	.414	15
3	Water Resources	1.24[a]	.434	17
4	Civil Defense	1.33[a]	.745	20
5	FIA	1.35	.813	20
6	Insurance Representatives	1.39[a]	.803	36
7	FHmA	1.47	.624	17
8	Governors	1.50	.618	18
9	State Planning Officials	1.50	.618	18
10	Construction Union Lobbyists	1.50	.688	20
11	Democratic Leaders	1.56	.613	34
12	State Geologists	1.65	.745	20
13	Newspaper Editors	1.68	.723	25
14	Banking Officials	1.75	.577	16
15	Disaster Legislators	1.82[b]	.910	66
16	Homebuilders	1.94[b]	.938	18
17	Republican Leaders	1.97[b]	1.043	35
18	Realtors	2.12[b]	.858	17

[a]The group mean is significantly lower than the overall average of the states (one-tailed t-test, $\alpha = .10$).

[b]The group mean is significantly higher than the overall average of the states (one-tailed t-test, $\alpha = .10$).

TABLE 6.6

Regression of State Elite Opinions of the Flood Insurance Program on Selected Characteristics of State Elites (N = 409)[a]

Independent Variables	b[b]	se[c]
1. General Attitudes - Disaster Policy[d]		
Free market position	-.163**	.040
Structural mitigation	.050	.039
Land-Use Controls	.079**	.040
Insurance	.119**	.038
Relief-Rehabilitation	.011	.038
2. Respondent's Political Ideology[e]		
Republican	.124	.078
Economic Liberalism	- 035	.063
Social Liberalism	-.124**	052
Pro-government regulation	-.021	059
3. Personal Characteristics[f]		
Education		
Years residing in state		

TABLE 6.6 *(Continued)*

4. Respondent's Disaster Experience[g]		
Hurricanes	-.067	.081
Floods	.064	.073
5. Respondent's Rating of Seriousness[h]		
Hurricanes	.025	.018
Floods	-.058**	.018
6. Probability of Future Disaster[i]		
Hurricanes	-.003**	.001
Floods	.003	.001
7. State Disaster Experience[j]		
Hurricanes	-.076	.096
Floods	-.038	.096
8. Position Dummies[k]		
Business	-.021	.130
Media	347**	.163
Appointed	.077	.128
Elected	.232**	.101
Development	.291**	.131
Constant = 1.75		
R^2 = .27**		
N = 409		

[a]Elite opinions of the flood insurance program ranged from 1 = strongly favor to 4 = strongly oppose.

[b]Unstandardized regression coefficients. ** designates statistically significant at Alpha = .05

[c]t-test, two tailed.

[d]For the exact wording of these items, see pp. 4-6 and 4-7.

[e]1 = Republican; 0 = all others. For liberalism items, 1 = very conservative, 4 = very liberal.

[f]Education ranged from 1 = did not complete HS to 7 = Ph.D. Years residing in state = respondent's length of residence

[g]Whether or not a respondent has experienced a flood or hurricane (1 = yes; 0 = no).

[h]Seriousness ratings (0 = not problem at all; 10 = a most serious problem).

[i]Respondents' estimates of the chances of a serious flood or hurricane occurring in the state in the next ten years.

[j]"Thinking back over the last ten years, has (STATE) experienced a (FLOOD/HURRICANE) that you would consider to be a serious event?" (1 = yes; 0 = no).

[k]Business = insurance and banking
Media = editors
Appointed = state geologist, planner, and community affairs director
Elected = all categories of state legislators

ity for hurricanes (but not for floods); however, these effects are typically very weak. Also, as the level of education increases, their favorability toward NFIP declines. Only one of the political ideology factors is significant: the more liberal one is on social issues, the more one favors NFIP.

The best predictors of NFIP attitudes are respondents' disaster philosophies and their job positions. Respondents holding disaster philosophies consistent with the risk-mitigation concepts of NFIP tend to favor the program. The multivariate effects for job position are generally consistent with the zero-order effects shown in Table 6.5. As in all other analyses, real estate and development groups show the least favorable NFIP opinions, even when all other variables in the model are controlled.

