Responsive Management

COASTAL TRAINING NEEDS ASSESSMENT AND MARKET INVENTORY FOR THE JACQUES COUSTEAU NATIONAL ESTUARINE RESEARCH RESERVE

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PROJECT SUMMARY

EXECUTIVE OVERVIEW OF NEEDS ASSESSMENT

This study entailed a coastal training needs assessment of coastal decision-makers in New Jersey conducted by Responsive Management on behalf of the Jacques Cousteau National Estuarine Research Reserve. For this study, 206 coastal decision-makers throughout the state of New Jersey were surveyed to assess the baseline knowledge, skills, and attitudes of coastal decision-makers, to identify gaps and overlaps in available training services, and to identify topics where decision-makers want/need additional training and educational materials. The decision-makers were categorized into one of the following categories: business organization representatives, K-12 educators, local government officials, state employees and professional association members, and volunteer organization members. The summary of findings of this needs assessment is presented below.

PARTICIPATION IN COASTAL RESOURCE PROFESSIONAL DEVELOPMENT PROGRAMS

- State employees and professional association members had the highest percentage saying that they attend coastal resource professional development programs (44%); business organization representatives had the lowest percentage (11%). No group had a majority saying they attend coastal resource professional development programs.
  - In total, 53 of the 206 respondents said that they attend coastal resource professional development programs.

- A slight majority (53% overall) of those respondents who said that they attend coastal resource professional development programs attend them every year.

- Volunteer organization members had the highest mean number of hours of attendance in coastal resource professional development programs of any respondent categories; state employees and professional association members had the second highest mean number of hours of attendance. K-12 educators had the lowest mean number of hours of attendance.

- Most often, the individual who responded to the survey made the decisions about which coastal resource professional development programs that he or she attends rather than a supervisor.

COSTS OF COASTAL RESOURCE PROFESSIONAL DEVELOPMENT PROGRAMS THAT RESPONDENT ATTENDS

- Volunteer organization members paid the highest average fee for the typical coastal resource professional development program; K-12 educators paid the lowest average fee.

- Volunteer organization members and K-12 educators pay an average of 25% and 20%, respectively, of the cost of the typical coastal resource professional development program out of their own pocket. Business organization representatives and local government officials, on average, pay none of the costs of the typical coastal resource professional development program.

- State agencies, professional associations, and local governments typically pay the highest percentage of the cost of the typical coastal resource professional development program, followed closely by volunteer organizations. Businesses and K-12 education institutions typically pay the lowest percentage of the cost of the typical coastal resource professional development program.

INTEREST IN PARTICIPATING IN COASTAL RESOURCE PROFESSIONAL DEVELOPMENT PROGRAMS, ISSUES OF INTEREST, AND COASTAL TRAINING NEEDS

Interest in Participating in Coastal Resource Professional Development Programs

- A majority of each group expressed interest in participating in coastal resource professional development programs in the future.
  - Volunteer organization members had the most interest (90% are very or somewhat interested in participating in coastal resource professional development programs), followed by state employees and professional association members (81%).

- The lowest interest is among business organization representatives, although a majority of them are interested (53% are very or somewhat interested in participating in coastal resource professional development programs).

- Direct mail and e-mail are the most popular ways that respondents prefer to be notified about coastal resource professional development programs.

- The most important factors that affect respondents' ability to attend coastal resource professional development programs are lack of time/being too busy, training not being relevant to the respondent's needs, inability to take time off from work, or the training being held in an inconvenient location.

Issues of Interest

- For all groups, the top two research and education topics about which the respondents are very interested in learning are wetlands and impacts of human disturbance on New Jersey estuaries. Other important topics are water quality monitoring, MARE, and habitat ecology of estuarine fishes.

Coastal Training Needs

- In general, volunteer organization members had the highest percentages saying that there is a high need for training about each habitat issue. Of those habitat issues, urban sprawl is at the top of each group's list; a majority of each group said there is a high need for training about urban sprawl. Other top habitat issues are wetlands and waterways protection (the second most popular answer among each group except state employees and professional association members, for which it is the third issue) and habitat protection and restoration.

- With a single exception, no coastal issue had a majority of any group saying that there is a high need for training about it. In general, K-12 educators had the highest percentages saying that there are high needs for training about the issues. The most important issues overall are coastal construction, dredging and filling, severe weather emergency management, coastal erosion, coastal hazards, public access, and saltwater intrusion.

- In general, volunteer organization members had the highest percentages saying there are high needs for training about water quality issues. The top issues are nonpoint source pollution (the top issue for four of the five groups), storm water protection and cleanup, and water quality.

- There was much variation among the groups' perceived needs for training about education, planning, and regulation issues. For instance, the top issues for K-12 educators are education issues, whereas the top issues for local government officials are public safety and regulations.

- There was much variation among the groups' perceived needs for training about resource management issues. The top issues are land trusts and conservation acquisitions, economic aspects of land use, social aspects of land use, and renewable energy.

- Of all the categories of coastal issues, ocean sciences topics had the lowest percentages of respondents having said that there are high needs for training about them. The highest percent indicating there is a high need for training is the 22% of K-12 educators who said that biogeochemical predictors of ocean-atmosphere conditions and climate prediction are issues about which there are high training needs.

- Currently, the most important sources of information that respondents use in making coastal resource management decisions are state resources, environmental groups, federal resources, professional contacts through meetings, municipal officials, and the Internet.

- State employees and professional association members had the highest percentage who agreed that there is enough coastal resource professional development in New Jersey and that there are enough providers of coastal resource professional development programs in New Jersey. Business organization representatives had the lowest percentage who agreed.

RATINGS OF VARIOUS FORMATS FOR COASTAL TRAINING AND EFFECTIVENESS OF VARIOUS LEARNING TECHNIQUES

Ratings of Various Formats for Coastal Training

- The answers regarding the professional development formats that would be very effective for respondents to learn about coastal resource issues varied according to the group being surveyed. Nonetheless, the formats that are at or near the top of the list for all groups are field trips (at the top of the list for all groups except business organization representatives), continuing education courses, and workshops.

Effectiveness of Various Learning Techniques

- The top three learning techniques for all groups, although not always in the same order, are one-on-one instructions, hands-on activities, and demonstrations.

ENCOURAGING PARTICIPATION IN COASTAL RESOURCE PROFESSIONAL DEVELOPMENT PROGRAMS

Incentives to Encourage Participation in Coastal Resource Professional Development Programs

- The most common answer among all groups except state employees and professional association members regarding the most effective means to encourage attendance at a training/education/outreach session is expert speakers. Other important means are easy access to workshop, free training, and field demonstrations. The items at the bottom of the list for all groups are t-shirts and a special patch for training completion.

Best Dates, Times, and Registration Structure to Encourage Participation in Coastal Resource Professional Development Programs

- No season stood out as much better than other seasons for coastal resource professional development programs, although spring is the least desired season among all groups except local government officials.

- By far, weekdays are preferred over weekends for coastal resource professional development programs.

- Morning is the preferred time of day for coastal resource professional development programs; evening is the least preferred time of day.

- Half-day sessions or day-long sessions are the most preferred length of time for coastal resource professional development programs.

- On-line registration is the most popular format for registering for coastal resource professional development programs among all groups. The next most popular format for registering is mail-in registration.

EXECUTIVE OVERVIEW OF MARKET INVENTORY

This study entailed a market inventory of coastal resource professional development providers in New Jersey conducted by Responsive Management for the Jacques Cousteau National Estuarine Research Reserve. Various agencies/organizations were identified as potential providers and were surveyed for the purpose of creating a statewide inventory of current coastal training programs, to identify gaps and overlaps in training services, and to identify potential partnerships for Coastal Training efforts in New Jersey. The summary of findings for this market inventory is presented below.

COASTAL RESOURCES OUTREACH/EDUCATION PROGRAMS PROVIDED/OFFERED

Programs Provided/Offered

- The most often provided formats/types of coastal training are educational materials (52% said their agency/organization provided these), science-based information (50%), outreach, such as Web pages, newsletters, etc. (48%), and classes, tours, or field trips (46%).

- The top topics/skills that the respondents' divisions offer relating to *habitat issues* are habitat protection and restoration (71% said their agency/organization offers training about this topic/skill), wetlands and waterways protection (66%), biodiversity (57%), and native plants (54%). These are the only habitat issues for which a majority said their agency/organization offers training.

- The top topics/skills that the respondents' divisions offer relating to *coastal issues* are coastal erosion and accretion (46%), dredging and filling (40%), and coastal processes/geology (40%). No coastal issue had a majority of respondents saying that their agency/organization offers training about it.

- The top topics/skills that the respondents' divisions offer relating to *water quality issues* are water quality (74%), nonpoint source pollution (74%), point source pollution (63%), and water quantity (54%). These are the only water quality issues for which a majority said their agency/organization offers training.

- The top topics/skills that the respondents' divisions offer relating to *education, planning, and regulation issues* are environmental education for K-12 students (69%), environmental education for adults (63%), and land use planning (smart growth, watershed buildup) (54%). These are the only education, planning, and regulation issues for which a majority said their agency/organization offers training.

Formats and Delivery Methods of Coastal Training Provided

- The types of coastal resource education/outreach formats that were most often provided were informal education/outreach (60% of the divisions provided this type), special events excluding conferences (37%), and in-service education/outreach for educators (31%).

- By far, field-based courses were the most-provided type of coastal training.

- The most popular types of informal education/outreach were publications, such as brochures and newsletters (63%), Websites (54%), field trips (49%), and interpretive signs (31%).

- The most popular delivery methods for coastal resource education/outreach are presentations (66%), field trips and courses (57%), and lectures (46%).

- The most popular information dissemination methods that agencies/organizations use are technical assistance via face-to-face interactions (37%), technical assistance via

manuals/materials for non-specialist (31%), synthesis of knowledge in the form of general, less technical outlets (29%), and partnerships (29%).

Characteristics of Outreach/Education Sessions

- The most common length of the typical coastal resources education/outreach session is one hour to a half-day, followed by a half-day to day-long session.

- Most often, respondents' organizations generally hold their coastal resources education/outreach sessions local to the organization providing the session (49%), followed closely by those that hold their sessions local to the participants (46%). Finally, 26% hold the sessions central to the providers and attendees.

Individuals and Organizations that Use Coastal Resources Outreach/Education Programs

- Of local government managers and other officials, city/town council members (34%), planning commission members (23%), and city/town engineers (23%) were the types of positions most in attendance at the coastal resources education/outreach programs offered by the respondent's organization.

- Of volunteer organization members, members of chapters of environmental organizations (34%), members of watershed associations (34%), and members of conservation commissions (26%) were the types of positions most in attendance at the coastal resources education/outreach programs offered by the respondent's organization.

- Of business organizations, environmental consultants (31%), members of chambers of commerce (17%), and members of tourist boards (17%) were the types of positions most in attendance at the coastal resources education/outreach programs offered by the respondent's organization.

- Of state agency employees, professional association members, and educators, K-12 educators (77%), the general population (51%), environmental educators (46%), and environmental

protection agency employees (40%) were the types of positions most in attendance at the coastal resources education/outreach programs offered by the respondent's organization.

EVALUATION AND RATINGS OF COASTAL RESOURCES OUTREACH/EDUCATION PROGRAMS PROVIDED

- A majority of respondents (86%) said that the coastal resources education/outreach that their division conducts matches exactly or matches somewhat the objectives of the National Estuarine Research Reserve System Coastal Training Program.
  - 23% said it matches exactly.
  - 63% said it matches somewhat.

- A strong majority of respondents (97%) said that coastal resources education/outreach is very or somewhat important compared to other programs in their division.
  - 51% said it was very important.
  - 46% said it was somewhat important.

- A majority of respondents (57%) said that their division does *not* have an evaluation component as part of its coastal resources education/outreach services.
  - 29% said their division does have an evaluation component as part of its coastal resources education/outreach services.

- Most often, those divisions that have an evaluation component as part of their coastal resources education/outreach services conduct the evaluations more than twice a year (4 respondents out of 10 gave this answer).

PROVIDERS' PERCEPTION OF COASTAL TRAINING NEEDS

- Respondents' perceptions of needs for coastal resources education/outreach regarding *habitat issues* were highest for the following topics: habitat protection and restoration (89% said there was a high need for training about this topic), wetlands and waterways protection (80%), biodiversity (74%), and urban sprawl (74%).

- Respondents' perceptions of needs for coastal resources education/outreach regarding *coastal issues* were highest for the following topics: coastal community development (86%), coastal construction (86%), and coastal erosion (77%).

- Respondents' perceptions of needs for coastal resources education/outreach regarding *water quality issues* were highest for the following topics: water quality (77%), water quantity (74%), and nonpoint source pollution (74%).

- Respondents' perceptions of needs for coastal resources education/outreach regarding *education, planning, and regulation issues* were highest for the following topics: land use planning (smart growth, watershed buildup) (74%), environmental education for K-12 students (74%), professional development for K-12 educators (71%), and environmental education for adults (69%).

- Respondents' perceptions of needs for coastal resources education/outreach regarding *resource management and other issues* were highest for the following topics: endangered species (69%), invasive species (66%), estuarine ecology (63%), ecological landscaping (60%), and erosion control (60%).

- Respondents' perceptions of needs for coastal resources education/outreach regarding *ocean sciences topics* was highest for ocean surface properties (9%).

- Coastal resources education/outreach providers perceived that the highest needs for coastal resources education/outreach were among planning commission members, city/town planners, city/town engineers, property owner associations, and building/development associations (all with 75% saying there was a high need for training among these groups).

- A majority of respondents (53%) disagreed that there is enough coastal resources education/outreach in New Jersey.
  - 2% strongly agreed and 13% moderately agreed.
  - 15% strongly disagreed and 38% moderately disagreed.

- More respondents disagreed than agreed that there are enough coastal resources education/outreach providers that offer education/outreach for coastal decision-makers in New Jersey.

RECOMMENDATIONS AND IMPLICATIONS

The results of these studies indicate that the community of coastal resource professional development providers in New Jersey appears small but is possibly quite sizeable. In the study, 140 individual potential providers were identified and surveyed, and 48 providers responded to the market inventory survey. Of the 48 providers who responded, 35 said that they conduct coastal resource professional development, and 13 said that they did not. Despite the small number of providers, a total of 95 formal coastal resource professional development programs were identified in New Jersey. This is likely a conservative number, as several organizations indicated that they provide formal coastal training programs but did not provide the names of their programs.

The coastal training providers in New Jersey (based on the respondents to this survey) are a diverse group, although most of the training was conducted by not-for-profit organizations and state agencies. Overall, agencies/organizations held their coastal training sessions with convenience in mind (for them or for their participants), either local to their agency/organization or local to the participant.

INCREASE TRAINING

Although current coastal resource training efforts are already reaching a relatively large audience (a mean of 5,813 people were reached by an agency's or organization's coastal training services) in New Jersey, coastal training agencies/organizations (providers) and coastal decision-makers agreed that there is a need for more coastal training and more coastal training providers in New Jersey. To increase the effectiveness of this effort, the Jacques Cousteau Reserve can focus on certain topics/skills as well as specific audiences.

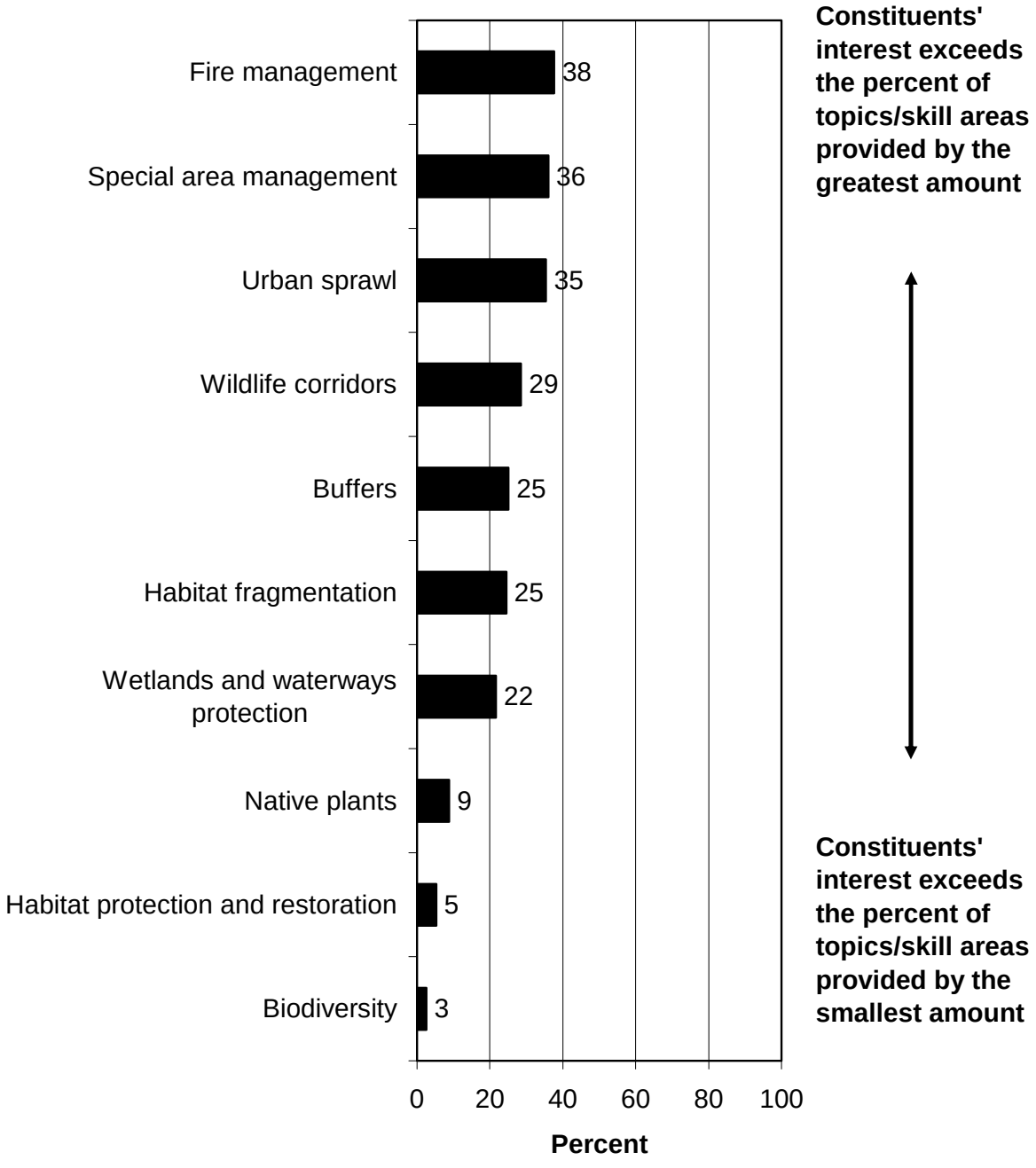
TOPICS/SKILLS AREAS

In the market inventory survey, providers were asked in which coastal resource topics/skills their agency or organization provides outreach/education, and in the needs assessment survey, coastal decision-makers were asked in which topics/skills areas were they most interested in learning more. Statistical analyses were then performed to determine the percentage point difference between coastal decision-makers' high or moderate interest in the given issue and the percentage of providers who actually offer training in that area. It is important to note that this gap does not always mean that not enough training about that topic is being provided, since in some instances a limited number of providers may have the capacity to meet all the needs. However, this information does highlight issues that the Jacques Cousteau Reserve should monitor to ensure that training needs in that issue are met. The following list shows the topic areas that have the *largest* percentage point difference between the percentage of coastal decision-makers' who show an interest in the issue and the percentage of providers offering training on that issue, suggesting that the following topics may be important for future program development:

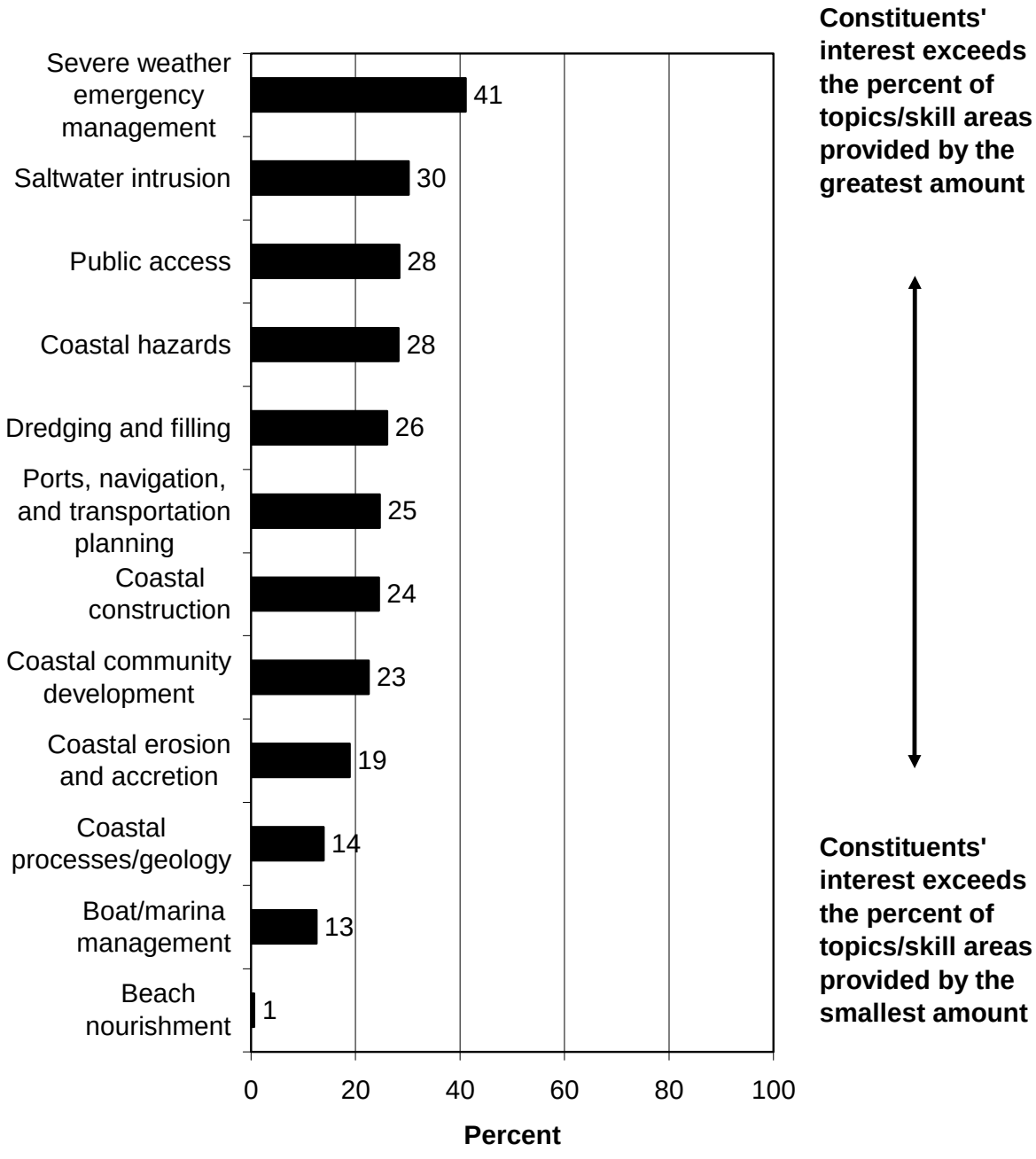
- **Habitat Issues:** Fire management, special area management, and urban sprawl.
- **Coastal Issues:** Severe weather emergency management, saltwater intrusion, public access, and coastal hazards.
- **Water Quality Issues:** Wastewater management, septic system issues, and storm water protection and cleanup.
- **Education, Planning and Regulation Issues:** Public safety, GIS education/outreach, organizational/management skills, and regulations.
- **Resource Management and Other Issues:** Environmental technologies, renewable energy, and land trusts and conservation acquisitions.
- **Ocean Sciences Topics:** Climate prediction.

This does not imply that the other topics/skills areas that providers currently offer are not important; rather, this information simply provides direction for the Jacques Cousteau Reserve in terms of planning future programs. This information can also be used when approaching new partners for the Coastal Training Program by helping to target organizations that may have a higher interest than others in providing coastal training or education/outreach services in these areas.

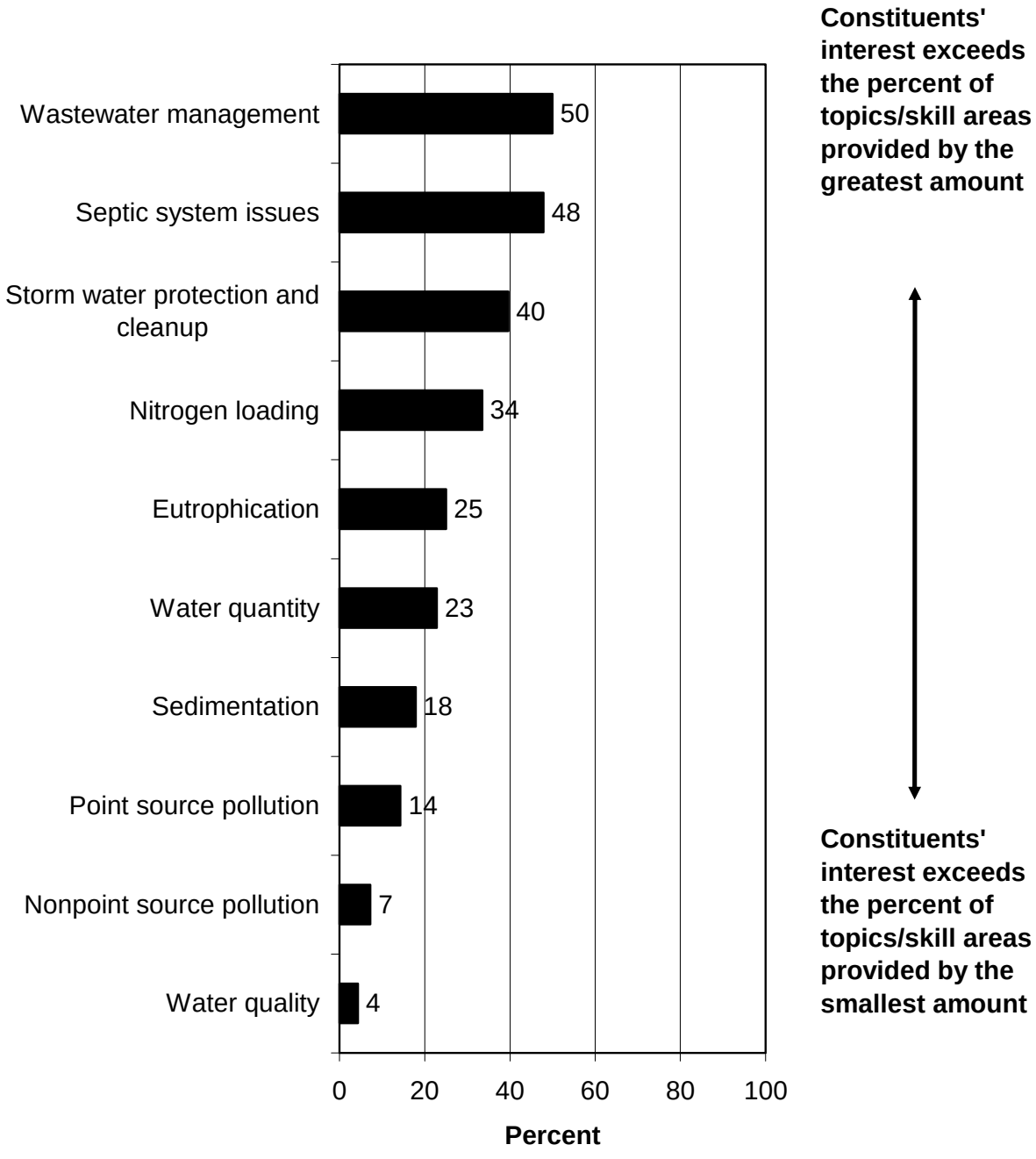
Percentage point differences in the percent of constituents' high and/or moderate interest in an issue and the percent of providers offering the service (habitat issues)



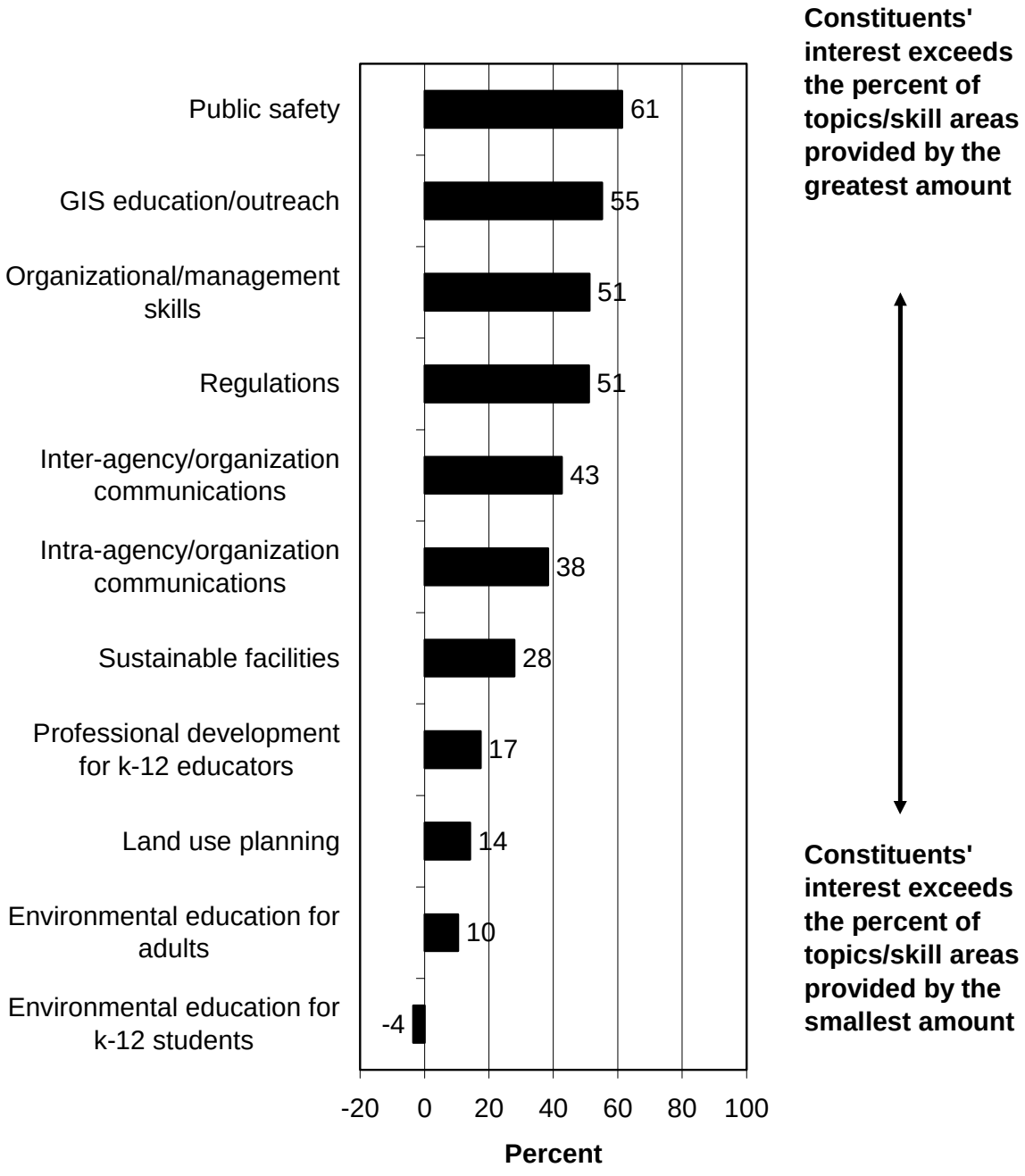
Percentage point differences in the percent of constituents' high and/or moderate interest in an issue and the percent of providers offering the service (coastal issues)



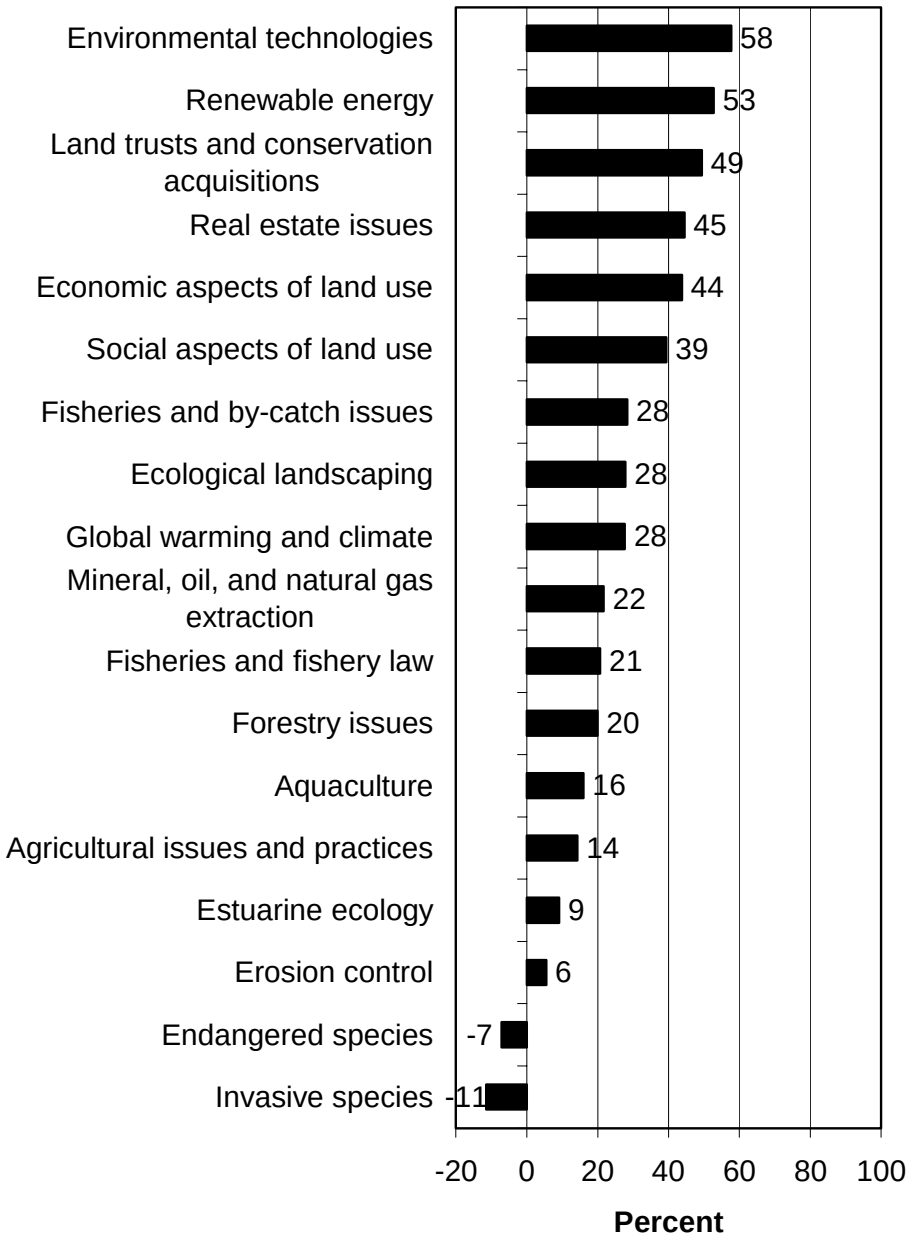
Percentage point differences in the percent of constituents' high and/or moderate interest in an issue and the percent of providers offering the service (water quality issues)



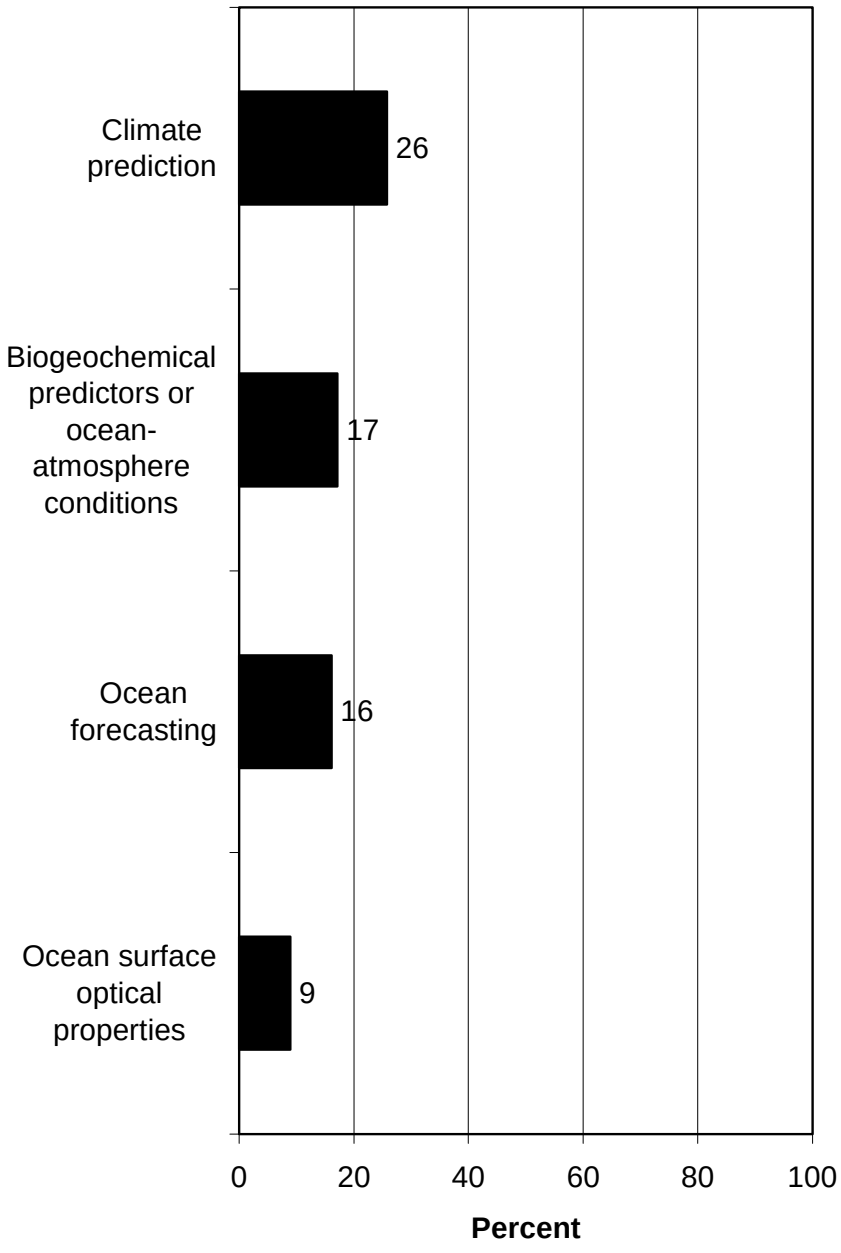
Percentage point differences in the percent of constituents' high and/or moderate interest in an issue and the percent of providers offering the service (regulation issues)



Percentage point differences in the percent of constituents' high and/or moderate interest in an issue and the percent of providers offering the service (resource management and other issues)



Percentage point differences in the percent of constituents' high and/or moderate interest in an issue and the percent of providers offering the service (ocean sciences topics)



Constituents' interest exceeds the percent of topics/skill areas provided by the greatest amount

Constituents' interest exceeds the percent of topics/skill areas provided by the smallest amount

TARGET MARKETS

Statistical analyses were also performed to compare the differences between coastal decision-makers' perceptions and providers' perceptions of the types of people most in need of training. The top five groups that providers felt were in most need of more coastal resource planning information and professional development were:

- Property owners associations
- City/town engineers
- Planning commission members
- Building development associations
- Commercial property owners associations

The top five groups that coastal decision-makers felt were in most need of more coastal resource planning information and professional development were:

- Coastal planners
- Coastal regulators
- Environmental protection agency personnel
- Planning commission members
- City/town planners and marine resource agency personnel

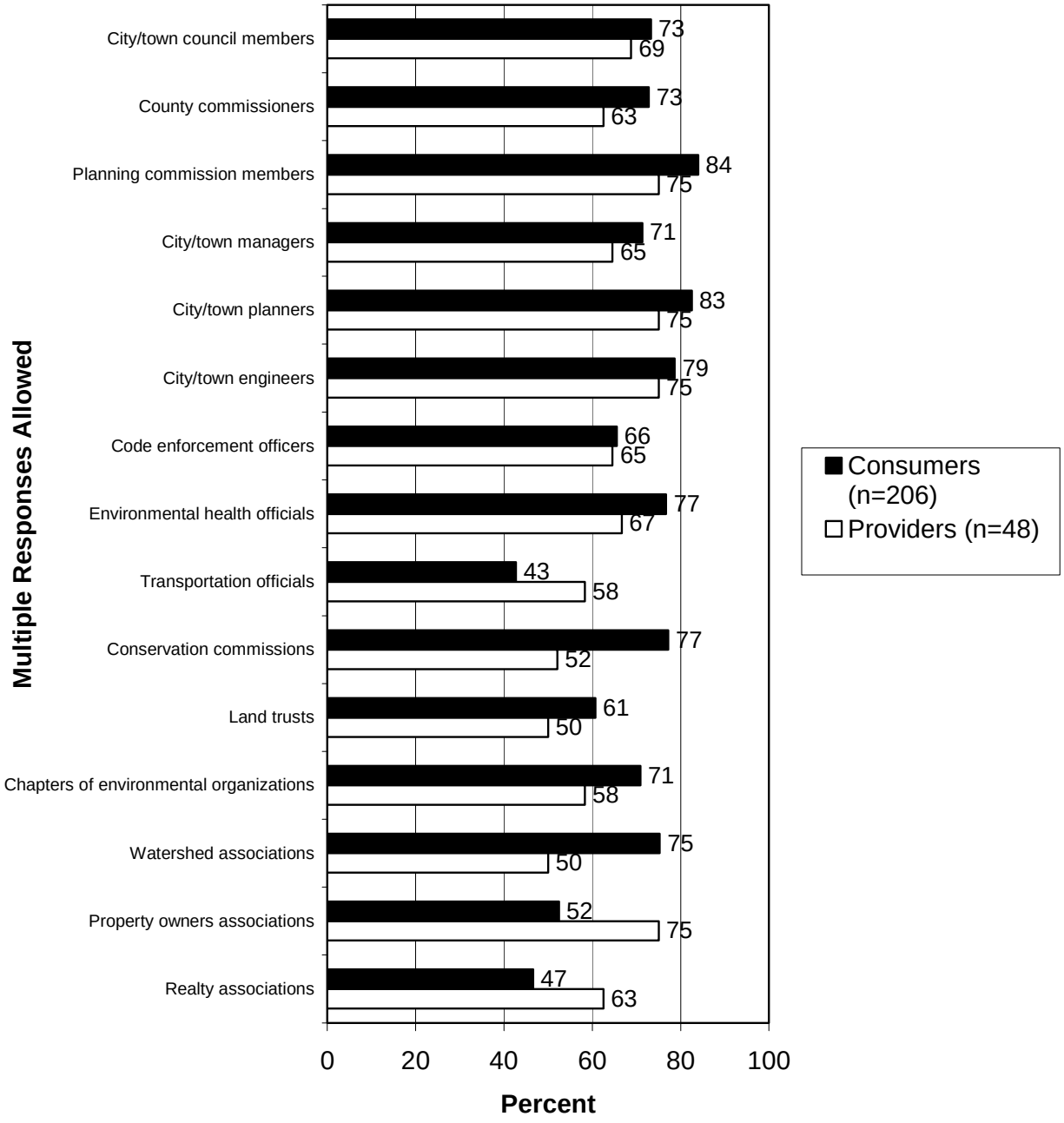
Although providers and coastal decision-makers differed slightly in their perceptions of groups that are in need of more coastal resource training, there were some similarities. For example, both groups felt that planning commission members were among the types of people in highest need of more coastal resource information and training. Providers seemed to think that people involved with planning or building had a higher need for more information. Coastal decision-makers also seemed to think that regional groups were in need of more training and education than were local groups. Both groups' perceive that the types of individuals they think need more training and information are involved with habitat issues, which coincides with their interest in habitat issues such as urban sprawl, as previously mentioned. Planners, regulators, and builders are often involved in urban planning and development, and as the state becomes more urbanized, it will become increasingly important for these types of decision-makers to be knowledgeable

about sustainable development and designing building projects that minimize impacts on the environment.

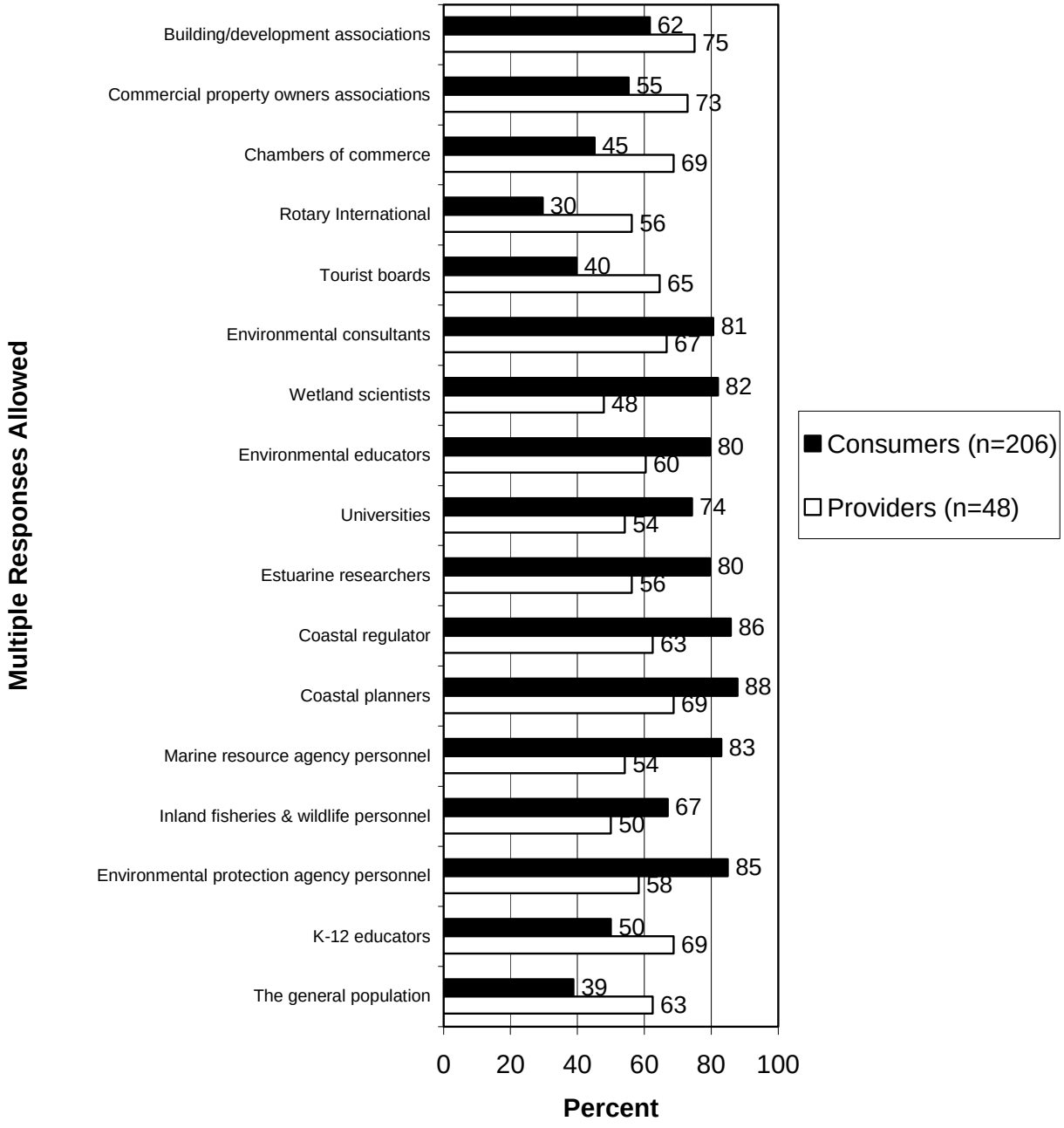
The groups of people for which coastal decision-makers' perceptions of needs greatly exceeds (more than 20 percentage points) providers' perceptions of needs are wetland scientists, marine resource agency personnel, environmental protection agency personnel, conservation commissions, watershed associations, estuarine researchers, and coastal regulators. On the other hand, the groups of people for which providers' perceptions of needs greatly exceeds (more than 20 percentage points) coastal decision-makers' perceptions of needs are K-12 educators, Rotary International, tourist boards, chambers of commerce, the general population, and property owners associations.

Although there is not a clear pattern to these differences, the Jacques Cousteau Reserve should keep these differences in mind when developing new programs for specific audiences. Providers seem to think that the "expert" audience (researchers, agency personnel) is in greater need of more education and information, while the coastal decision-makers seem to place more emphasis on the "general" audience (general population, chambers of commerce). This could simply be because providers are the agencies and organizations providing the service and, therefore, feel that they need more information to become better educators.

People for whom respondents felt there was a high need for coastal resource planning information and professional development.
Part 1



People for whom respondents felt there was a high need for coastal resource planning information and professional development.
Part 2



PARTNERSHIPS

All of the agencies/organizations that were contacted for this study should be viewed as potential partners for the Jacques Cousteau Reserve in its Coastal Training Program efforts. However, some agencies/organizations may be better suited to provide coastal training than others. For example, the respondent representing the Great Swamp Outdoor Education Center said that the Center does not become involved in coastal training issues, but the mission statement indicates that, "through the use of trail guides, wildlife surveys and interpretive hikes, we encourage a wise and responsible relationship with nature" (see profiles of each organization). This organization also indicated an interest in future partnerships to conduct education on coastal resources. It seems possible that this organization, through its existing facilities, could add a coastal resources component with something as simple as using interpretive signs to explain the importance of wetlands on water quality. In contrast, the respondent from the Department of Environmental Science and Geography at William Paterson University indicated that the Department was not interested in forming a partnership; however, this organization could still potentially serve as an important source of information on scientific research on issues relating to coastal resources.

COASTAL TRAINING ADMINISTRATION

Most of the coastal resource professional development that is administered by the agencies/ organizations that responded to the survey is accomplished through informal education/outreach, special events, and in-service education/outreach for educators. By far, field-based courses were the most-provided type of coastal training (the highest actual number of available programs). Although coastal decision-makers varied in their preferences for delivery formats, the formats that were at or near the top of the list for all groups were field-based programs/field trips (at the top of the list for all groups except business organization representatives), continuing education courses, and workshops. Therefore, it appears that the need is being met regarding programs with a field component.

Coastal training providers should consider offering additional continuing education courses and workshops. With 28 university contacts identified for the market inventory, this group could become an important and viable addition to the Coastal Training Program efforts in New Jersey.

Almost all universities have biology or environmental science departments, sometimes with a marine science component. Continuing education programs (with a coastal resource component) could be an added benefit to universities as a source of revenue and to coastal decision makers as a source of information and education. Also, universities are located throughout the state, which would make it more convenient for coastal decision-makers to attend the programs.