STATE FLOODPLAIN REGULATIONS AND NFIP

One factor that indicates a state's concern with flooding is whether it has floodplain regulations independent of NFIP. According to the Federal Insurance Administration (n.d.b) 8 of the 20 states we sampled have such regulations, and in 3 states the requirements are stricter than those stipulated in NFIP (see Table 6.7).

All state respondents were asked whether their state currently had regulations or restrictions concerning development and construction in flood-hazard areas. More than 55% said their state did *not* have such regulations (Table 6.7). In Illinois, which has regulations even more strict than NFIP's, only 28.6% of the respondents said that the state had any floodplain regulations. In general, respondents from states without such regulations were somewhat more likely to respond *no* to the question, but the tendency is not very strong. State elites in general are *not* especially well informed about the current status of floodplain-management regulations in their states.

Among respondents from the eight states that have state regulations, 57.4% knew of such regulations, 33.9% stated that there are no regulations, and 8 7% did not know. Among these states, awareness of state floodplain regulations varied by position. State water resource directors were the most aware group (87 5% stated correctly that their state did have regulations), followed by the state disaster legislators (77 8% correct). Seventy-five percent of state planning officials, state geologists, and representatives of the National Association of Homebuilders were also aware of their states' regulations. Almost 67% of the Republican leaders in these states also stated correctly that their state did have flood plain regulations. The least aware groups were the insurance industry (35.7% correct), followed by construction union lobbyists and state Civil Defense directors (37.5% each).

Respondents who said their states *did* have floodplain regulations were asked how effective these regulations had been in restricting development and construction in flood-hazard areas (Table 6.8). Overall, 65.4% felt that the state regulations had been "somewhat" or "very" effective. The highest levels of perceived effectiveness are in Massachusetts and New Jersey, the lowest in Florida and California.

The tendency to see state regulations as effective varies, although not sharply, by elite position (data not shown). Interestingly, the two elite groups perceiving the greatest level of effectiveness for their state regulation are Republican leaders and presentatives from the National

TABLE 6.7

Status of States: Flood Plain Regulations (N = 461)

State	Total	Flood Regulations[a] Yes	No	DK	State Flood Plain Regulations[b]
AL	21	19.1%	71.4%	9.5%	None
CA	23	47.8%	43.5%	8.7%	Yes
CO	24	66.7%	33.3%	--	Yes
CT	21	66.7%	14.3%	19.0%	Yes
DL	23	43.5%	43.5%	13.0%	None
FL	26	50.0%	46.2%	3 8%	Yes
IL	21	28.6%	47.6%	23.8%	Yes
LA	20	--	80.0%	20.0%	None
MA	22	72.7%	22.7%	4.6%	Yes
MO	23	17.4%	69.6%	13.0%	None
NH	21	14.3%	57.1%	28.6%	None
NJ	23	65.2%	26.1%	8.7%	Yes
NY	23	60.9%	34.8%	4.3%	Yes
NC	25	24.0%	72.0%	4.0%	None
OK	23	8.7%	87.0%	4.3%	None
PA	24	20.8%	75.0%	4.2%	None
SC	24	16.7%	58.3%	25.0%	None
TX	26	11.5%	81.5%	--	None
UT	24	16.7%	75.0%	8.3%	None
VA	24	37.5%	50.0%	12.5%	None
TOTAL	461	34.5%	55.1%	10.4%	

[a] The question was worded, "As far as you know, does (STATE) currently have statewide regulations or restrictions concerning development and construction in areas that are subject to floods?"

[b] This is according to "Statutory Land Use Control Enabling Authority in the Fifty States" (FIA publication, undated).

TABLE 6.8

The Perceived Effectiveness of the State Flood Plain Regulations

How effective have the state regulations been on restricting development and construction in flood hazard areas ...