Coastal training providers in New Jersey should consider offering programs during the week, in the morning, and with sessions that do not run longer than one day. Overall, coastal decision makers did not indicate a strong preference for any particular season; however, spring was the least desired season among all groups except for local government officials. It appears that coastal training providers are meeting the needs of coastal decision-makers regarding the average length of program sessions. The market inventory results showed that a majority of providers are offering coastal resource training sessions that on average last less than one day.

Coastal training providers in New Jersey should consider using conferences, continuing education classes, seminars, workshops, and Web-based programs to deliver coastal training. In addition, when the percentage of coastal decision-makers who rated learning techniques as very or somewhat effective and the percentage of providers who offer the given learning technique were compared, the largest percentage point differences (indicating the possibility of an unmet need) occurred with case studies, accelerated learning techniques, and one-on-one instruction.

INFORMATION DISSEMINATION

The Jacques Cousteau Reserve should consider developing methods to improve communication and information dissemination among the coastal management community in New Jersey, including those that provide coastal resource professional development as well as those that participate in training. Although the community of coastal training providers in New Jersey appears to be small, there is ample latitude for expanding the current network of identified coastal resource professional development providers and their partners. One of the most important and influential things the Jacques Cousteau Reserve can do is to improve the general awareness levels of current coastal training services in New Jersey, the agencies/organizations that are currently offering these services, and the methods that an agency/organization can use to

tap into the network of coastal resource management professionals. Many of the individuals who were contacted for these studies expressed interest in being made aware of coastal resource professional development programs offered in New Jersey, as well as being made aware of how they could become involved in the Coastal Training Program. The Jacques Cousteau Reserve could improve general awareness levels by creating a formal schedule of coastal resource professional development services that are currently offered and distributing this schedule to coastal resource management professionals.

The top preferred methods (direct mail and e-mail) for coastal decision-makers to receive notification of coastal training closely matched providers' delivery methods. However, other than those two methods, there are extremely large differences between ways that notification is provided and the ways that coastal decision-makers would like to be notified. Interestingly, the Internet was preferred by only 8% of coastal decision-makers but was used by 74% of providers; an organizational newsletter was preferred by only 4% of consumers but was used by 51% of providers; and a press release was preferred by only 1% of consumers but was used by 63% of providers. It appears that coastal decision-makers wish to be informed about information and education opportunities in a very direct manner (direct mail, e-mail). This is actually very convenient for providers, since the largest barriers to offering coastal resources education and outreach were funding and time. Direct mail and e-mail announcements can be sent quickly and generally with little costs.

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NEEDS ASSESSMENT

SUMMARY OF FINDINGS OF NEEDS ASSESSMENT

This study entailed a coastal training needs assessment of coastal decision-makers in New Jersey conducted by Responsive Management on behalf of the Jacques Cousteau National Estuarine Research Reserve. For the study, 206 coastal decision-makers throughout the state of New Jersey were surveyed to assess the baseline knowledge, skills, and attitudes of coastal decision-makers, to identify gaps and overlaps in available training services, and to identify topics where decision-makers want/need additional training and educational materials. The summary of findings of this needs assessment is presented below.

PARTICIPATION IN COASTAL RESOURCE PROFESSIONAL DEVELOPMENT PROGRAMS

- State employees and professional association members had the highest percentage saying that they attend coastal resource professional development programs (44%); business organization representatives had the lowest percentage (11%). No group had a majority saying they attend coastal resource professional development programs.
  - In total, 53 of the 206 respondents said that they attend coastal resource professional development programs.

- A slight majority (53% overall) of those respondents who said that they attend coastal resource professional development programs attend them every year.

- Volunteer organization members had the highest mean number of hours of attendance in coastal resource professional development programs of any respondent categories; state employees and professional association members had the second highest mean number of hours of attendance. K-12 educators had the lowest mean number of hours of attendance.

- Most often, the individual who responded to the survey made the decisions about which coastal resource professional development programs that he or she attends rather than a supervisor.

COSTS OF COASTAL RESOURCE PROFESSIONAL DEVELOPMENT PROGRAMS THAT RESPONDENT ATTENDS

- Volunteer organization members paid the highest average fee for the typical coastal resource professional development program; K-12 educators paid the lowest average fee.

- Volunteer organization members and K-12 educators pay an average of 25% and 20%, respectively, of the cost of the typical coastal resource professional development program out of their own pocket. Business organization representatives and local government officials, on average, pay none of the costs of the typical coastal resource professional development program.

- State agencies, professional associations, and local governments typically pay the highest percentage of the cost of the typical coastal resource professional development program, followed closely by volunteer organizations. Businesses and K-12 education institutions typically pay the lowest percentage of the cost of the typical coastal resource professional development program.

Interest in Participating in Coastal Resource Professional Development Programs

- A majority of each group expressed interest in participating in coastal resource professional development programs in the future.
  - Volunteer organization members had the most interest (90% are very or somewhat interested in participating in coastal resource professional development programs), followed by state employees and professional association members (81%).
  - The lowest interest is among business organization representatives, although a majority of them are interested (53% are very or somewhat interested in participating in coastal resource professional development programs).

- Direct mail and e-mail are the most popular ways that respondents prefer to be notified about coastal resource professional development programs.

- The most important factors that affect respondents' ability to attend coastal resource professional development programs are lack of time/being too busy, training not being relevant to the respondent's needs, inability to take time off from work, or the training being held in an inconvenient location.

Issues of Interest

- For all groups, the top two research and education topics about which the respondents are very interested in learning are wetlands and impacts of human disturbance on New Jersey estuaries. Other important topics are water quality monitoring, MARE, and habitat ecology of estuarine fishes.

Coastal Training Needs

- In general, volunteer organization members had the highest percentages saying that there is a high need for training about each habitat issue. Of those habitat issues, urban sprawl is at the top of each group's list; a majority of each group said there is a high need for training about urban sprawl. Other top habitat issues are wetlands and waterways protection (the second most popular answer among each group except state employees and professional association members, for which it is the third issue) and habitat protection and restoration.

- With a single exception (coastal construction, among business organization representatives), no coastal issue had a majority of any group saying that there is a high need for training about it. In general, K-12 educators had the highest percentages saying that there are high needs for training about the issues. The most important issues overall are coastal construction, dredging and filling, severe weather emergency management, coastal erosion, coastal hazards, public access, and saltwater intrusion.

- In general, volunteer organization members had the highest percentages saying there are high needs for training about water quality issues. The top issues are nonpoint source pollution (the top issue for four of the five groups), storm water protection and cleanup, and water quality.

- There was much variation among the groups' perceived needs for training about education, planning, and regulation issues. For instance, the top issues for K-12 educators are education issues, whereas the top issues for local government officials are public safety and regulations.

- There was much variation among the groups' perceived needs for training about resource management issues. The top issues are land trusts and conservation acquisitions, economic aspects of land use, social aspects of land use, and renewable energy.

- Of all the categories of coastal issues, ocean sciences topics had the lowest percentages of respondents having said that there are high needs for training about them. The highest percent indicating there is a high need for training is the 22% of K-12 educators who said that biogeochemical predictors of ocean-atmosphere conditions and climate prediction are issues about which there are high training needs.

- Currently, the most important sources of information that respondents use in making coastal resource management decisions are state resources, environmental groups, federal resources, professional contacts through meetings, municipal officials, and the Internet.

- State employees and professional association members had the highest percentage who agreed that there is enough coastal resource professional development in New Jersey and that there are enough providers of coastal resource professional development programs in New Jersey. Business organization representatives had the lowest percentage who agreed.

RATINGS OF VARIOUS FORMATS FOR COASTAL TRAINING AND EFFECTIVENESS OF VARIOUS LEARNING TECHNIQUES

Ratings of Various Formats for Coastal Training

- The answers regarding the professional development formats that would be very effective for respondents to learn about coastal resource issues varied according to the group being surveyed. Nonetheless, the formats that are at or near the top of the list for all groups are field trips (at the top of the list for all groups except business organization representatives), continuing education courses, and workshops.

Effectiveness of Various Learning Techniques

- The top three learning techniques for all groups, although not always in the same order, are one-on-one instructions, hands-on activities, and demonstrations.

ENCOURAGING PARTICIPATION IN COASTAL RESOURCE PROFESSIONAL DEVELOPMENT PROGRAMS

Incentives to Encourage Participation in Coastal Resource Professional Development Programs

- The most common answer among all groups except state employees and professional association members regarding the most effective means to encourage attendance at a training/education/outreach session is expert speakers. Other important means are easy access to workshop, free training, and field demonstrations. The items at the bottom of the list for all groups are t-shirts and a special patch for training completion.

Best Dates, Times, and Registration Structure to Encourage Participation in Coastal Resource Professional Development Programs

- No season stood out as much better than other seasons for coastal resource professional development programs, although spring is the least desired season among all groups except local government officials.

- By far, weekdays are preferred over weekends for coastal resource professional development programs.

- Morning is the preferred time of day for coastal resource professional development programs; evening is the least preferred time of day.

- Half-day sessions or day-long sessions are the most preferred length of time for coastal resource professional development programs.

- On-line registration is the most popular format for registering for coastal resource professional development programs among all groups. The next most popular format for registering is mail-in registration.

INTRODUCTION AND METHODOLOGY FOR NEEDS ASSESSMENT

This chapter summarizes the findings of a coastal training needs assessment of coastal decision-makers in New Jersey conducted by Responsive Management on behalf of the Jacques Cousteau National Estuarine Research Reserve. The goal of this study was to assess current and future needs for coastal resource professional development programs in New Jersey to assist the Coastal Training Program (CTP) in its goal to provide comprehensive, science-based training to coastal decision-makers. The research objectives of this study were to assess the baseline knowledge, skills, and attitudes of coastal decision-makers statewide, to identify gaps and overlaps in available training services, and to identify topics where decision-makers want/need additional training and educational materials.

The data gathered from this study will assist the CTP in its efforts to "provide the best available science-based information, tools and techniques to those individuals and groups that are making important decisions regarding resources within coastal watersheds, estuaries and nearshore waters; increase networking and collaboration across sectors and disciplines related to coastal management issues in local and biogeographic areas; and increase understanding of the environmental, social and economic consequences of human activity within the coastal landscape."

The study entailed a survey via telephone, e-mail, and mail of coastal decision-makers in New Jersey. The survey instruments are included with this report. For the purpose of this market study, coastal decision-maker was defined as "a person who, in a professional or volunteer capacity, makes decisions affecting the health of coastal resources." For that reason, coastal decision-makers were targeted statewide, rather than simply those who lived near the coast.

Using information gathered from independent research conducted by Responsive Management, a random sample of coastal decision-makers was developed to identify 600 potential coastal decision-makers from the following: the state legislature, local governments, volunteer organizations, business organizations, state agencies and professional associations, and K-12 education institutions. State legislators were ultimately dropped from the survey because numerous offices said that their policy is to *not* participate in surveys.

For the survey, each identified coastal decision-maker was initially sent a letter describing the purpose of the study and identifying him or her as a coastal decision-maker. Surveys were generally conducted by telephone, although respondents were given the option to receive a hardcopy of the survey by e-mail or mail.

In total, 206 completed questionnaires (whether completed via e-mail/mail or by telephone) were obtained, broken down into the groups shown in the tabulation below.

Respondent Type	**Number of Completed Questionnaires**
Business Organization Representatives	45
K-12 Educators	37
Local Government Officials	45
State Employees and Professional Association Members	32
Volunteer Organization Members	47
Total	**206**

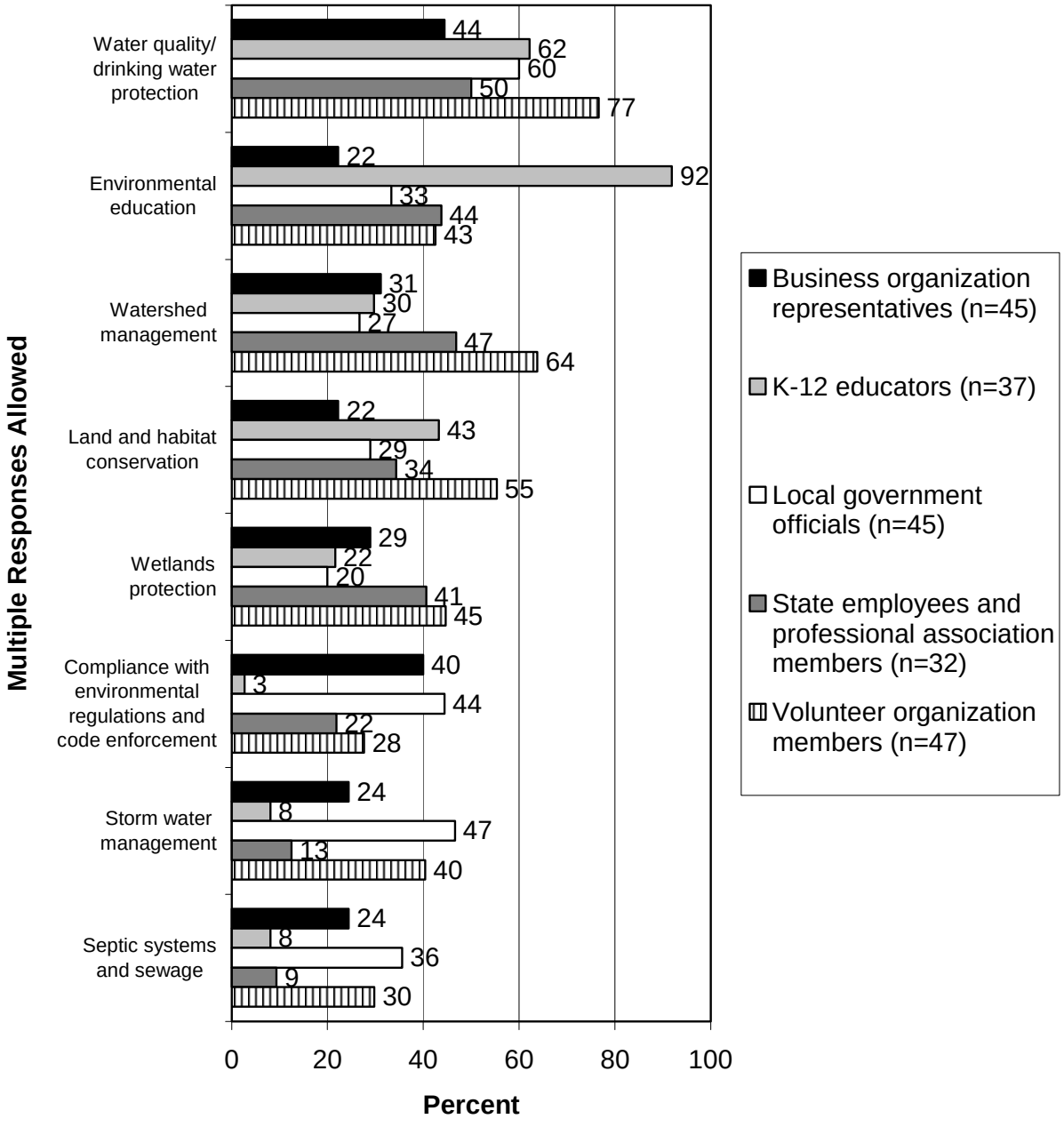
ISSUES ON WHICH INDIVIDUAL/ORGANIZATION FOCUSES

- The focus of the individuals and organizations varied depending on the type of individual/organization.
  - The top issues of focus for business organization representatives are water quality/drinking water protection (44% indicated that they or their organization focuses on this) and compliance with environmental regulations and code enforcement (40%).
  - The top issues for K-12 educators are environmental education (92%), water quality/drinking water protection (62%), and land and habitat conservation (43%).
  - The top issues for local government officials are water quality/drinking water protection (60%), storm water management (47%), compliance with environmental regulations and code enforcement (44%), and septic systems and sewage (36%).
  - The top issues for state employees and professional association members are water quality/drinking water protection (50%), watershed management (47%), environmental education (44%), and wetlands protection (41%).
  - The top issues for volunteer organization members are water quality/drinking water protection (77%), watershed management (64%), land and habitat conservation (55%), wetlands protection (45%), environmental education (43%), and storm water management (40%).

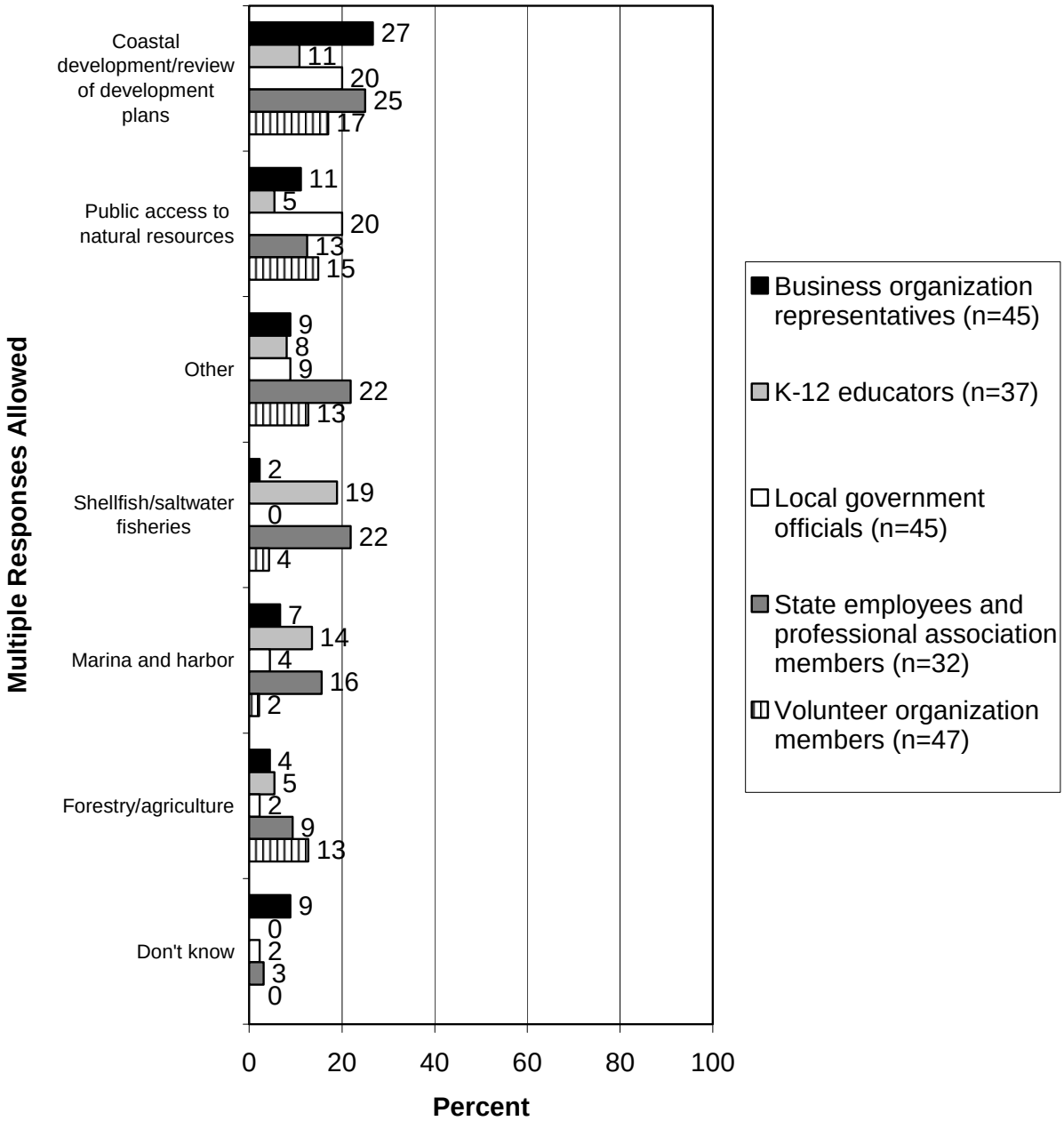
- In general, volunteer organization members had higher percentages than did the other types of respondents saying that they focused on a particular issue.
  - Volunteer organization members had the highest percentage of all respondent groups saying that they focused on water quality/drinking water protection, watershed management, land and habitat conservation, wetlands protection, and forestry/agriculture. Volunteer organizations had the second highest percentage of all respondent groups saying that they focused on environmental education, storm water management, septic systems and sewage, and public access to natural resources.

- Water quality/drinking water protection is the top issue among respondents overall. It is the top issue for four of the five respondent categories, the exception being K-12 educators, who rated environmental education the highest.

Q10. On which of the following coastal management resource issues do you/does your organization focus? Part 1.



Q10. On which of the following coastal management resource issues do you/does your organization focus? Part 2.



PARTICIPATION IN COASTAL RESOURCE PROFESSIONAL DEVELOPMENT PROGRAMS

- No group had a majority saying they attend coastal resource professional development programs. State employees and professional association members had the highest percentage saying that they attend coastal resource professional development programs (44%); business organization representatives had the lowest percentage (11%).
  - In total, 53 of the 206 respondents said that they attend coastal resource professional development programs.

- A slight majority (53% overall) of those respondents who said that they attend coastal resource professional development programs attend them every year. (The graph shows frequency rather than percent because of the low number of respondents in each respondent group.)

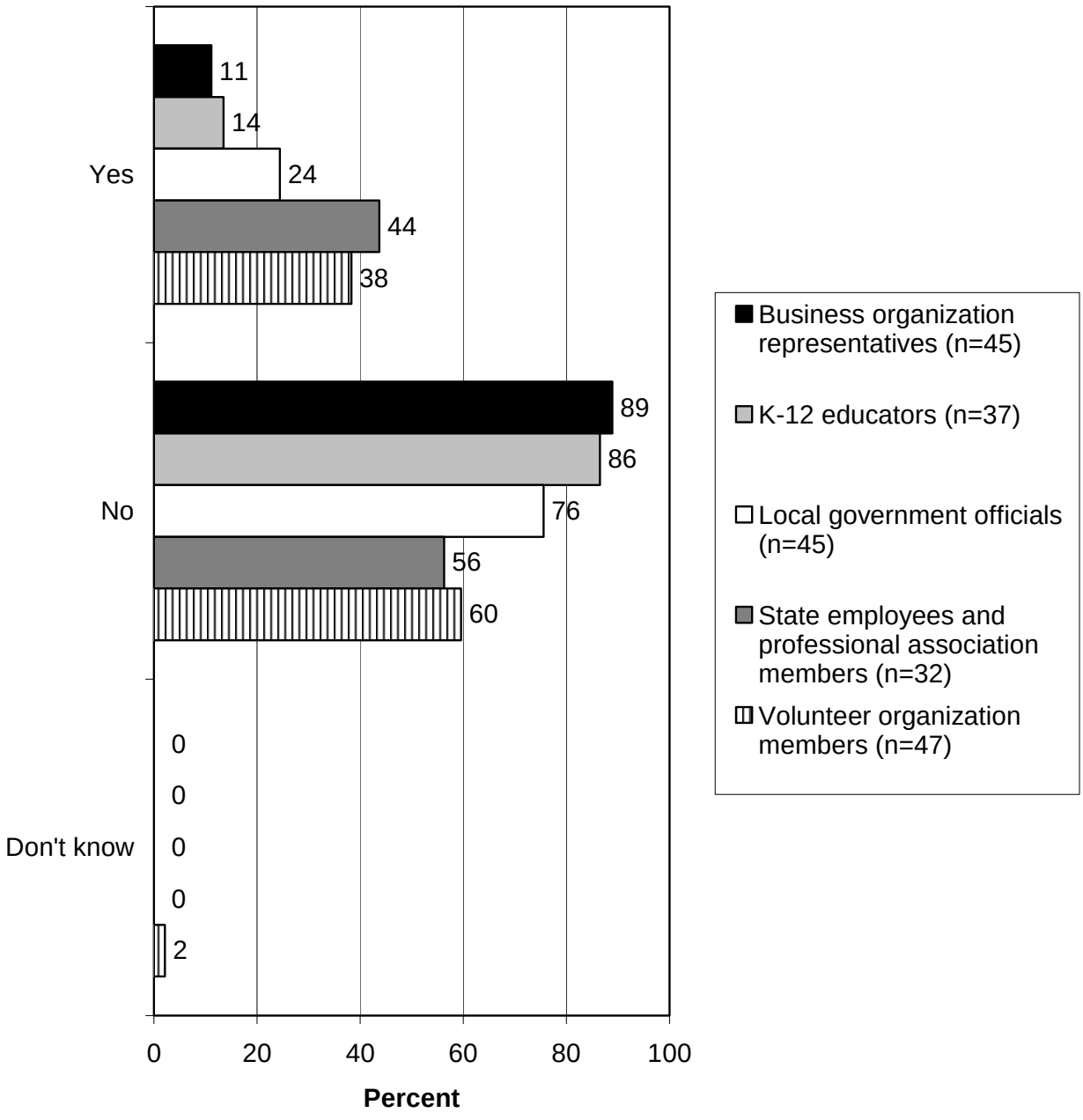
- Volunteer organization members had the highest mean number of hours of attendance in coastal resource professional development programs of any respondent categories; state employees and professional association members had the second highest mean number of hours of attendance. K-12 educators had the lowest mean number of hours of attendance.

- Volunteer organization members had the highest mean number of sessions of coastal resource professional development programs of any respondent categories; state employees and professional association members had the second highest mean number of sessions. Business organization representatives and K-12 educators had the lowest mean number of hours of attendance.

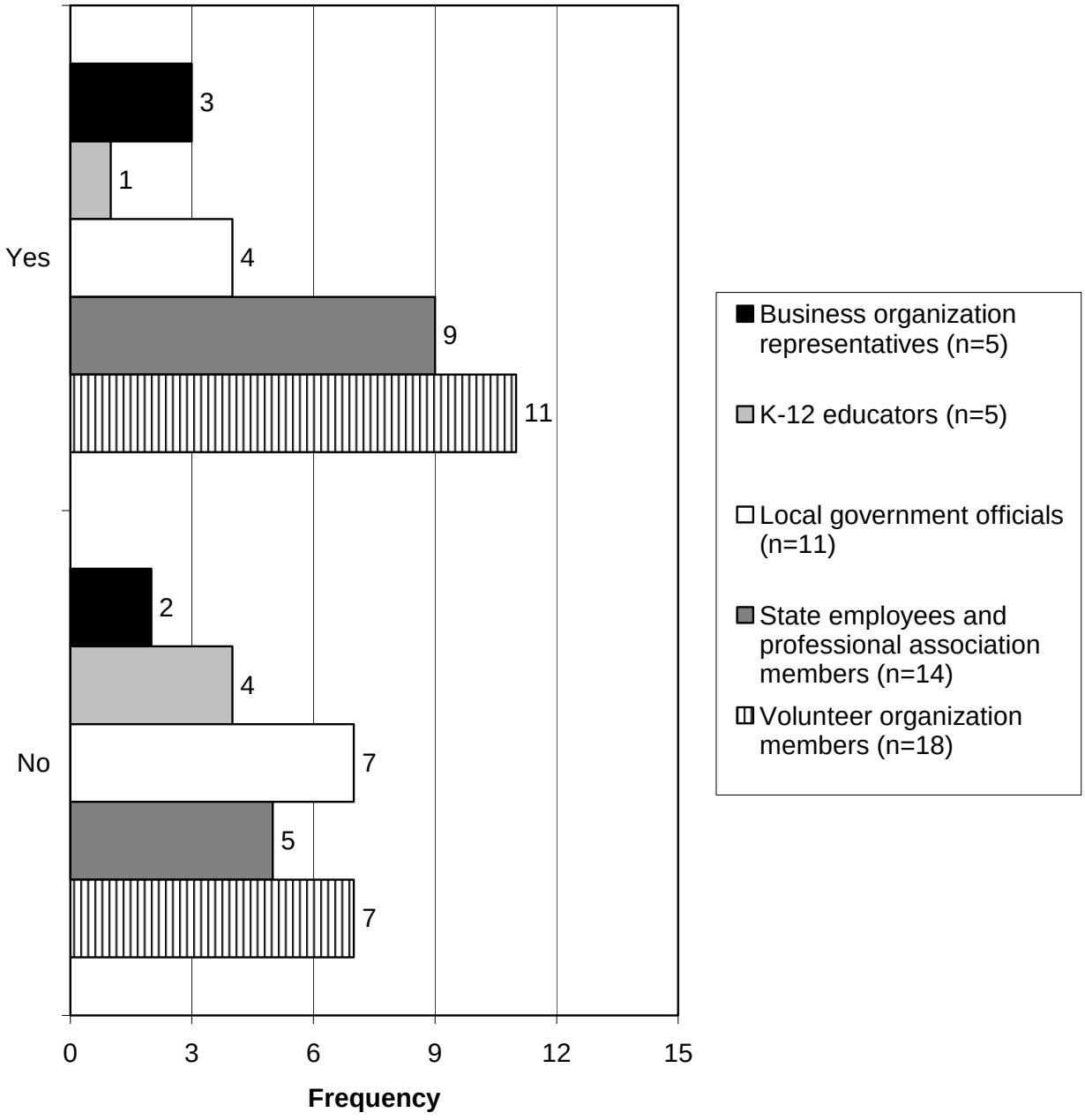
- Most often, the individual who responded to the survey made the decisions about which coastal resource professional development programs that he or she attends rather than a supervisor.

- Regarding travel to coastal resource professional development programs, the farther the distance to the programs, the fewer the number of respondents who said they usually travel that far.
  - 30 respondents indicated that they usually travel locally, 28 respondents usually travel regionally, and 26 respondents usually travel statewide. Only 6 respondents traveled nationally, and 3 respondents traveled internationally.
  - Only the K-12 educators and state employees and professional association members traveled nationally or internationally to coastal resource professional development programs.

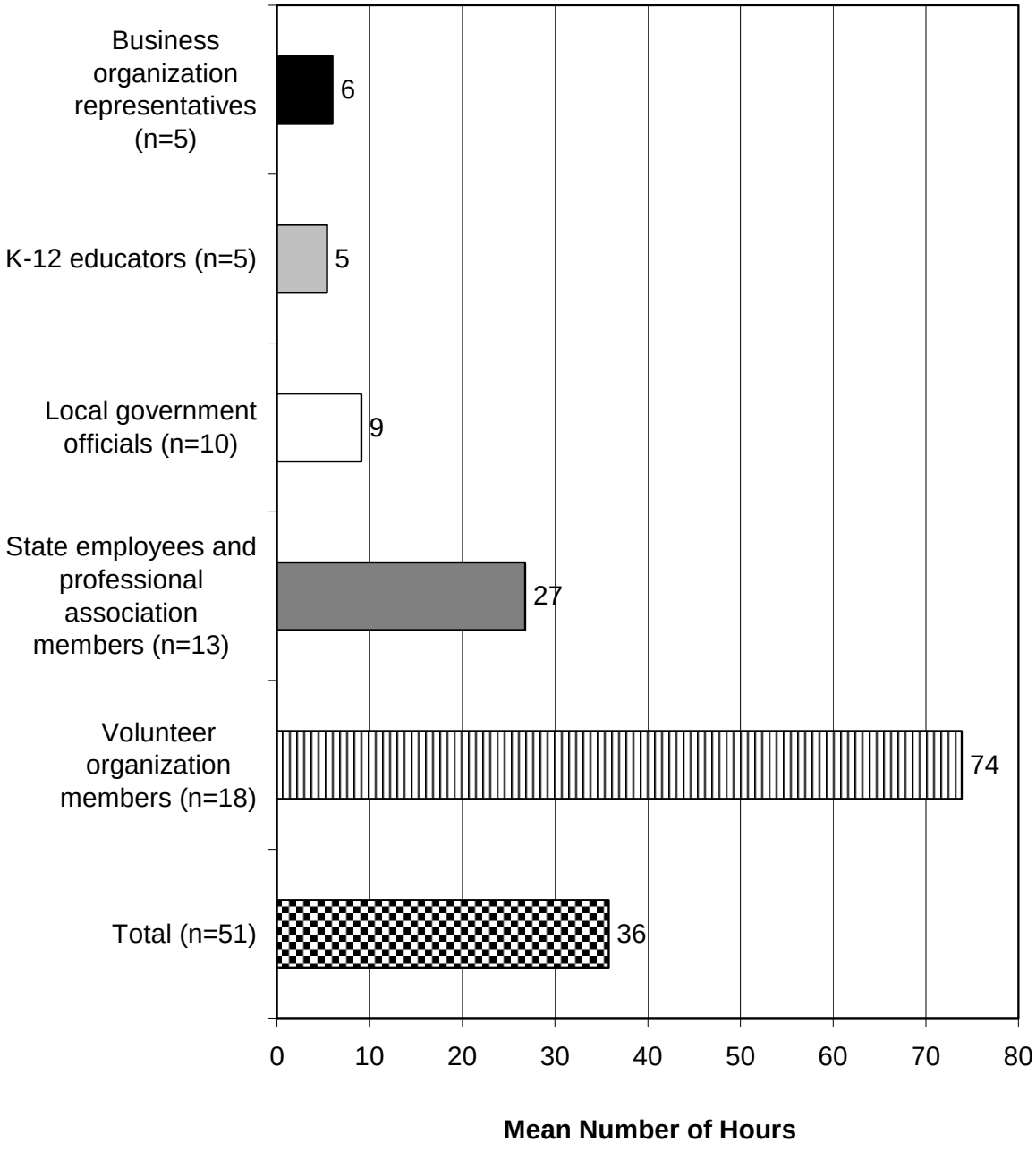
Q13. Do you attend coastal resource professional development programs as part of your job?



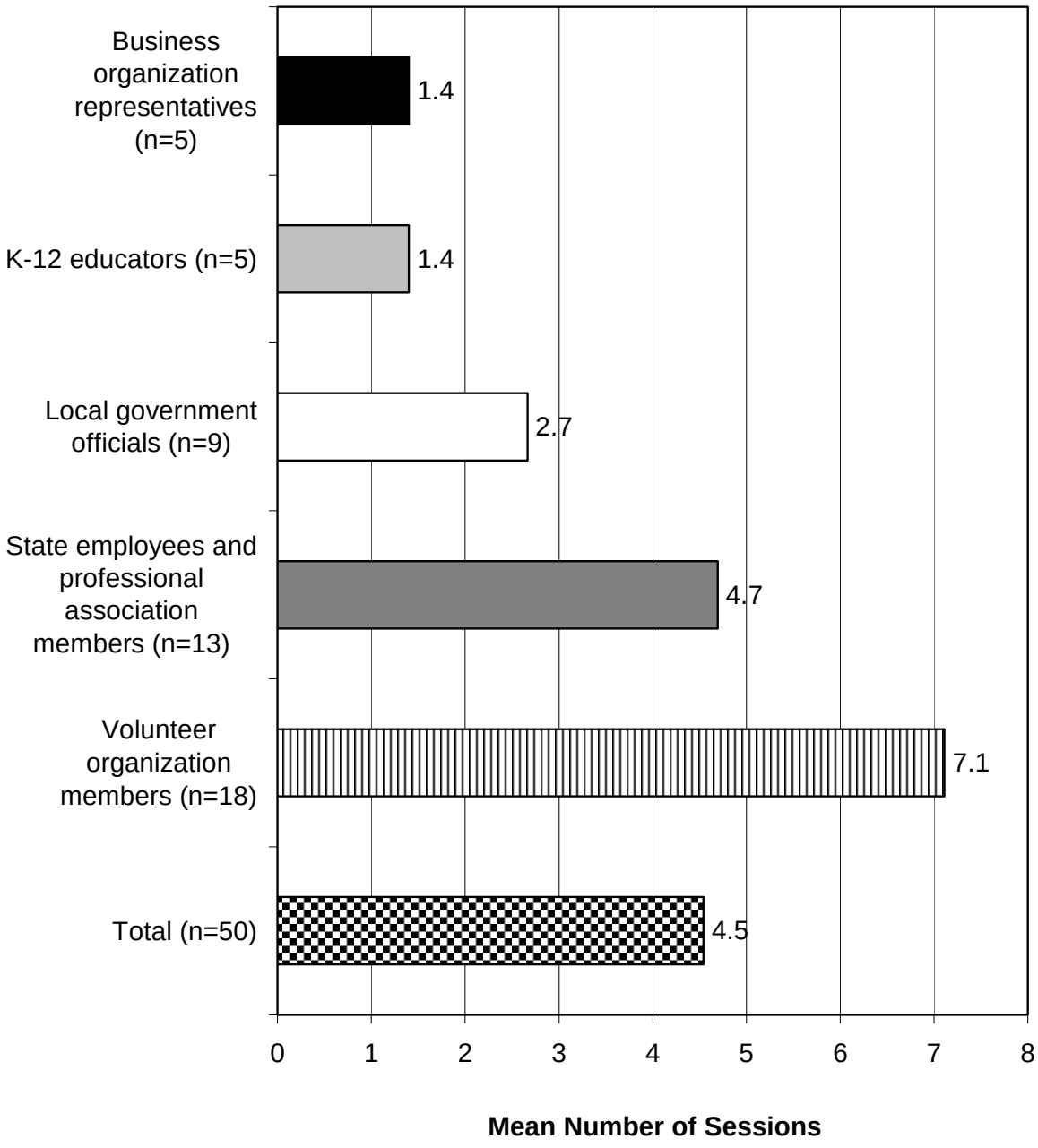
Q15. Do you attend coastal resource professional development programs every year? (Asked of those who attend coastal resource professional development programs as part of their job.)



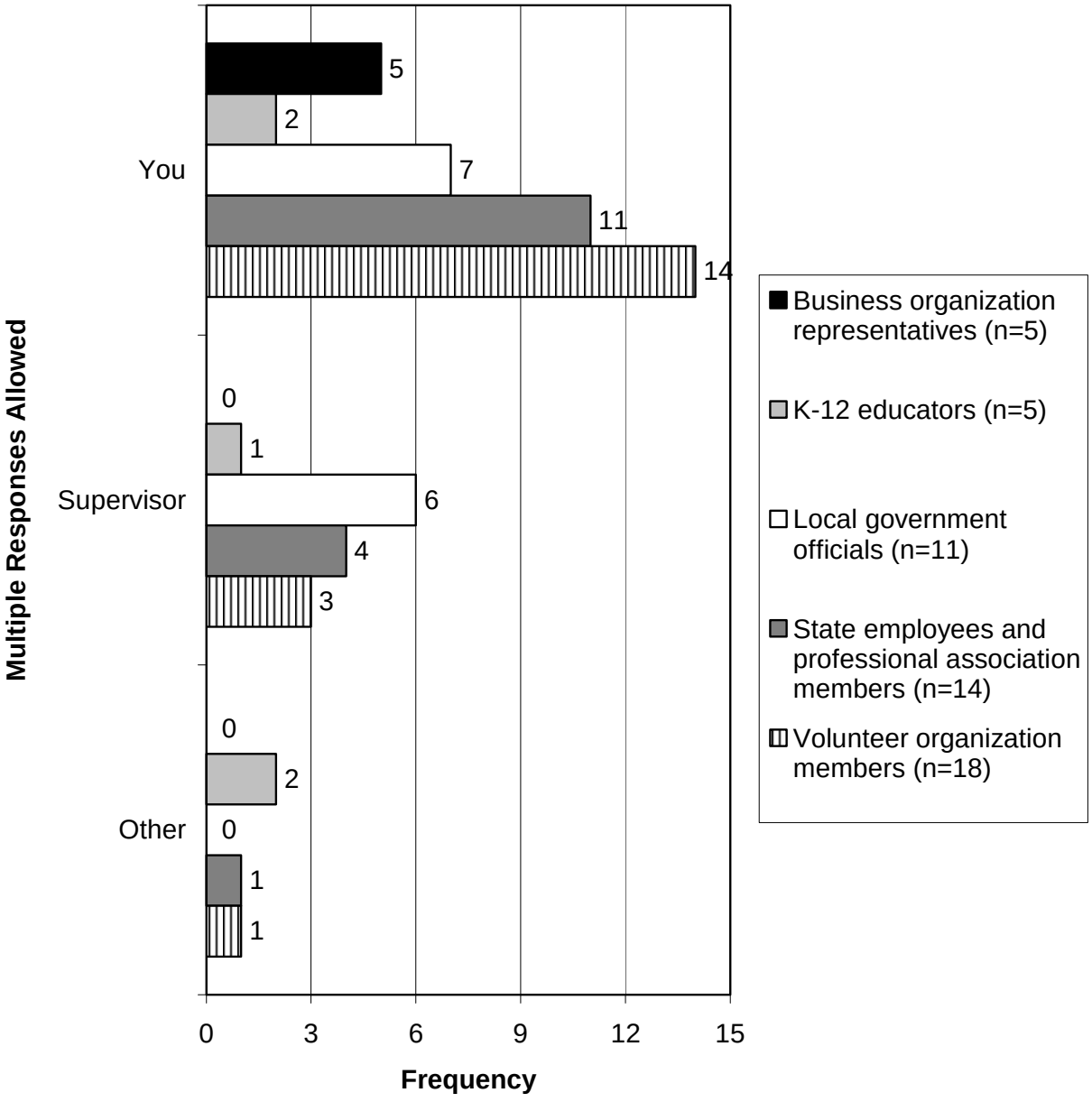
Q16. How many hours of coastal resource professional development did you receive in the past year (January 2002-January 2003)? (Asked of those who attend coastal resource professional development programs as part of their job.)



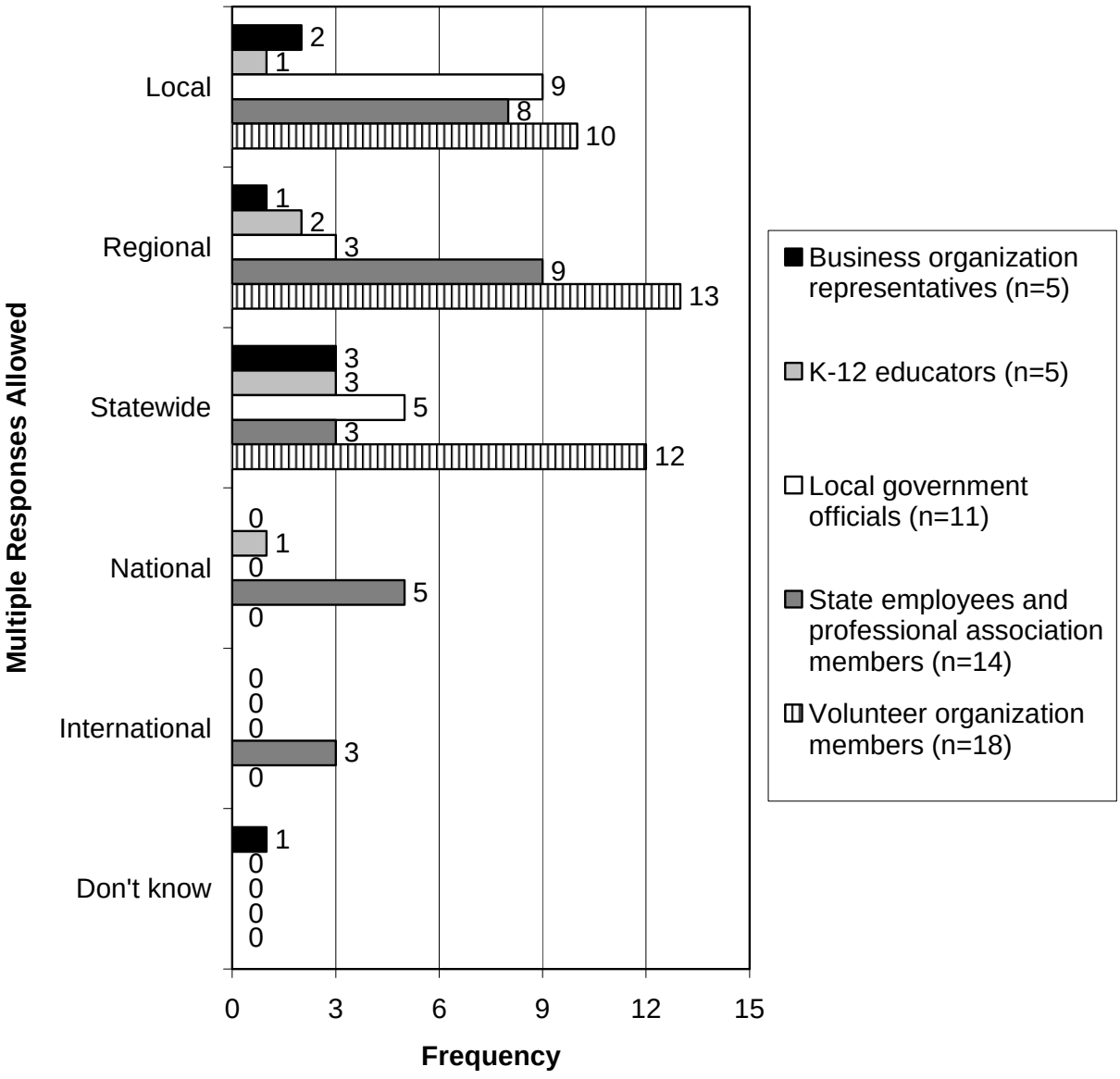
Q17. How many different coastal resource professional development sessions do you typically attend per year? (Asked of those who attend coastal resource professional development programs as part of their job.)



Q24. Who makes the decision about which coastal resource professional development programs that you attend? (Asked of those who attend coastal resource professional development programs as part of their job.)



Q38. Would you say that your travel to coastal resource sciences professional development is usually local, regional, statewide, national, or international? (Asked of those who attend coastal resource professional development programs as part of their job.)



COSTS OF COASTAL RESOURCE PROFESSIONAL DEVELOPMENT PROGRAMS THAT RESPONDENT ATTENDS

- Volunteer organization members paid the highest average fee for the typical coastal resource professional development program; K-12 educators paid the lowest average fee.

- Local government officials paid the highest average fee for technical training/skills building programs; K-12 educators paid the lowest average fee.

- Local government officials paid the highest average fee for outreach workshops; business organization representatives paid the lowest average fee.

- Regarding the amount respondents paid for one-on-one sessions:

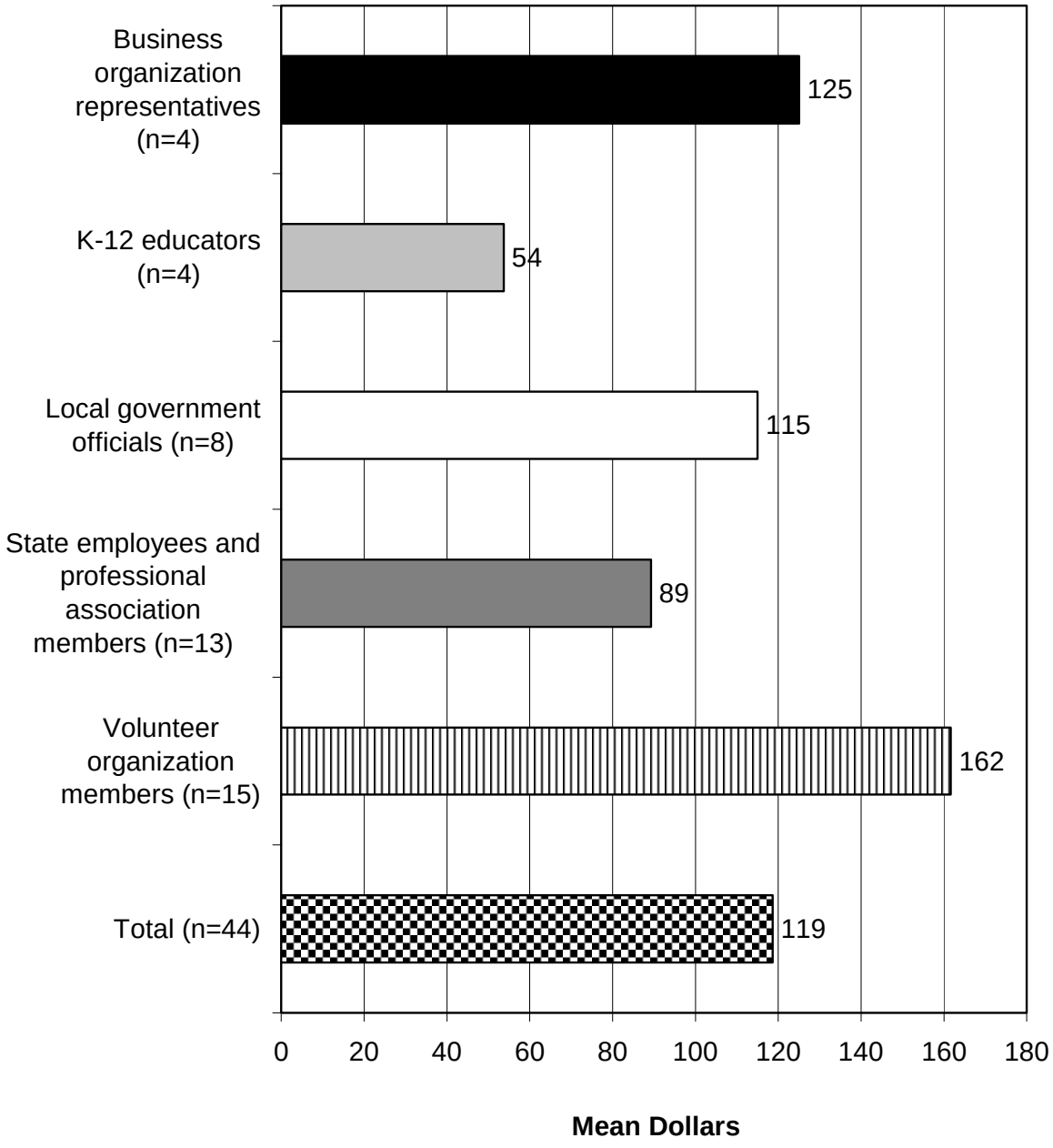
28 respondents answered,	$ 0
1 respondent answered,	$ 1
1 respondent answered,	$ 40
1 respondent answered,	$ 50

- State employees and professional association members paid the highest average fee for consultations.