TOTAL SAMPLE

Very Effective	Somewhat Effective	Not Too Effective	Don't Know	N
19.9%	45.5%	17.9%	16.7%	156

STATES WHICH DEFINITELY HAVE FLOOD PLAIN REGULATIONS[a]

State	Very Effective	Somewhat Effective	Not Too Effective	Don't Know	N
CA	9.1%	45.5%	27.3%	18.2%	11
CO	20.0%	53.3%	20.0%	6.7%	15
CT	21.4%	42.9%	14.3%	21.4%	14
FL	8.3%	33.3%	25.0%	33.3%	12
IL	33.3%	16.7%	33.3%	16.7%	6
MA	31.3%	50.0%	6.3%	12.5%	16
NJ	33.3%	33.3%	13.3%	20.0%	15
NY	--	71.4%	7.1%	21.4%	14
TOTAL	19.4%	45.6%	16.5%	18.5%	103

[a]This is according to the FIA undated publication entitled, "Statutory Land Use Control Enabling Authority in the Fifty States."

Realtors, the groups with the least favorable attitudes toward NFIP. Some part of their opposition to NFIP presumably reflects their judgment that existing regulations are adequate.

Respondents who said their state did have floodplain regulations were also asked if they felt that NFIP had interfered in any way with the state's efforts to regulate floodplains (Table 6.9). About 70% of the total sample said *no*, about the same percentage answered *no* in each of the states that actually have such regulations Realtors, homebuilders, and, surprisingly, Federal Insurance Administration state coordinators were most likely to feel that NFIP *had* interfered with the state's floodplain-management regulations

STATE VERSUS LOCAL ELITES: MEAN OPINIONS, BY STATE

So far, we have considered the attitudes of state elites to NFIP. How do the opinions of *local* elites compare to those of state elites on this issue? Table 6.10 presents the mean aggregate NFIP opinions for state and local elites within each state and also shows the difference between these means. In 11

TABLE 6.9

Conflict Between the National Flood Insurance Program and State Efforts to Regulate Flood Plains

In your opinion, has the Federal Flood Insurance Program interfered in any way with the state's efforts to regulate development and construction in flood hazard areas?

TOTAL SAMPLE

Yes	No	Don't Know	N
13.3%	68.6%	18.2%	159

STATES WHICH DEFINITELY HAVE FLOOD PLAIN REGULATIONS[a]

State	Yes	No	Don't Know	N
CA	--	45.5%	54.5%	11
CO	12.5%	87.5%	--	16
CT	21.4%	64.3%	14.3%	14
FL	15.4%	53.8%	30.8%	12
IL	--	83.3%	16.7%	6
MA	6.3%	62.5%	31.3%	16
NJ	33.3%	66.7%	--	15
NY--	--	85.7%	14.3%	14
TOTAL	12.0%	69.0%	19.0%	105

[a]This is according to the FIA undated publication entitled, "Statutory Land Use Control Enabling Authority in the Fifty States."

of 20 cases, the differences are negative, indicating that these state elites tend to have more favorable NFIP attitudes than the local elites within the state. In 2 states no difference exists between the state and local opinions, and in the remaining 7 states local elites are somewhat *more* favorable than state elites.

In four states the state elites are significantly more favorable toward NFIP than are local elites (New York, Pennsylvania, North Carolina, and New Hampshire); in two states local elites are significantly more favorable (Delaware and Oklahoma). These results are quite similar to the state-local disaster innovation differences reported in Chapter 4, (p. 92), and suggest the possibility of some conflict between states and local communities over the implementation of NFIP

Levels of approval of NFIP for state and local elites tend to vary together. When state elites were favorable toward NFIP, local elites in those states also tended to be favorable. This congruence does not suggest a high degree of consensus. Rather, there is sufficient looseness in the correlation ($r = +.46$) to suggest that local elites and state elites may be responding to slightly