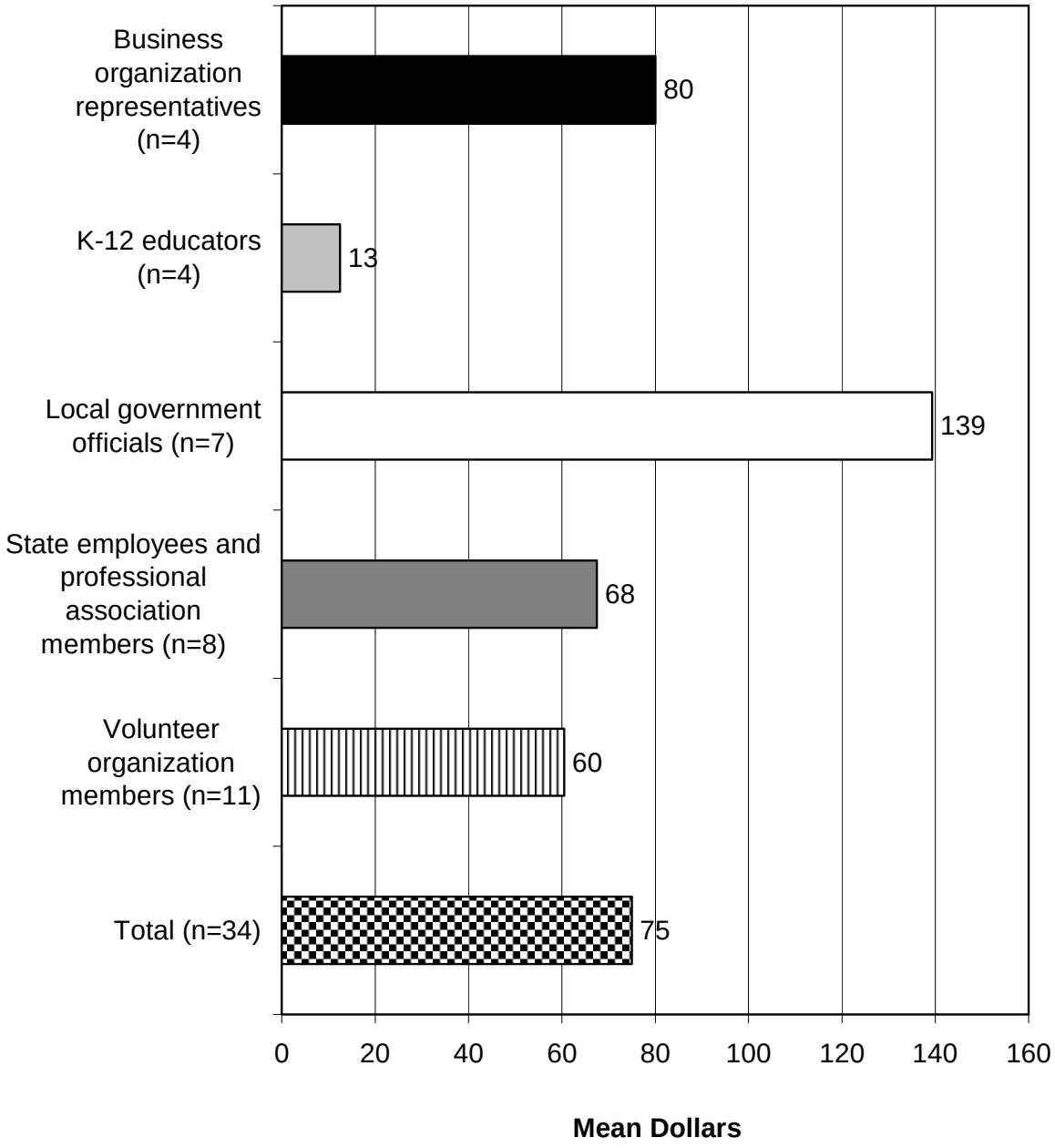
- Volunteer organization members and K-12 educators pay an average of 25% and 20%, respectively, of the cost of the typical coastal resource professional development program out of their own pocket. Business organization representatives and local government officials, on average, pay none of the costs of the typical coastal resource professional development program.

- State employees/professional association members and local government officials typically pay the highest percentage of the cost of the typical coastal resource professional development program, followed closely by volunteer organization members. Business organization representatives and K-12 educators typically pay the lowest percentage of the cost of the typical coastal resource professional development program.

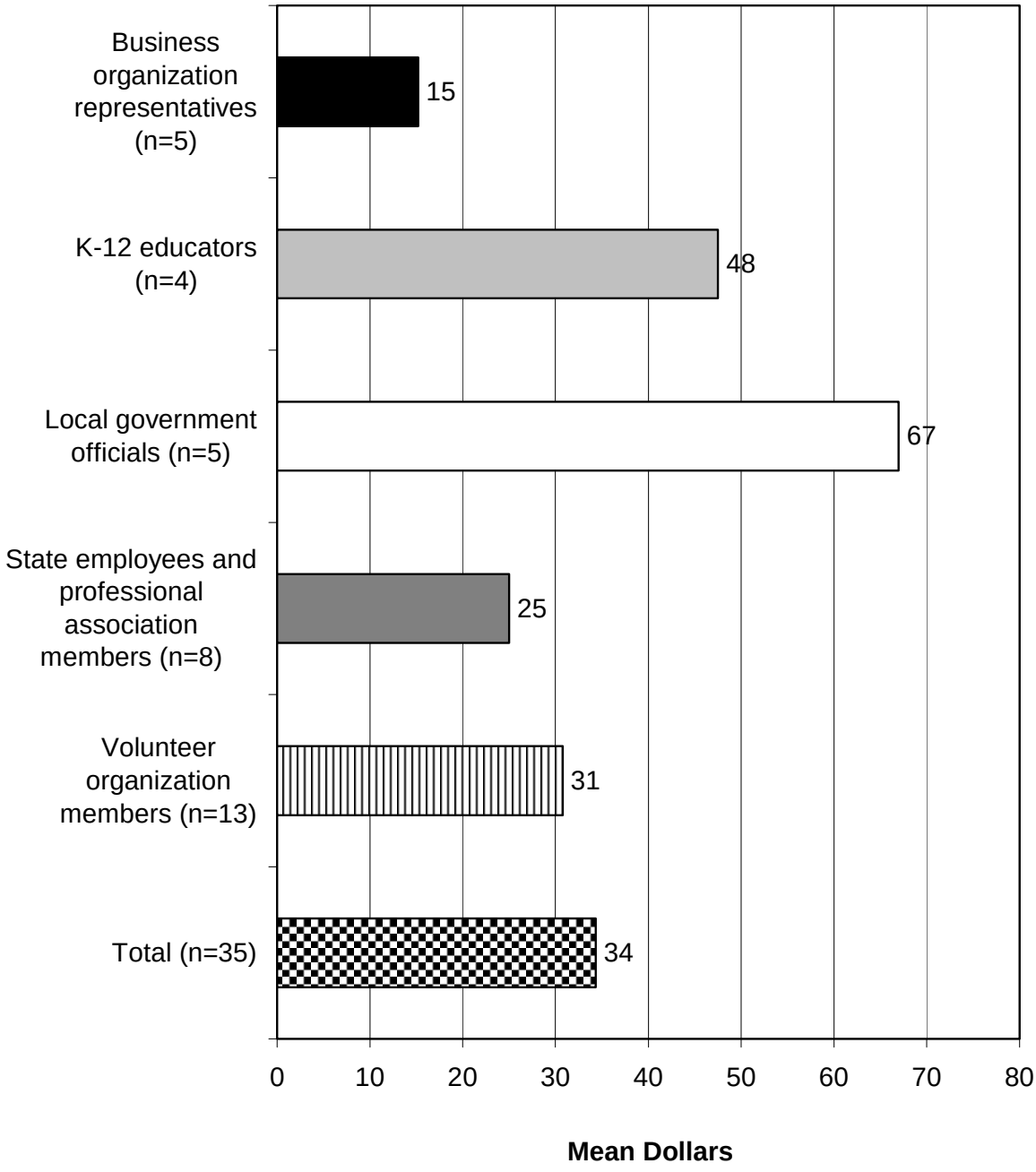
Q26. What is the average fee of the typical coastal resource professional development programs that you attend? (Asked of those who attend coastal resource professional development programs as part of their job.)



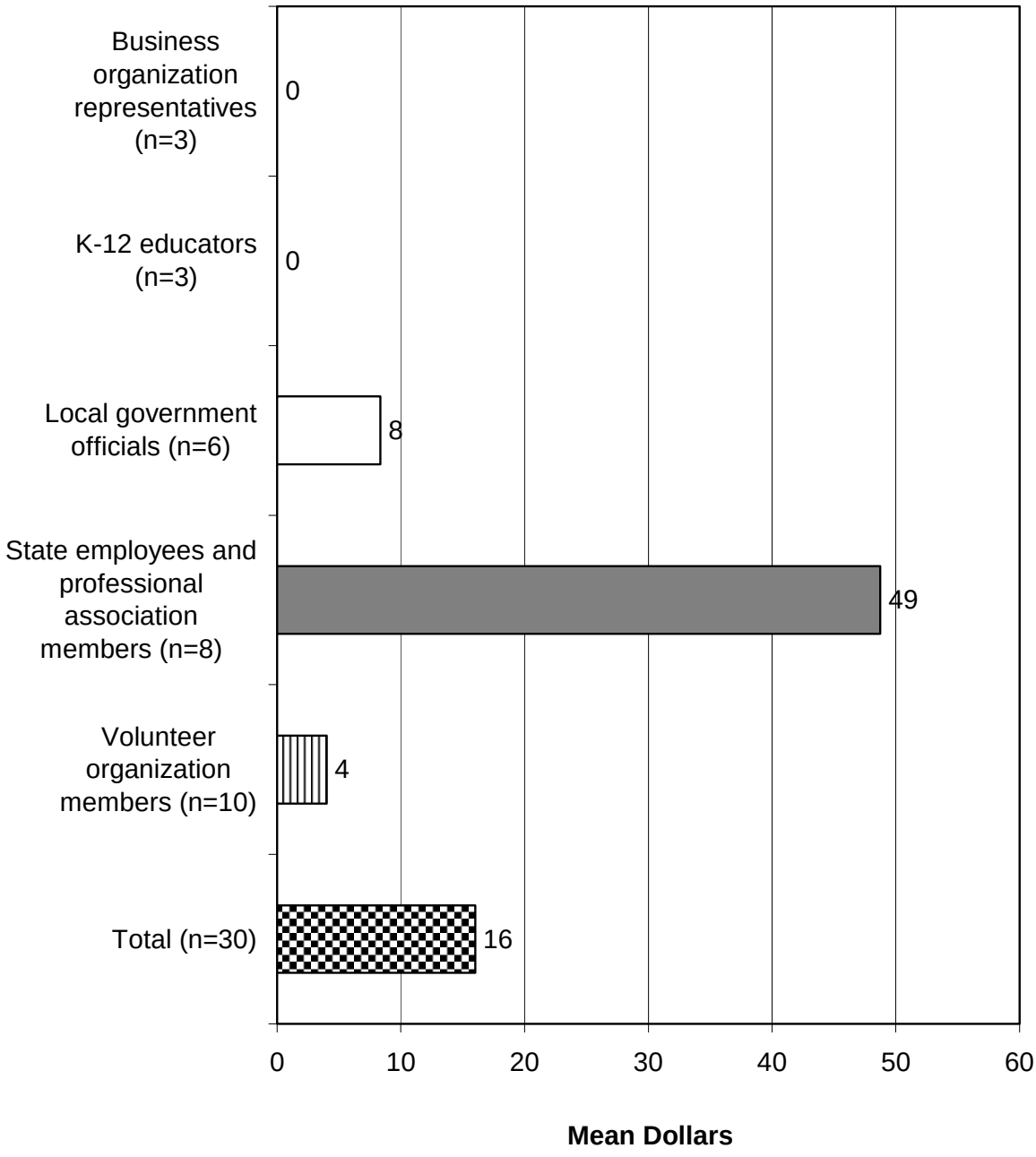
Q27. Please tell me the average fee of technical training/skills building programs that you attend. (Asked of those who attend coastal resource professional development programs as part of their job.)



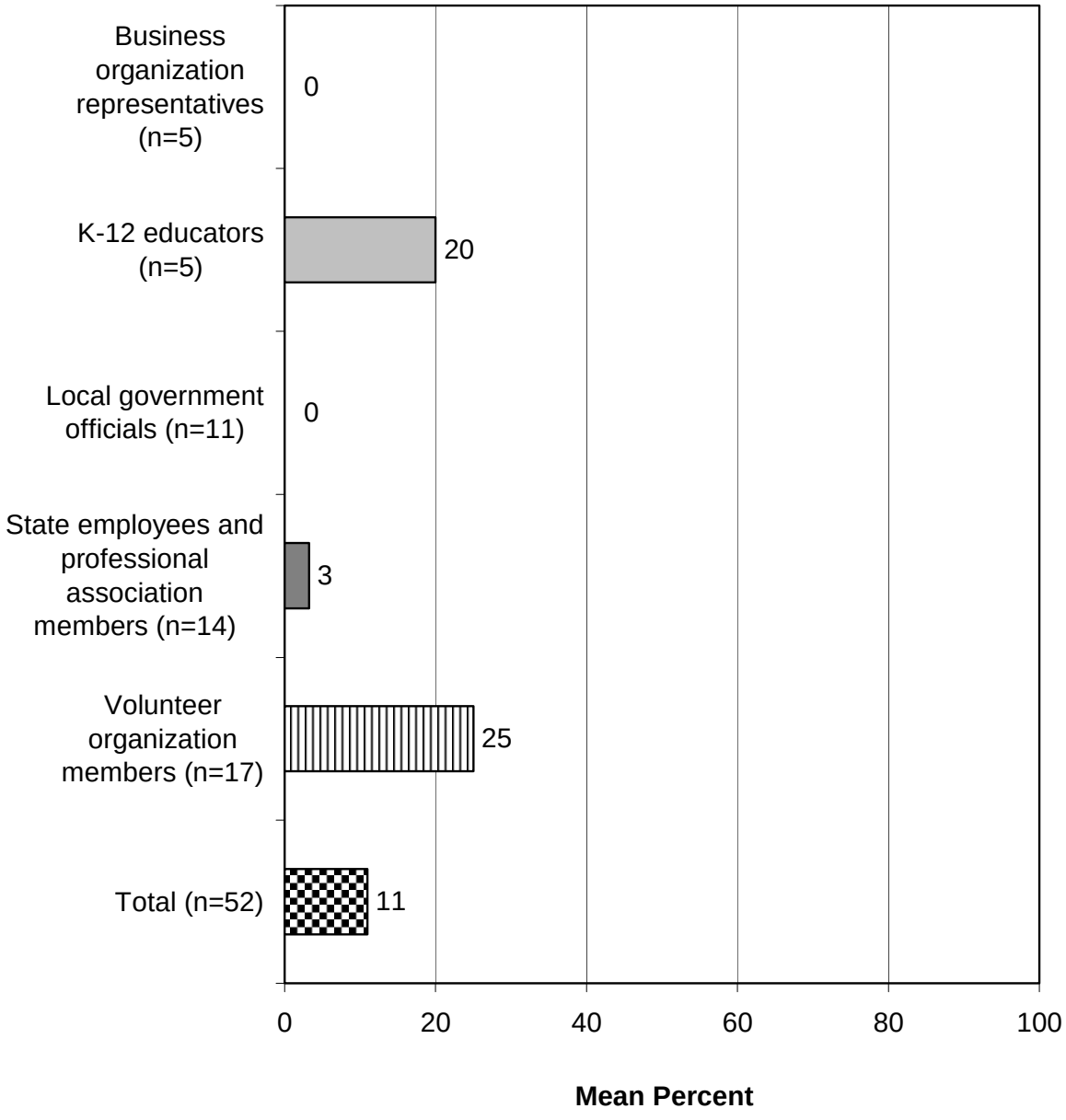
Q28. Please tell me the average fee of outreach workshops that you attend. (Asked of those who attend coastal resource professional development programs as part of their job.)



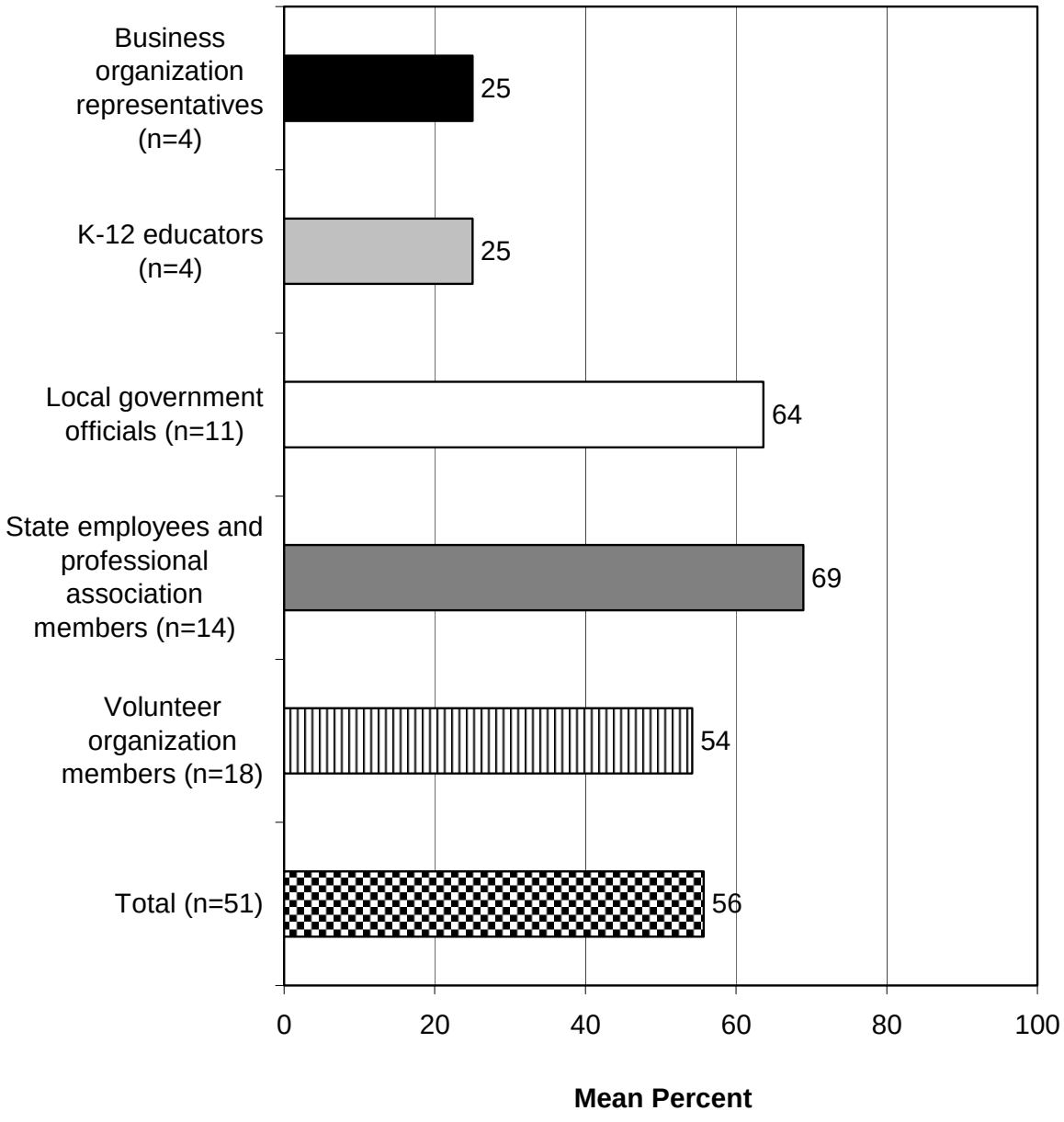
Q30. Please tell me the average fee of consultations that you attend. (Asked of those who attend coastal resource professional development programs as part of their job.)



Q35. Please tell me the average percent that you pay (out-of-pocket) for the typical coastal resource professional development programs that you attend. (Asked of those who attend coastal resource professional development programs as part of their job.)



Q36. Please tell me the average percent that your organization pays for the typical coastal resource professional development programs that you attend. (Asked of those who attend coastal resource professional development programs as part of their job.)



FAMILIARITY WITH COASTAL RESOURCE PROFESSIONAL DEVELOPMENT PROGRAMS

- State employees and professional association members had the highest familiarity with all of the four entities asked about in the survey (the Jacques Cousteau National Estuarine Research Reserve, LEO-15 (Long-term Ecosystem Observatory, an ocean observatory located in the coastal waters of New Jersey), MARE (Marine, Activities, Resource and Education) Summer Institute for K-8 Educators, and the Coastal Decision Maker Workshops). In general, local government officials had the lowest familiarity.

- Familiarity with the Jacques Cousteau National Estuarine Research Reserve was the highest of the four entities asked about in the survey. In general, familiarity with the MARE Summer Institute was the lowest.
  - For all five groups, the highest familiarity was with the Estuarine Reserve.
  - For four of the five groups, the lowest familiarity was with the MARE Summer Institute.

- State employees and professional association members and volunteer organization members were the most familiar with the Jacques Cousteau National Estuarine Research Reserve before the survey.
  - A strong majority (75%) of state employees and professional association members were familiar with the Jacques Cousteau National Estuarine Research Reserve, as were a majority (73%) of volunteer organization members.
  - A slight majority (51%) of K-12 educators were familiar with the Reserve.
  - Business organization representatives and local government officials were the least familiar with the Reserve (31% of business organization representatives and 27% of local government officials were very or somewhat familiar with the Estuarine Reserve).

- State employees and professional association members had the highest familiarity with LEO-15
  - Only one group had a majority saying that they were very or somewhat familiar with LEO-15 before the survey: state employees and professional association members (59%).

- Local government officials had the lowest familiarity level: 11% were very or somewhat familiar with LEO-15.

- State employees and professional association members, K-12 educators, and volunteer organization members had the highest familiarity with the MARE Summer Institute for K-8 Educators.
  - 41% of state employees and professional association members indicated that they were very or somewhat familiar with the MARE Summer Institute; this was followed closely by K-12 educators (36%) and volunteer organization members (34%).
  - Local government officials had the lowest familiarity with MARE (9%), slightly lower than business organization representatives (11%).

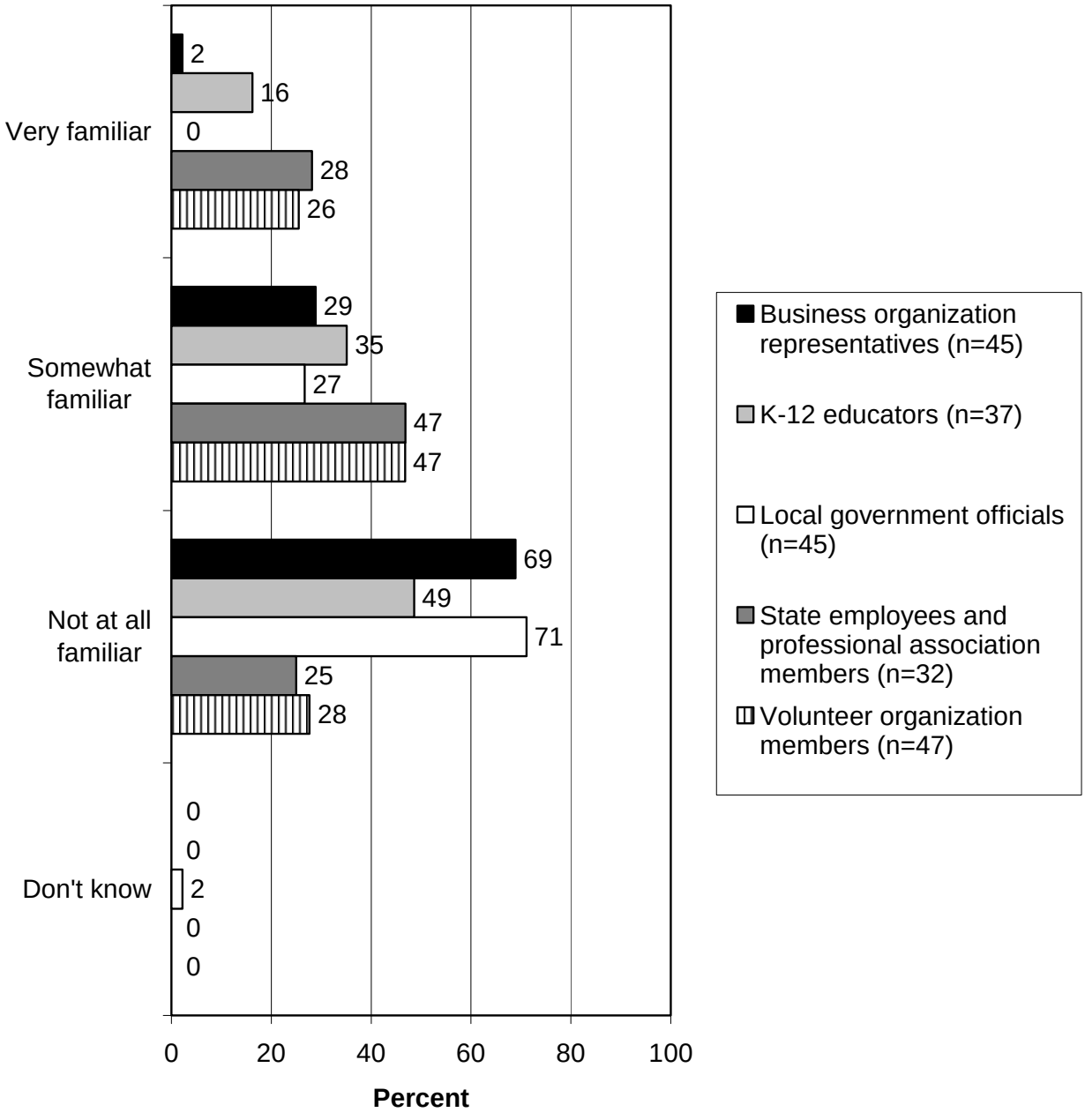
- The highest familiarity with the Coastal Decision Maker Workshops was among state employees and professional association members (44%), although no group had a majority saying that they were very or somewhat familiar. The lowest familiarity was among business organization representatives (13%).

Percent Who Said They Were Very or Somewhat Familiar with the Entity

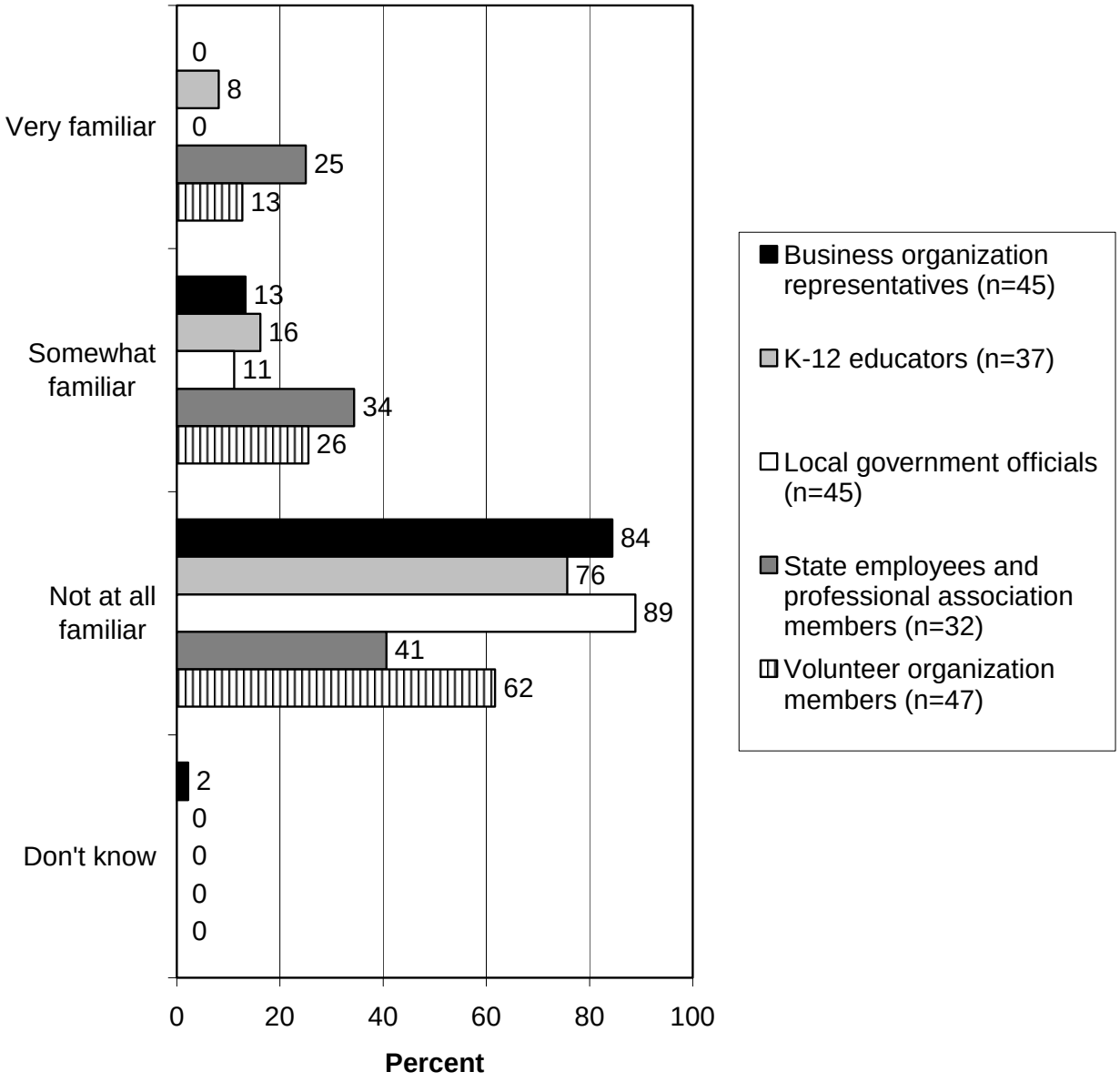
	Business Organization Representatives	K-12 Educators	Local Government Officials	State Employees and Professional Association Members	Volunteer Organization Members
Jacques Cousteau National Estuarine Research Reserve	31	51	*27*	**75**	73
LEO-15	13	24	*11*	**59**	39
MARE Summer Institute for K-8 Educators	11	36	*9*	**41**	34
Coastal Decision Maker Workshops	*13*	25	20	**44**	35

(Note: Bold font indicates the highest percent among the five groups; italics font indicate the lowest percent among the five groups.)

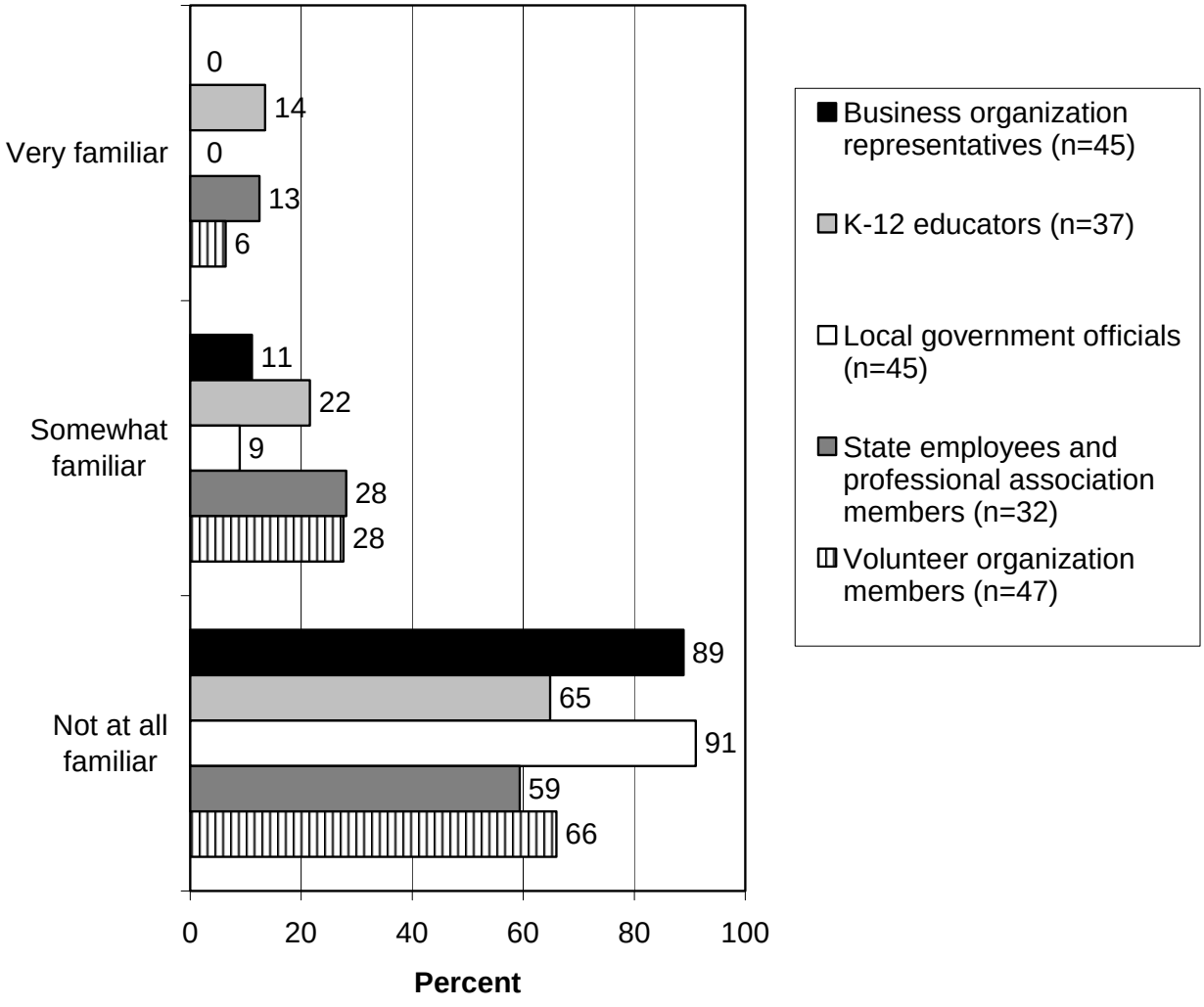
Q40. Before this survey, were you very familiar, somewhat familiar, or not at all familiar with the Jacques Cousteau National Estuarine Research Reserve in New Jersey?



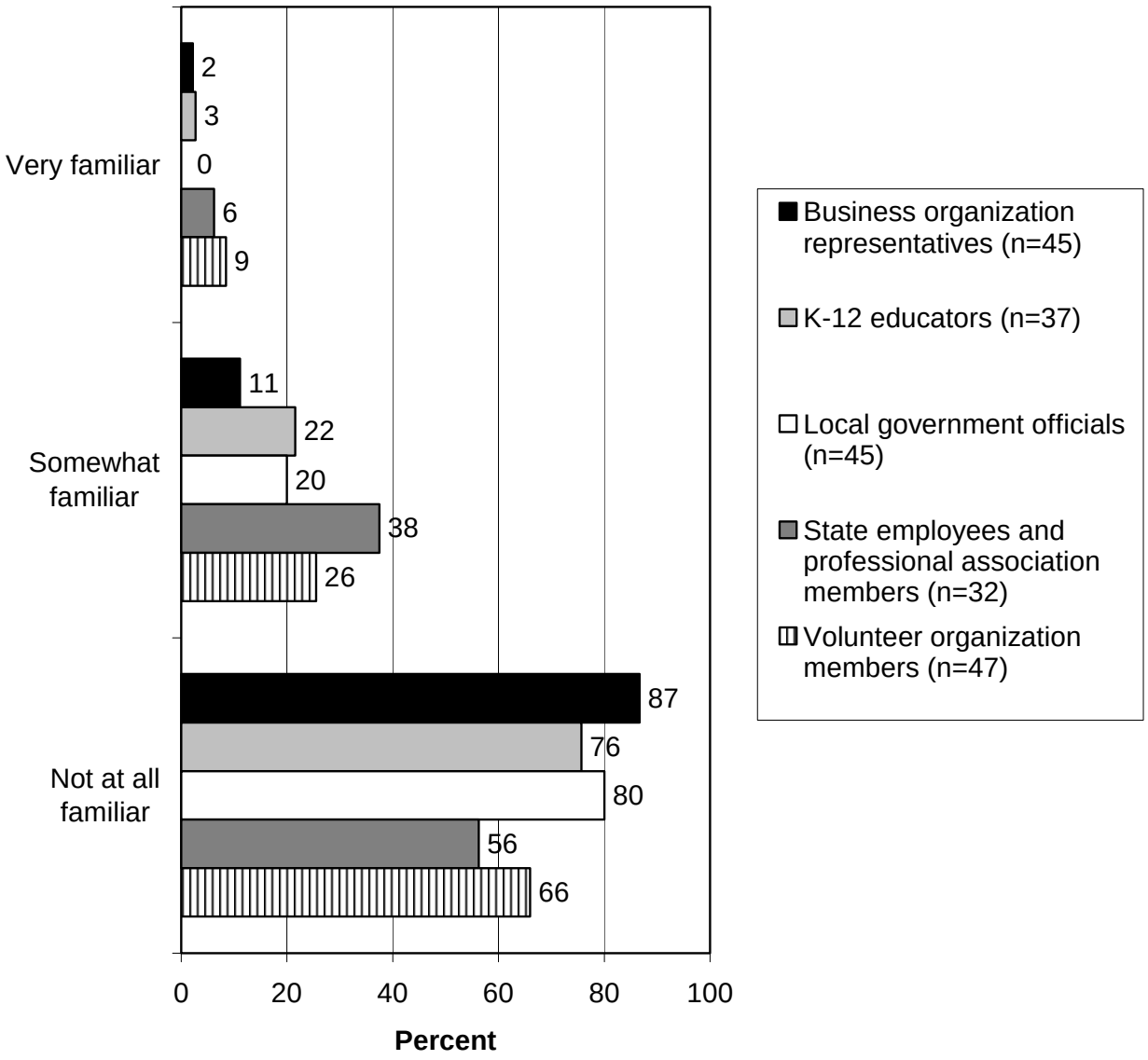
Q41. Before this survey, were you very familiar, somewhat familiar, or not at all familiar with LEO-15 (Long-term Ecosystem Observatory, an ocean observatory located in the coastal waters off the New Jersey shore to provide real-time data to researchers and the public)?



Q42. Before this survey, were you very familiar, somewhat familiar, or not at all familiar with MARE (Marine, Activities, Resource and Education) Summer Institute for K-8 educators (an interdisciplinary, whole-school change program that engages teachers, students, parents, administrators, and the community to transform elementary and middle schools into dynamic laboratories for study of the ocean)?



Q43. Before this survey, were you very familiar, somewhat familiar, or not at all familiar with the Coastal Decision Maker (CDM) workshops (which enhance informed decision-making on coastal issues by transferring technical information to audiences that have the ability to influence the management of coastal resources)?



INTEREST IN PARTICIPATING IN COASTAL RESOURCE PROFESSIONAL DEVELOPMENT PROGRAMS, ISSUES OF INTEREST, AND COASTAL TRAINING NEEDS

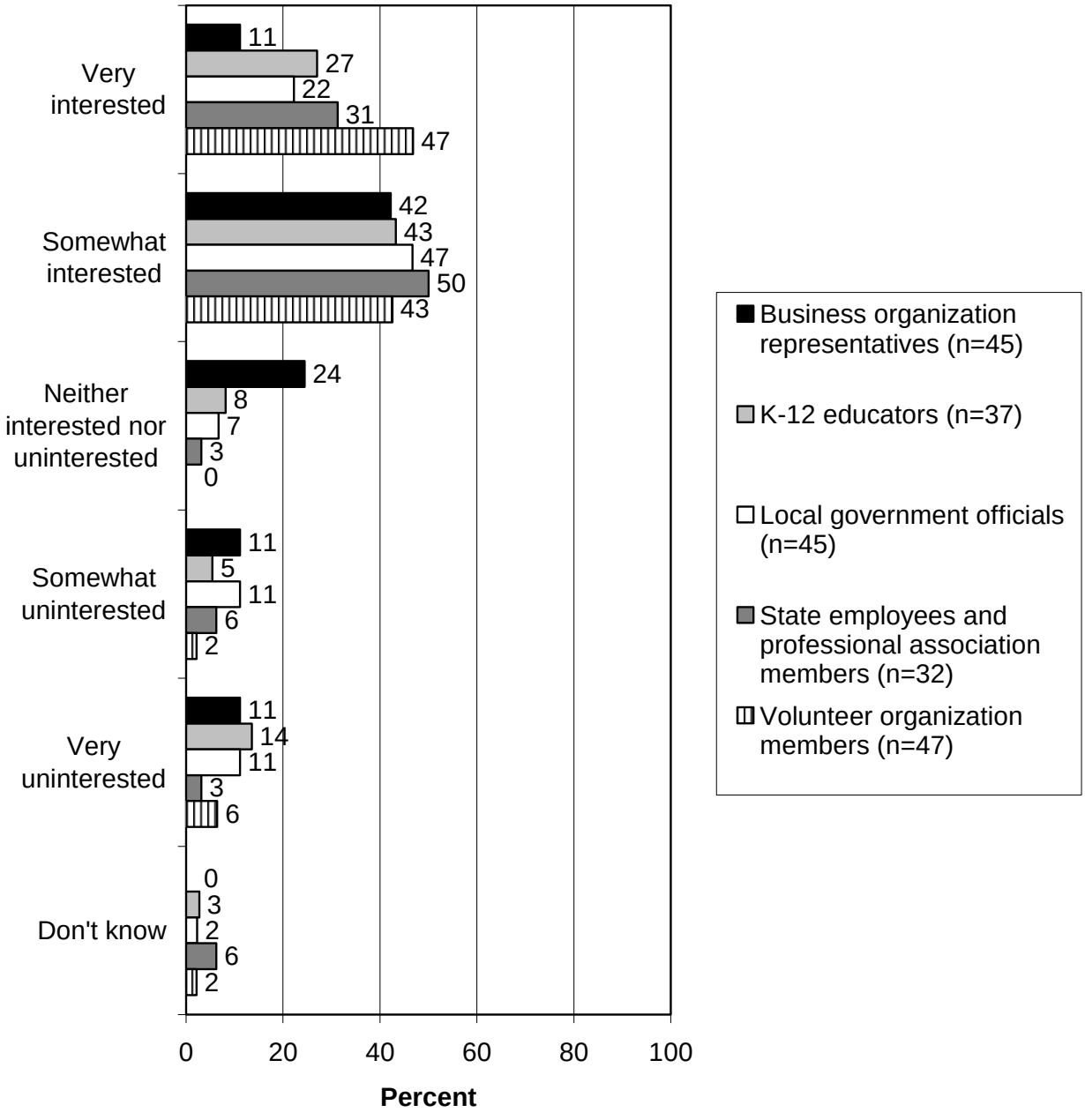
Interest in Participating in Coastal Resource Professional Development Programs

- A majority of each group expressed interest in participating in coastal resource professional development programs in the future.
  - Volunteer organization members had the most interest (90% are very or somewhat interested in participating in coastal resource professional development programs), followed by state employees and professional association members (81%).
  - The lowest interest is among business organization representatives, although a majority of them are interested (53% are very or somewhat interested in participating in coastal resource professional development programs).

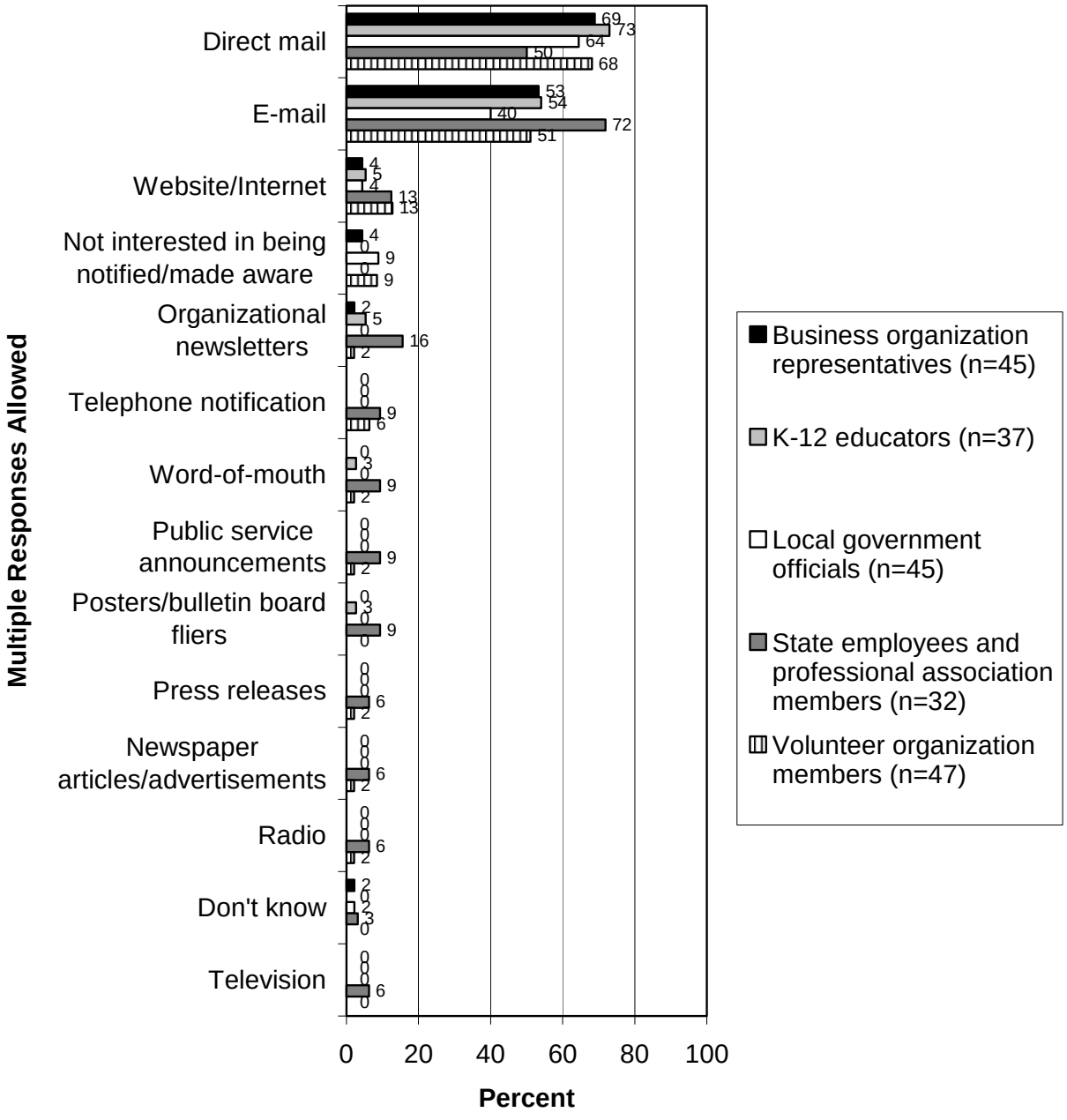
- Direct mail and e-mail are the most popular ways that respondents prefer to be notified about coastal resource professional development programs.

- The most important factors that affect respondents' ability to attend coastal resource professional development programs are lack of time/being too busy, training not being relevant to the respondent's needs, inability to take time off from work, or the training being held in an inconvenient location.

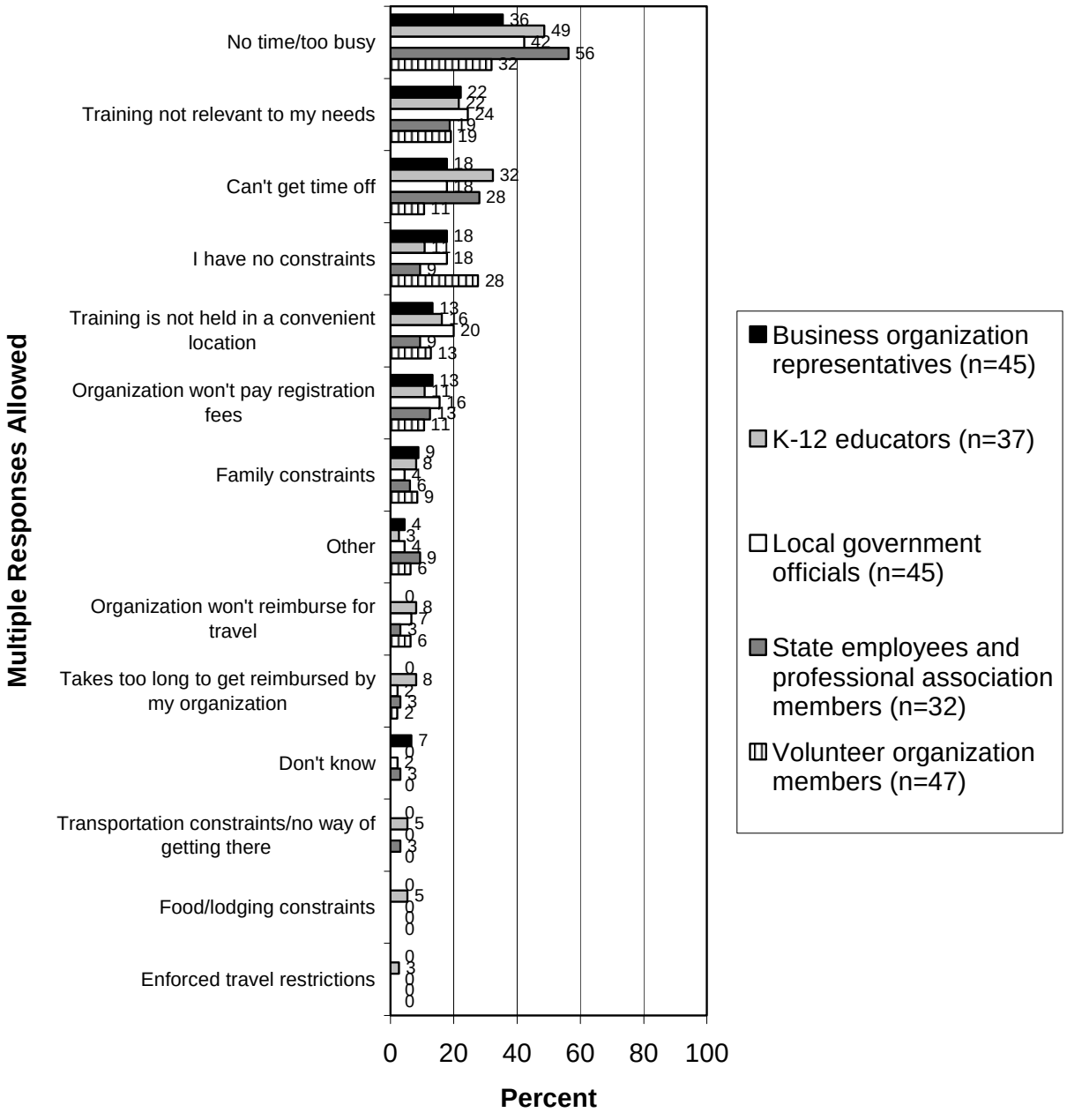
Q14. Please tell me how interested you are in participating in coastal resource professional development programs in the future.



Q187. How would you prefer to be notified/made aware of coastal resource professional development programs?



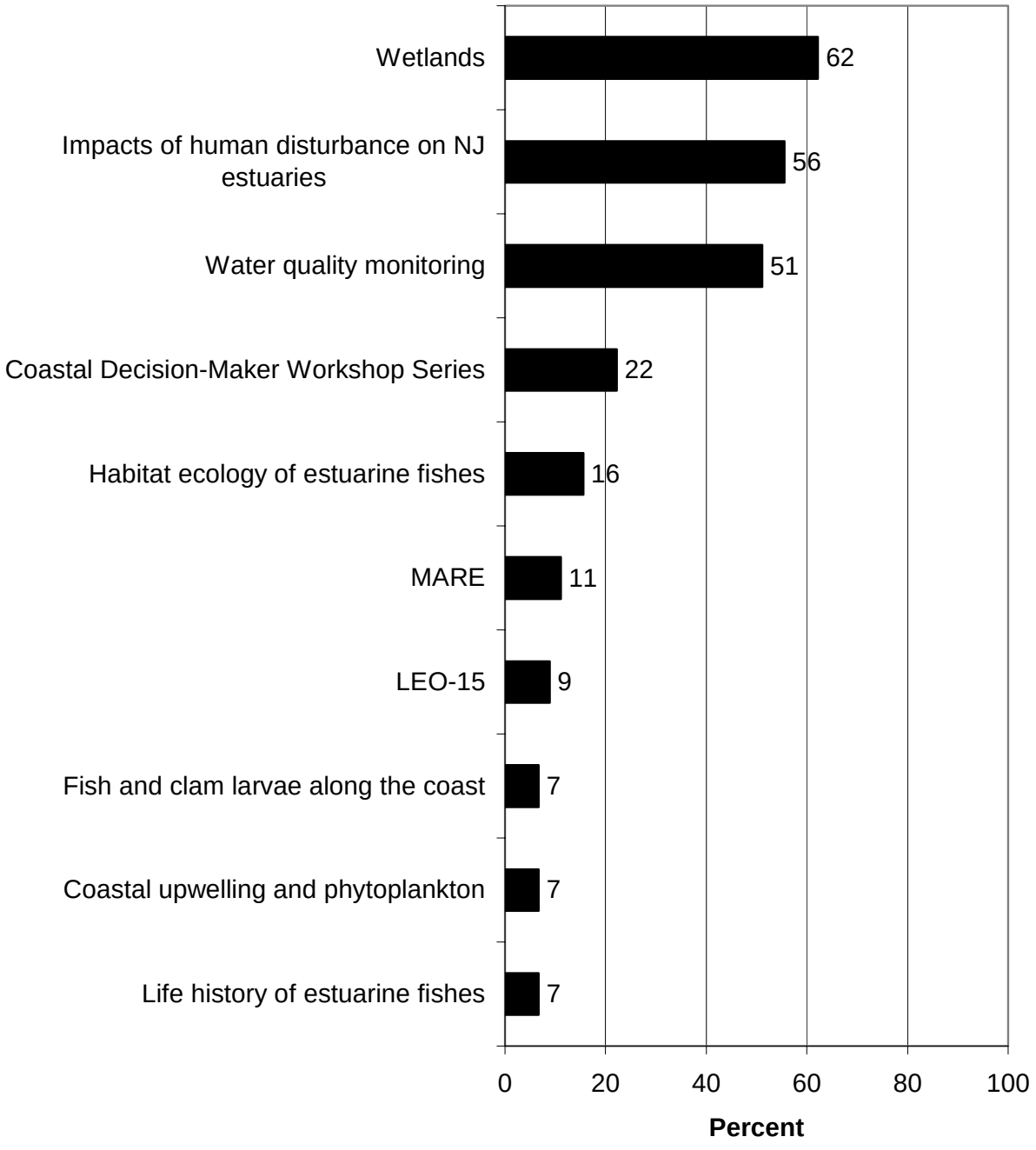
Q206. What factors affect your ability to attend coastal resource professional development?



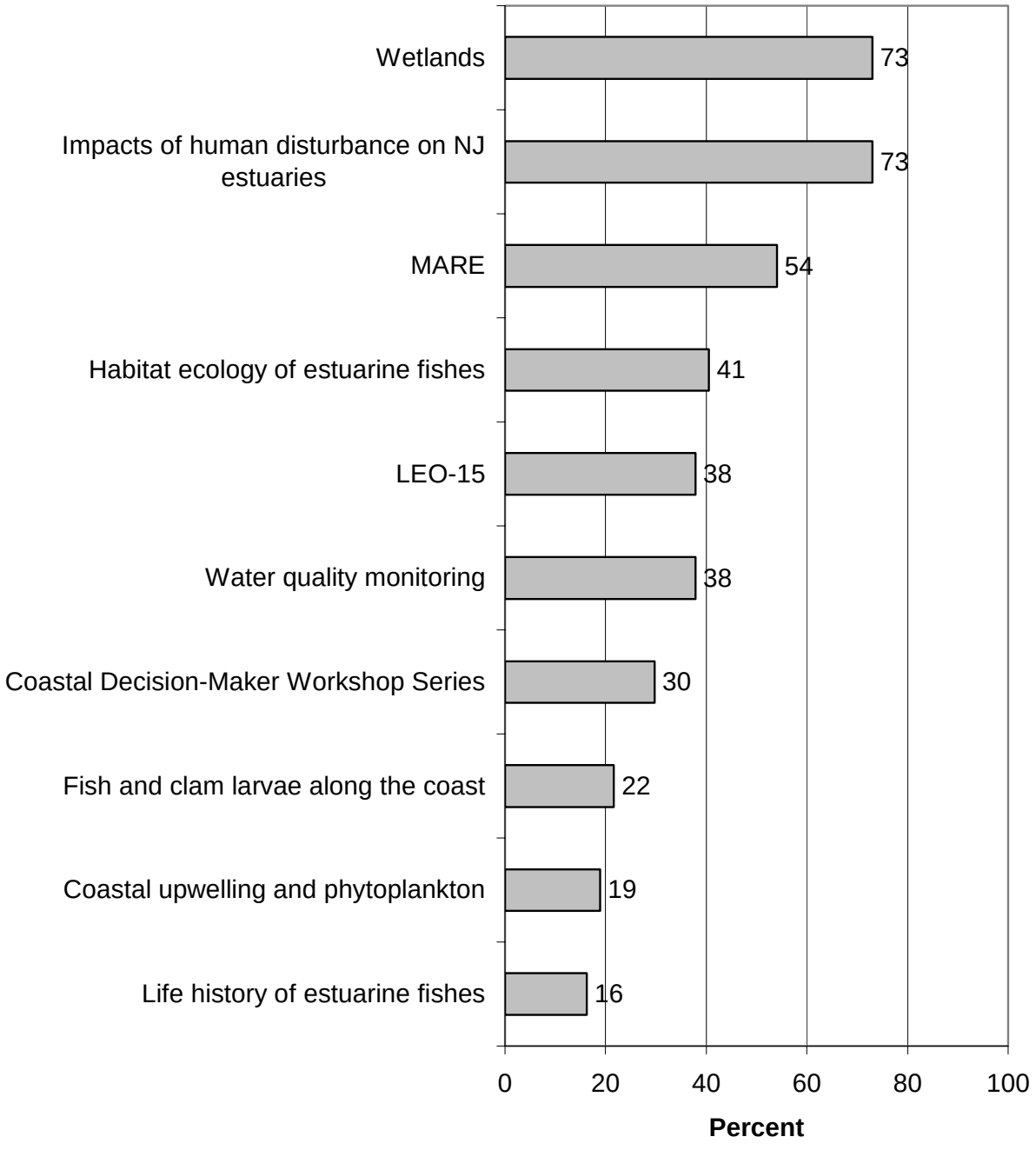
Issues of Interest

- For all groups, the top two research and education topics about which the respondents are very interested in learning are wetlands and impacts of human disturbance on New Jersey estuaries. Other important topics are water quality monitoring, MARE, and habitat ecology of estuarine fishes.
  - For business organization representatives, the top topics are wetlands (62% said that they are very interested in this topic), the impacts of human disturbance on New Jersey estuaries (56%), and water quality monitoring (51%).
  - For K-12 educators, the top topics are wetlands (73%), the impacts of human disturbance on New Jersey estuaries (73%), and MARE (54%).
  - For local government officials, the top topics are wetlands (60%), the impacts of human disturbance on New Jersey estuaries (49%), and water quality monitoring (47%).
  - For state employees and professional association members, the top topics are wetlands (81%), the impacts of human disturbance on New Jersey estuaries (81%), water quality monitoring (75%), and habitat ecology of estuarine fishes (53%).
  - For volunteer organization members, the top topics are wetlands (81%), the impacts of human disturbance on New Jersey estuaries (74%), and water quality monitoring (68%).

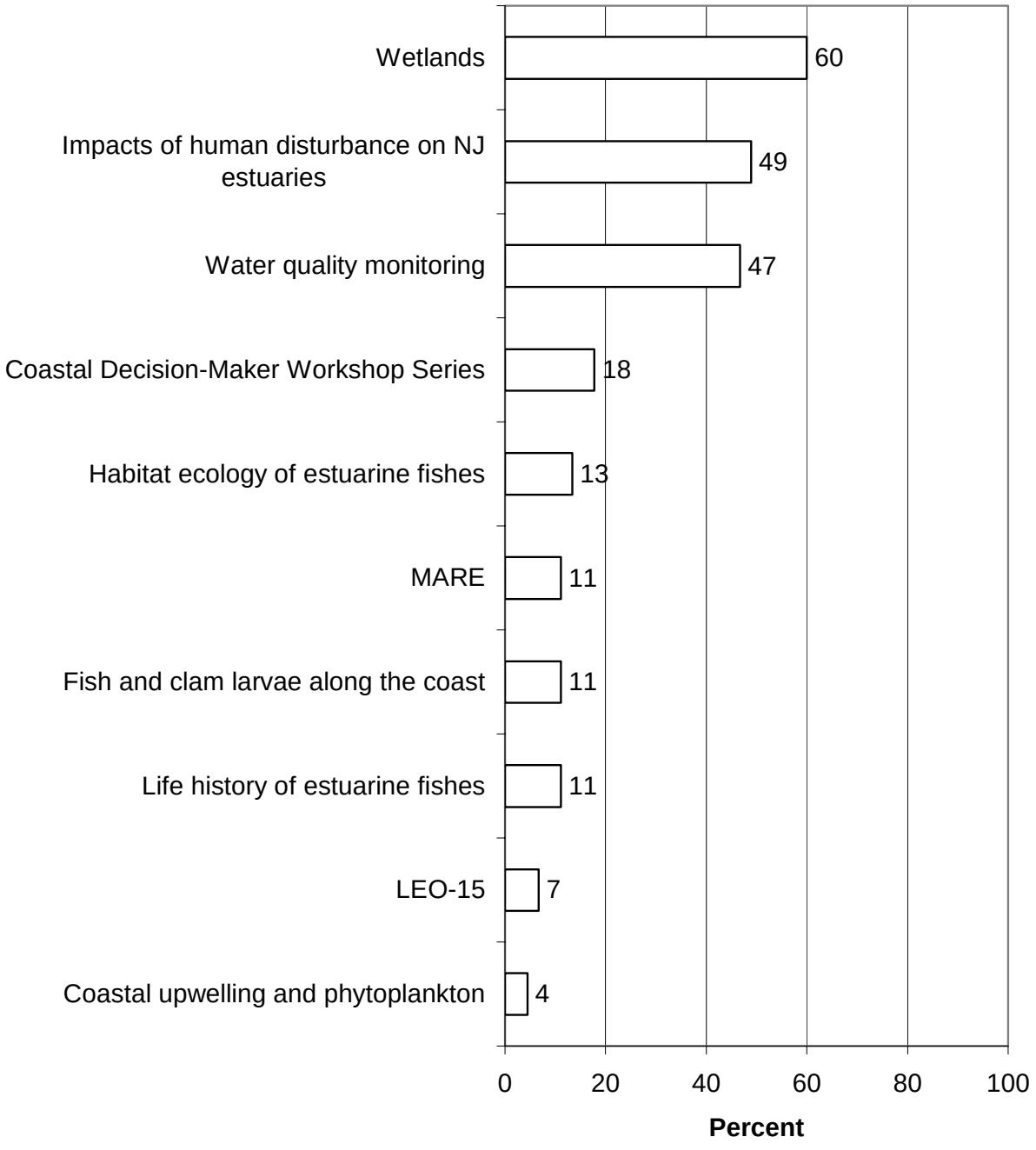
Q45-54. Research and Education Topics that Business Organization Representatives Are Very Interested in Learning More About.



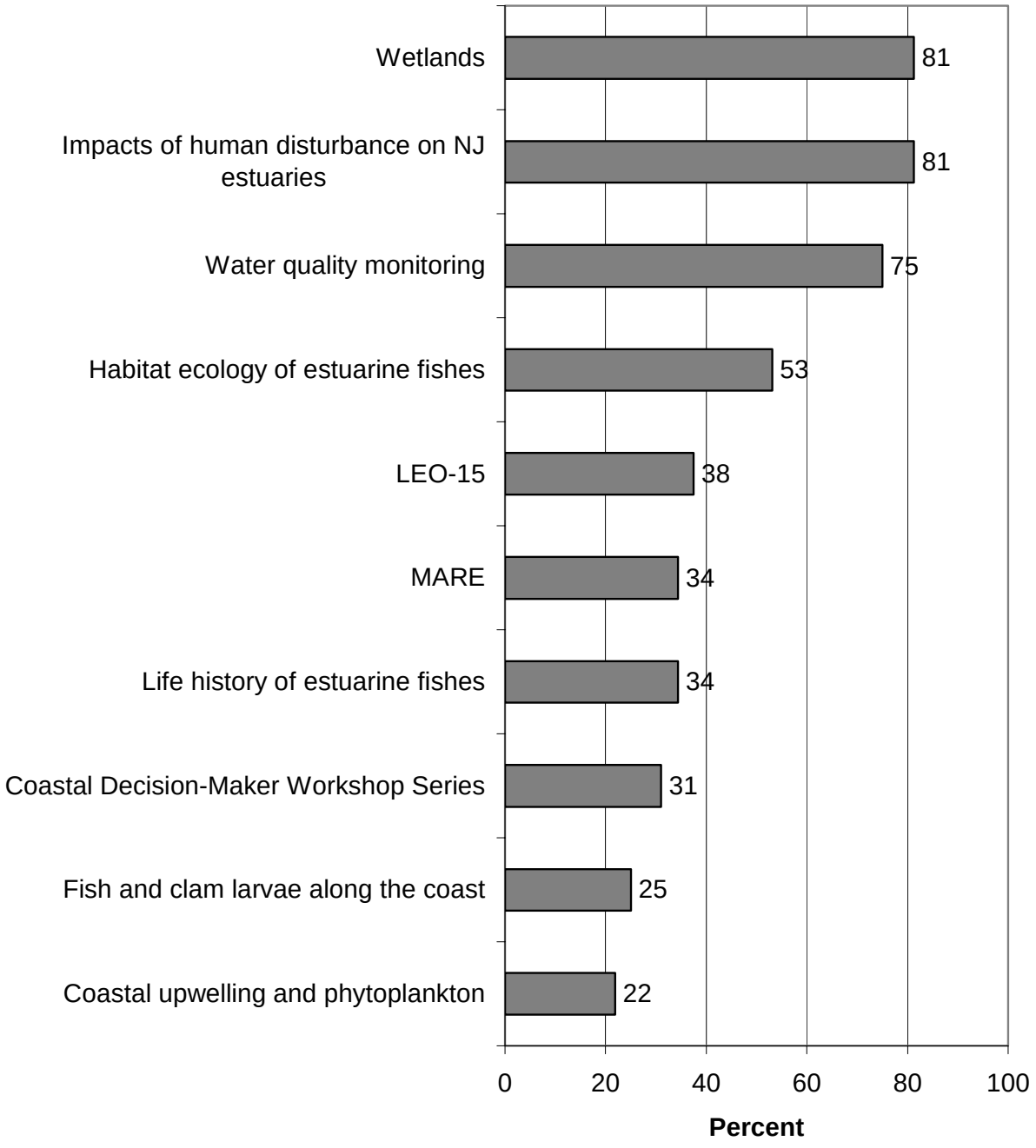
Q45-54. Research and Education Topics that K-12 Educators Are Very Interested in Learning More About.



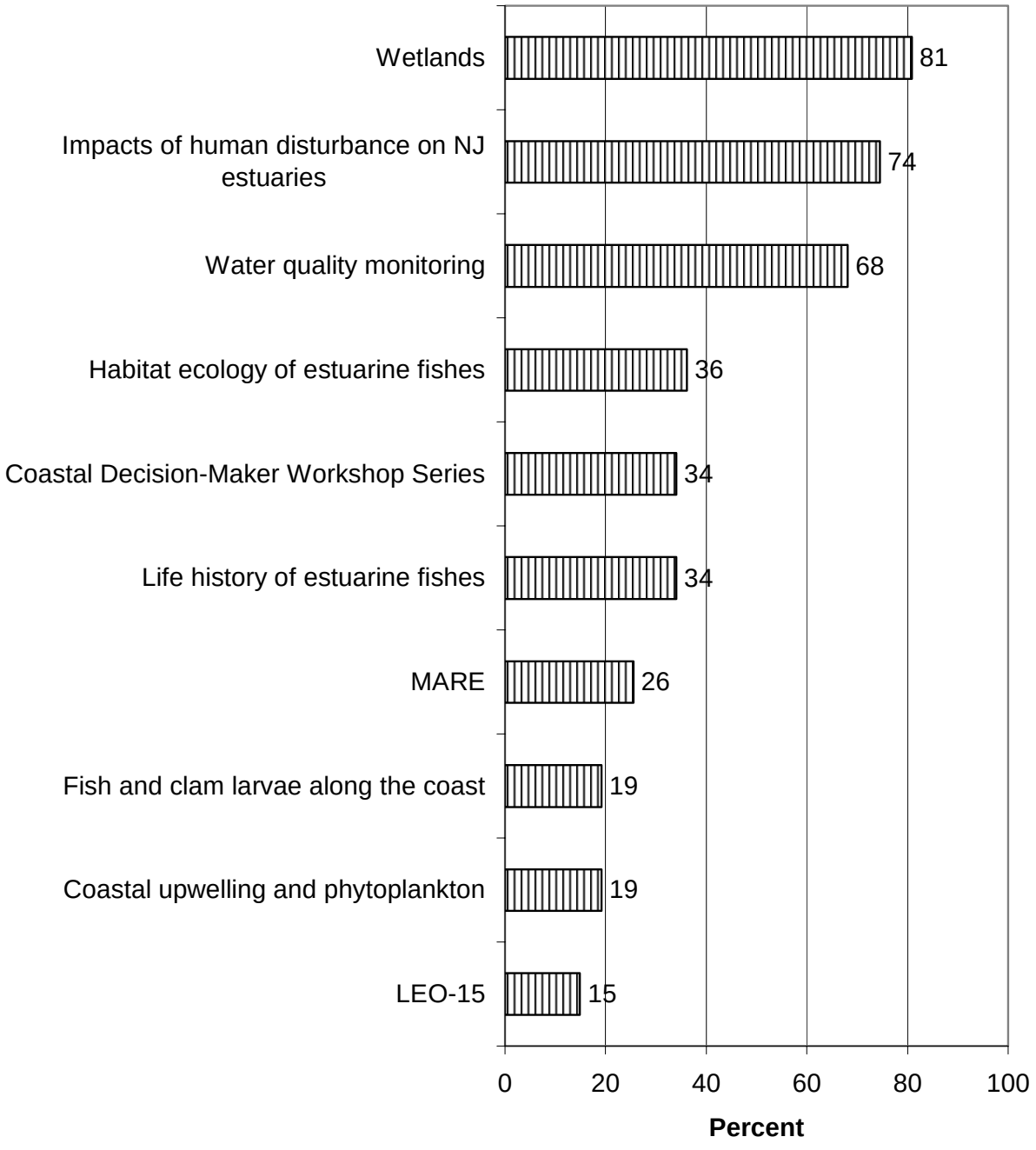
Q45-54. Research and Education Topics that Local Government Officials Are Very Interested in Learning More About.



Q45-54. Research and Education Topics that State Employees and Professional Association Members Are Very Interested in Learning More About.



Q45-54. Research and Education Topics that Volunteer Organization Members Are Very Interested in Learning More About.



Coastal Training Needs

- In general, volunteer organization members had the highest percentage saying that there is a high need for training about each *habitat issue*. Of those *habitat issues*, urban sprawl is at the top of each group's list—a majority in each instance. Other top *habitat issues* are wetlands and waterways protection (the second most popular answer among each group except state employees and professional association members, for which it is the third issue) and habitat protection and restoration.
  - For business organization representatives, the top *habitat issue*, by far, is urban sprawl, with a majority (78%) indicating a high need for training about it. Next is wetlands and waterways protection (42%) and habitat protection and restoration (38%).
  - For K-12 educators, the top *habitat issues* are urban sprawl and wetlands and waterways protection (both with 54% saying there is a high need for training about that issue).
  - For local government officials, urban sprawl is the top *habitat issue* (60%), followed by wetlands and waterways protection (56%).
  - For state employees and professional association members, urban sprawl is the top *habitat issue* (69%). The next *habitat issues* are habitat protection and restoration (50%) and wetlands and waterways protection (47%).
  - For volunteer organization members, the top *habitat issues* are urban sprawl (70%), wetlands and waterways protection (70%), and habitat protection and restoration (55%). Buffers also had a majority indicating that a high need for training about it (51%).

- With a single exception, no *coastal issue* had a majority of any group saying that there is a high need for training about it. In general, K-12 educators had the highest percentages saying that there are high needs for training about the issues. The most important issues overall are coastal construction, dredging and filling, severe weather emergency management, coastal erosion, coastal hazards, public access, and saltwater intrusion.
  - For business organization representatives, the top *coastal issues* about which there are high needs for training are coastal construction (36% said there is a high need for training about it) and dredging and filling (31%).

- For K-12 educators, the top *coastal issues* are severe weather emergency management (51%—the only issue with a majority saying there is a high need for training about it), coastal erosion (49%), saltwater intrusion (43%), and coastal hazards (43%).
- For local government officials, the top *coastal issues* are severe weather emergency management (33%) and public access (33%).
- For state employees and professional association members, the top *coastal issues* are dredging and filling (38%), coastal processes/geology (31%), and coastal erosion (31%).
- For volunteer organization members, the top *coastal issues* are saltwater intrusion (40%) and coastal erosion (30).

➢ In general, volunteer organization members had the highest percentages saying there are high needs for training about the *water quality issues*. The top *water quality issues* are nonpoint source pollution (the top issue for four of the five groups), storm water protection and cleanup, and water quality.

- For business organization representatives, the top *water quality issues* about which there are high needs for training are nonpoint source pollution (51%), point source pollution (49%), storm water protection and cleanup (44%), wastewater management (44%), and water quality (40%).
- For K-12 educators, the top *water quality issues* are water quality (59%), wastewater management (49%), water quantity (49%), and nonpoint source pollution (38%).
- For local government officials, the top *water quality issues* are nonpoint source pollution (62%), storm water protection and cleanup (60%), wastewater management (49%), point source pollution (49%), septic system issues (47%), water quantity (44%), and water quality (40%).
- For state employees and professional association members, the top *water quality issues* are nonpoint source pollution (66%), water quality (60%), point source pollution (53%), nitrogen loading (50%), and eutrophication (44%).
- For volunteer organization members, every *water quality issue* except one (septic system issues) had a majority indicating that there is a high need for training about it. The top issue is nonpoint source pollution (74%).

- There is much variation among the groups' perceived needs for training about *education, planning, and regulation issues*. For instance, the top issues for K-12 educators are education issues, whereas the top issues for local government officials are public safety and regulations.
  - For business organization representatives, the top *education, planning, and regulation issues* are regulations (56%) and public safety (42%).
  - For K-12 educators, the top *education, planning, and regulation issues*, not surprisingly, are education issues: professional development for K-12 educators (81%), environmental education for K-12 students (78%), and environmental education for adults (51%). Public safety (51%) and regulations (43%) are other important issues among K-12 educators.
  - For local government officials, the top *education, planning, and regulation issues* are public safety (64%) and regulations (53%).
  - For state employees and professional association members, the top *education, planning, and regulation issues* are environmental education for K-12 students (44%) and environmental education for adults (41%).
  - For volunteer organization members, the top *education, planning, and regulation issues* are regulations (55%), environmental education for adults (49%), GIS (47%), environmental education for K-12 students (45%), sustainable facilities (43%), and land use planning (43%).

- There is much variation among the groups' perceived needs for training about *resource management issues*. The top issues are land trusts and conservation acquisitions, economic aspects of land use, social aspects of land use, and renewable energy.
  - For business organization representatives, the top *resource management issues* are real estate issues (67%), land trusts and conservation acquisitions (47%), and economic aspects of land use (47%).
  - For K-12 educators, the top *resource management issues* are renewable energy (46%) and global warming and climate (46%).

- For local government officials, the top *resource management issues* are economic aspects of land use (51%), land trusts and conservation acquisitions (44%), and social aspects of land use (44%).
- For state employees and professional association members, estuarine ecology is the top *resource management issue* (44%). All other issues had less than 35% saying there is a high need for training about them.
- For volunteer organization members, the top *resource management issues* are land trusts and conservation acquisitions (53%), economic aspects of land use (45%), and environmental technologies (45%).

➢ Of all the categories of issues, *ocean sciences topics* had the lowest percentages of respondents having said that there are high needs for training about them. The highest percent indicating there is a high need for training is the 22% of K-12 educators who said that biogeochemical predictors of ocean-atmosphere conditions and climate prediction are issues about which there are high training needs.

- For business organization representatives, the top *ocean sciences topics* are climate prediction (4%) and ocean forecasting (4%).
- For K-12 educators, the top *ocean sciences topics* are biogeochemical predictors of ocean-atmosphere conditions (22%) and climate prediction (22%).
- For local government officials, the top *ocean sciences topic* is climate prediction (7%).
- For state employees and professional association members, the top *ocean sciences topic* is climate prediction (16%).
- For volunteer organization members, the top *ocean sciences topic* is biogeochemical predictors of ocean-atmosphere conditions (6%).

➢ Currently, the most important sources of information that respondents use in making coastal resource management decisions are state resources, environmental groups, federal resources, professional contacts through meetings, municipal officials, and the Internet.

- A majority (58%) of business organization representatives receive information from state resources. The next most important sources for business organization representatives are municipal officials (40%), federal resources (31%), and the Internet (31%).

- The most important source of information for K-12 educators is the Internet (46%), followed by environmental groups (41%), professional contacts through meetings (38%), and state resources (35%).
- A majority (62%) of local government officials receive information from state resources. The next most important sources for local government officials are municipal officials (42%) and environmental groups (31%).
- For state employees and professional association members, four sources of information are equally important, all had 44% of respondents saying they receive information from that source: state resources, the Internet, professional contacts through meetings, and associations and newsletters.
- A strong majority of volunteer organization members receive information from state resources (79%) and from federal resources (62%). A slight majority receive information from environmental groups (55%). Additional important sources of information are professional contacts through meetings (38%) and municipal officials (36%).

➢ State employees and professional association members made the most use of real-time science data in their jobs: 50% of them used real-time data. Otherwise, volunteer organization members (32%) and K-12 educators (24%) made the most use of real-time data. Business organization representatives (13%) and local government officials (4%) made the least use of real-time science data.

➢ Interest in learning more about real-time science data is greater than the actual current use of the data.

- Majorities of K-12 educators (73%), volunteer organization members (60%), and state employees and professional association members (53%) expressed interest in learning more about real-time science data. Business organization representatives had the lowest percentage, although more than a third, expressing interest in learning more about real-time science data (38%).

- A majority of each group except K-12 educators had used GIS in their job.
  - 81% of state employees and professional association members had used GIS in their job, followed closely by volunteer organization members (74%).
  - K-12 educators used GIS the least: 22% had used GIS in their job.

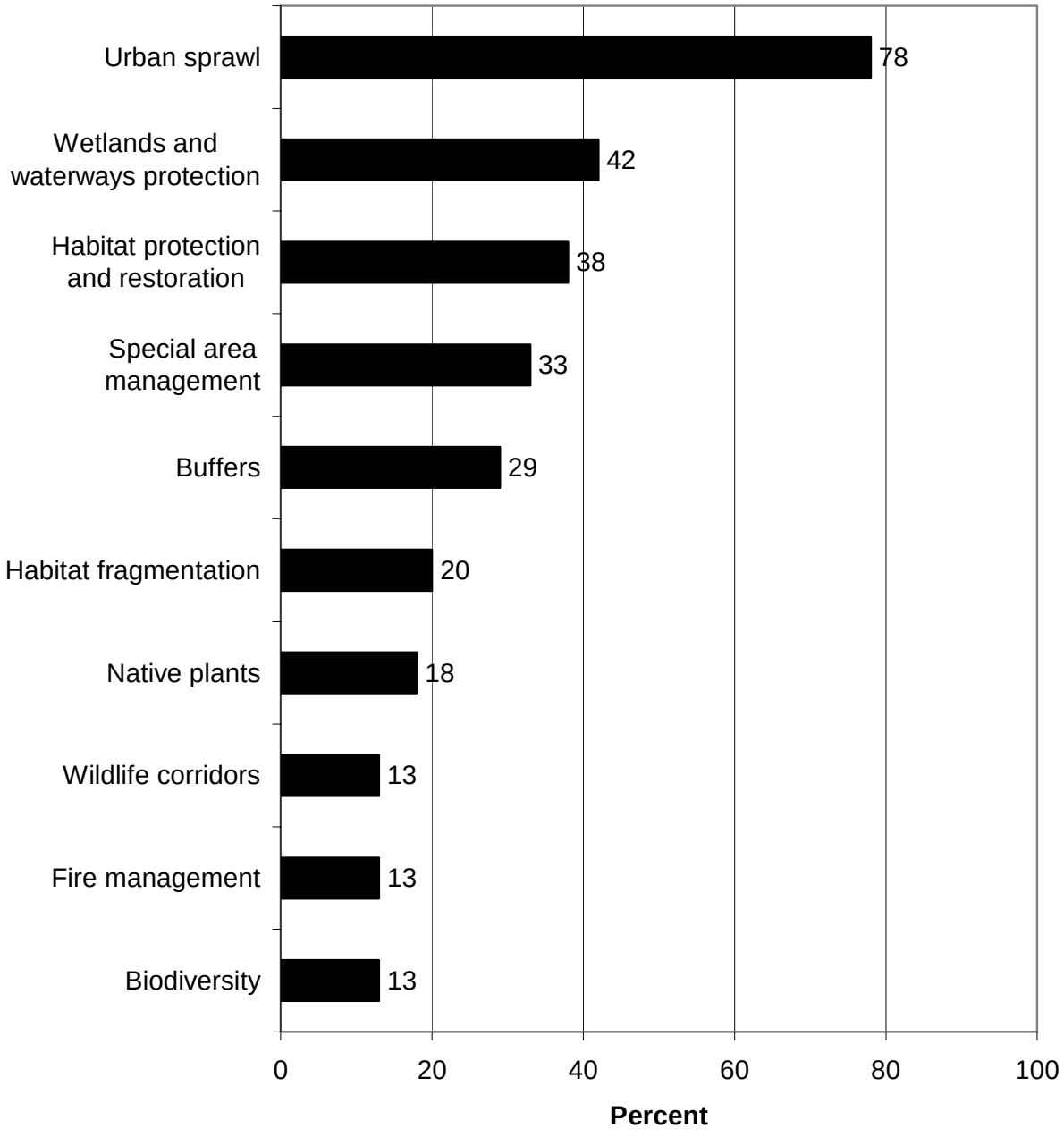
- In general, interest in learning about GIS is higher than its actual use.
  - A majority of each group expressed interest in learning more about GIS, ranging from 56% of business organization representatives to 77% of volunteer organization members.

- State employees and professional association members had the highest percentage who agreed that there is enough coastal resource professional development in New Jersey and that there are enough providers of coastal resource professional development programs in New Jersey. Business organization representatives had the lowest percentage who agreed.

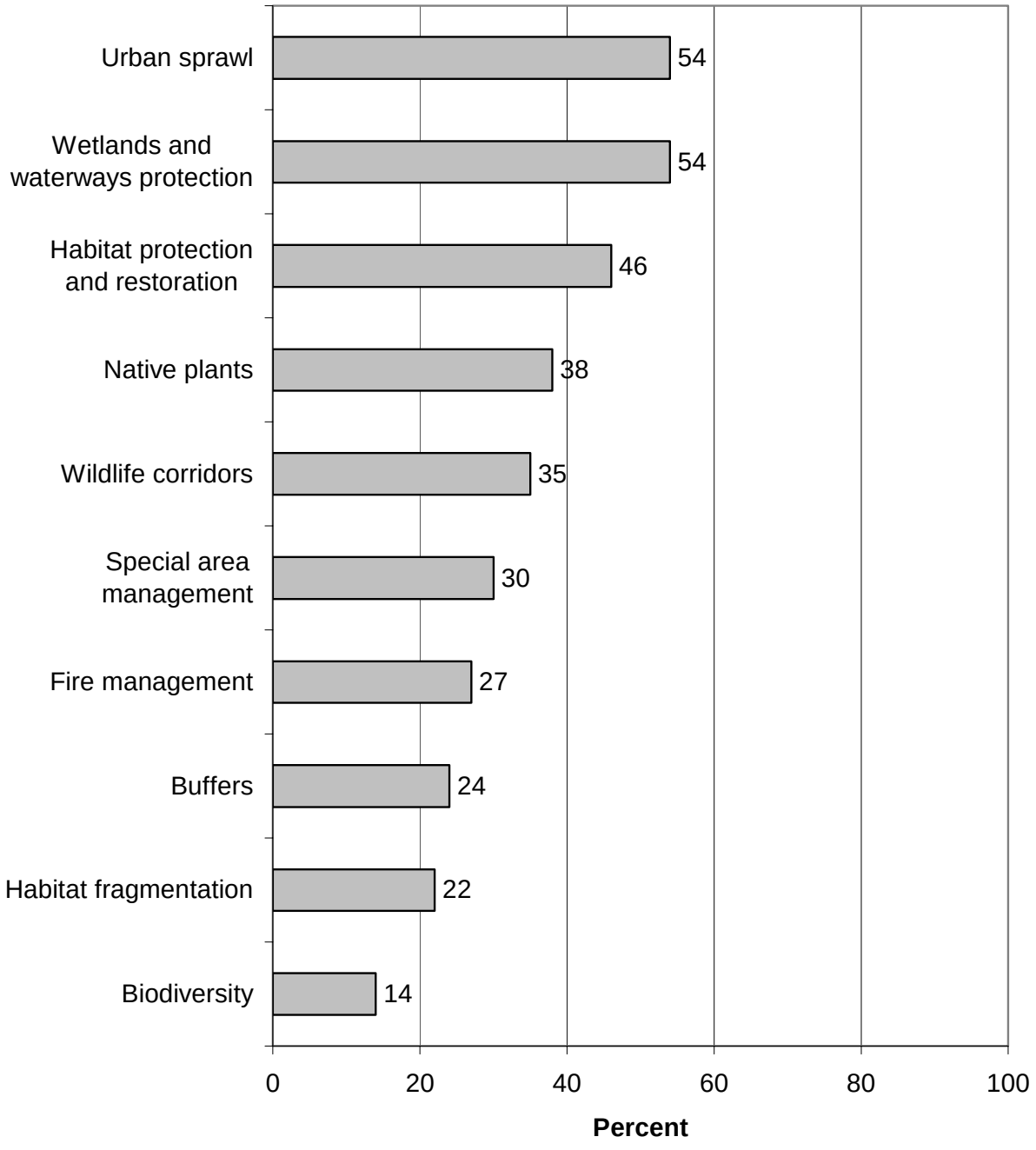
- Overall, the groups that respondents indicated had the highest needs for coastal resource information and professional development are coastal planners, coastal regulators, planning commission members, wetland scientists, environmental educators, state legislators, and environmental protection agency personnel.
  - Business organization representatives indicated that the following groups had the highest needs for coastal resource information and professional development: environmental protection agency personnel (87%), coastal planners (84%), environmental consultants (82%), and wetland scientists (82%).
  - K-12 educators indicated that the following groups had the highest needs for coastal resource information and professional development: wetland scientists (97%), environmental educators (97%), environmental health officials (95%), coastal regulators (95%), coastal planners (95%), and environmental protection agency personnel (95%).
  - Local government officials indicated that the following groups had the highest needs for coastal resource information and professional development: estuarine researchers (89%), coastal regulators (89%), wetland scientists (87%), environmental educators (87%), coastal planners (87%), marine resource agency personnel (87%), and environmental protection agency personnel (87%).

- State employees and professional association members indicated that the following groups had the highest needs for coastal resource information and professional development: coastal planners (91%), state legislators (88%), planning commission members (88%), county commissioners (84%), city/town planners (84%), and coastal regulators (84%).
- Volunteer organization members indicated that the following groups had the highest needs for coastal resource information and professional development: state legislators (87%), planning commission members (87%), environmental health officials (87%), and coastal planners (85%).

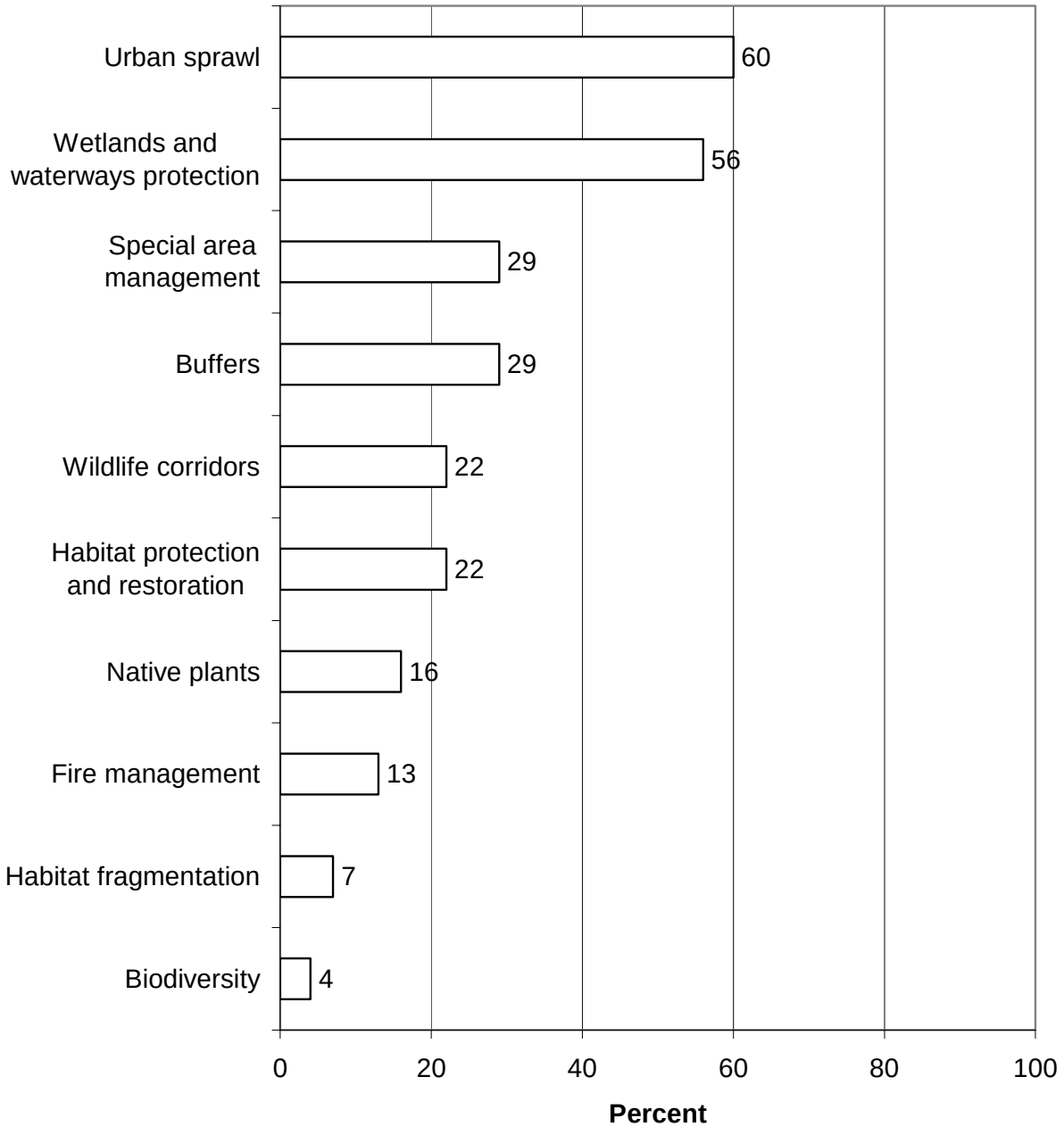
Q55-64. Habitat Issues for Which Business Organization Representatives Have a High Professional Need for Coastal Resource Training and Information.



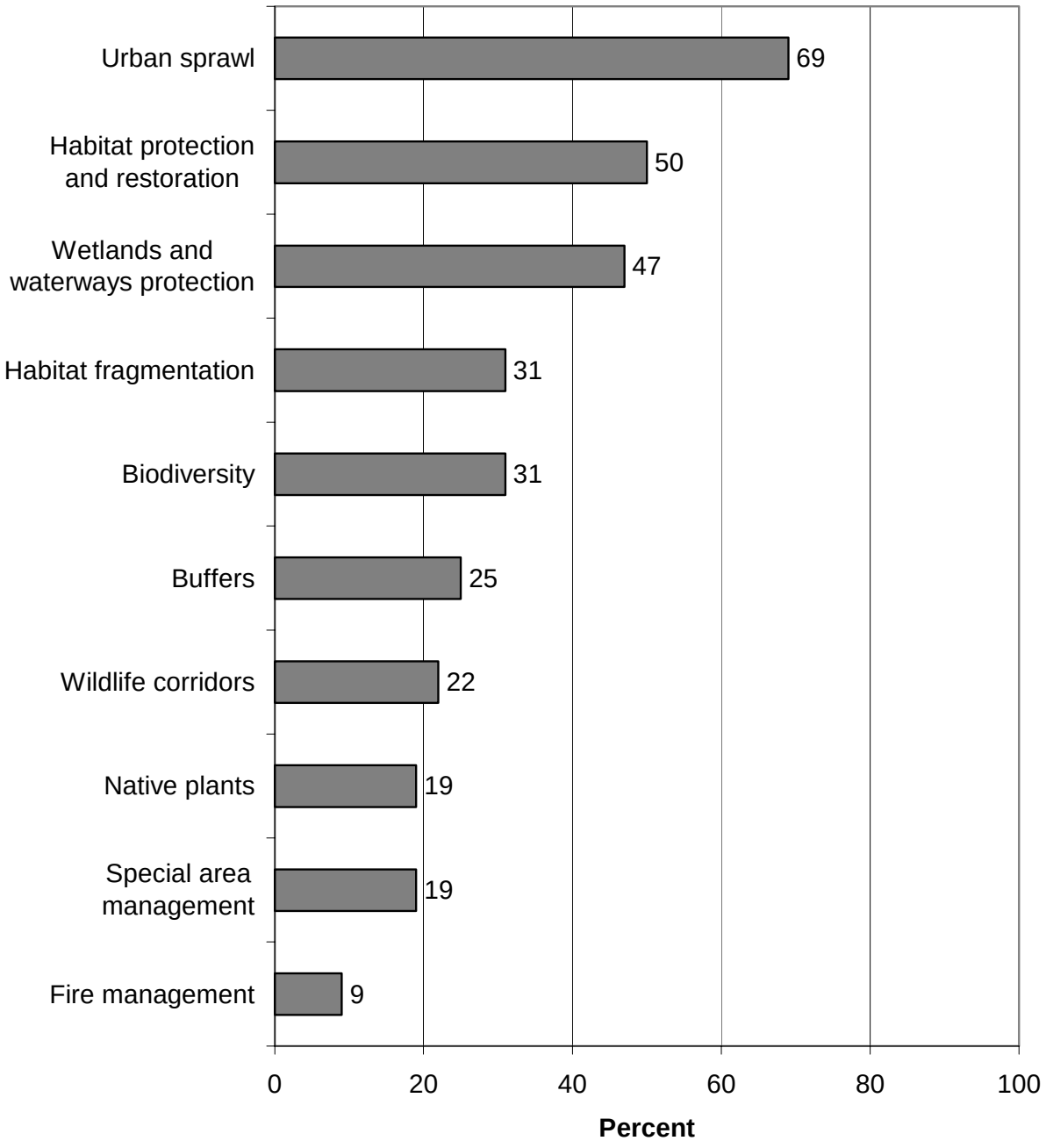
Q55-64. Habitat Issues for Which K-12 Educators Have a High Professional Need for Coastal Resource Training and Information.



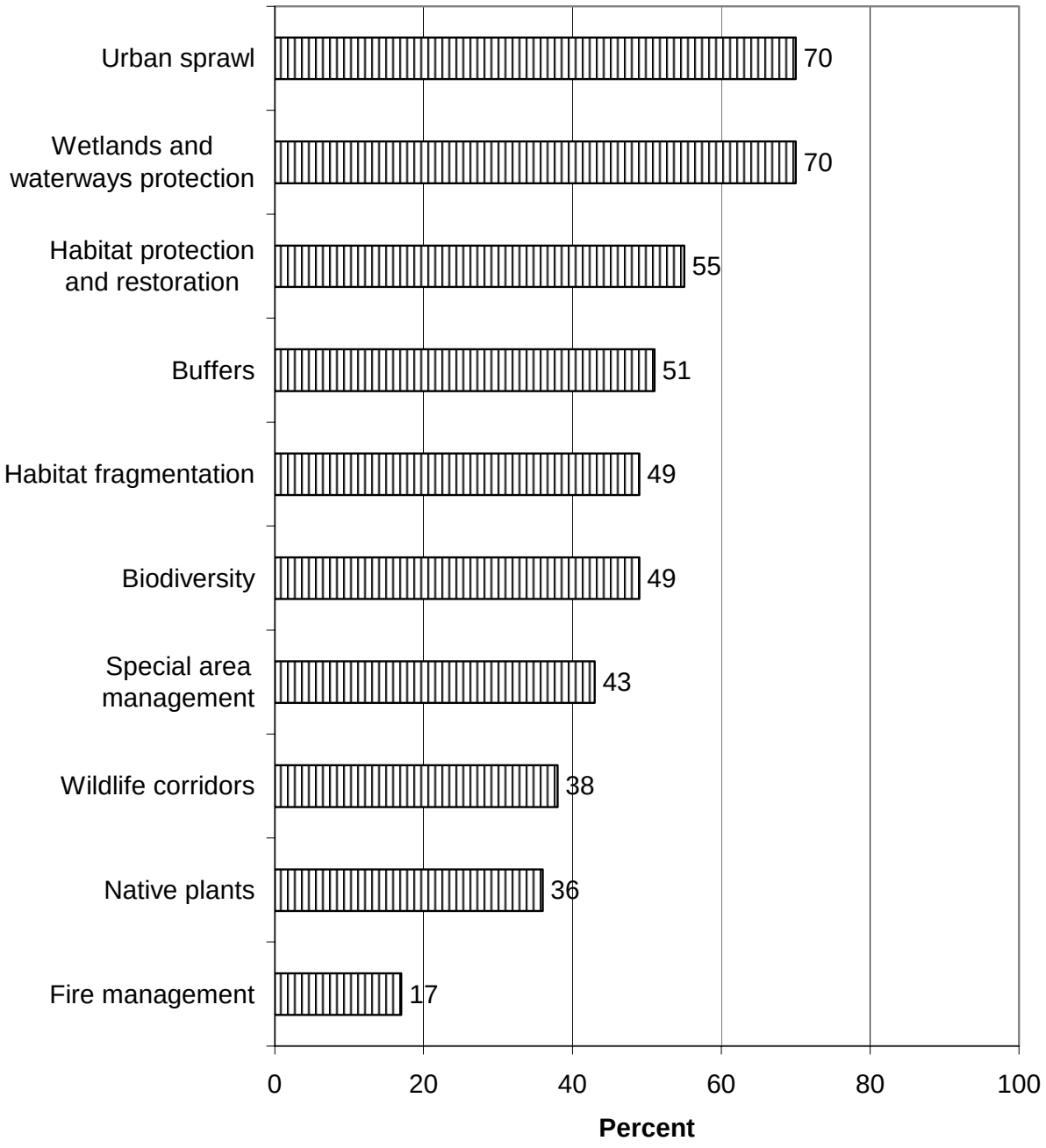
Q55-64. Habitat Issues for Which Local Government Officials Have a High Professional Need for Coastal Resource Training and Information.



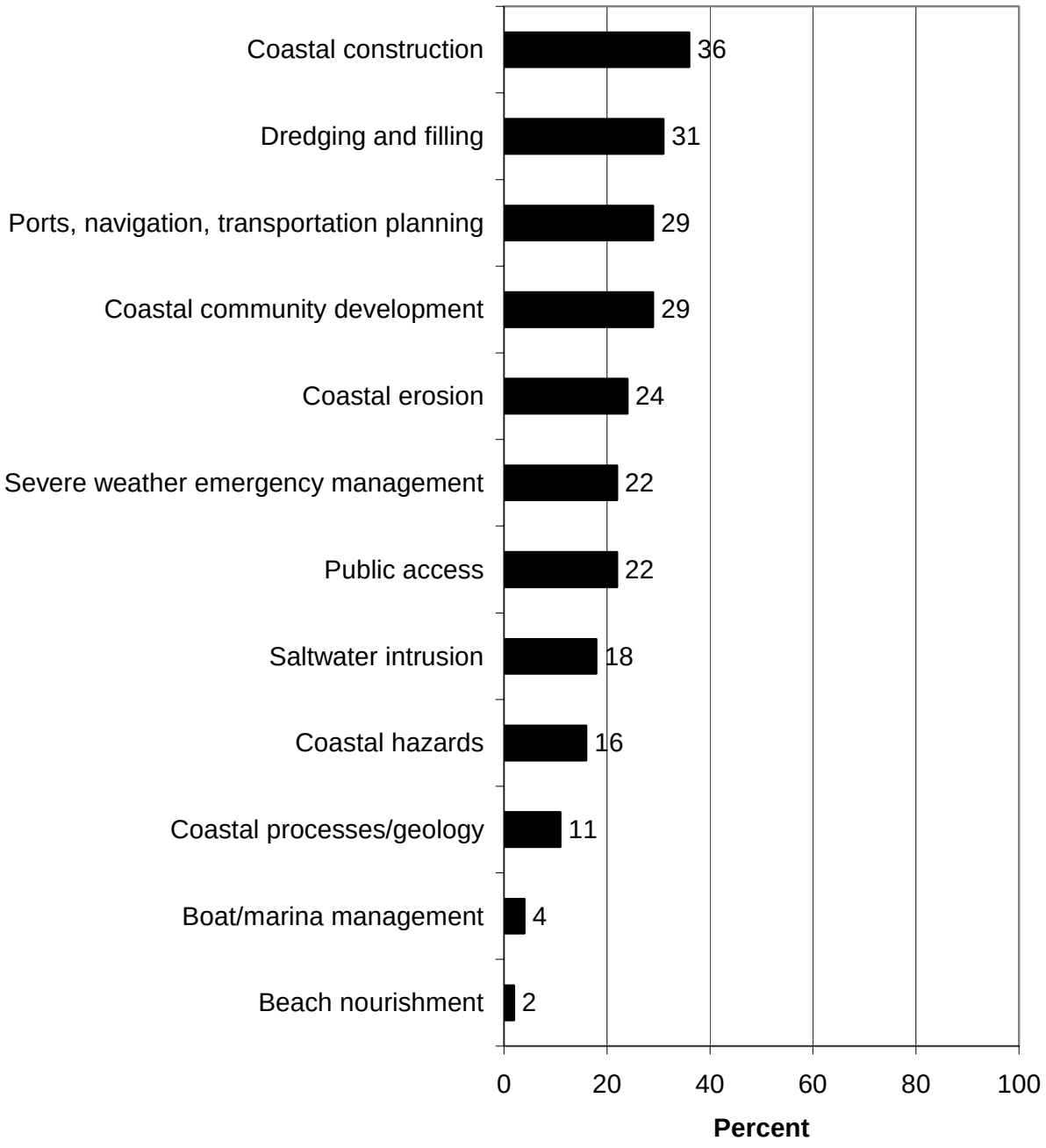
Q55-64. Habitat Issues for Which State Employees and Professional Association Members Have a High Professional Need for Coastal Resource Training and Information.



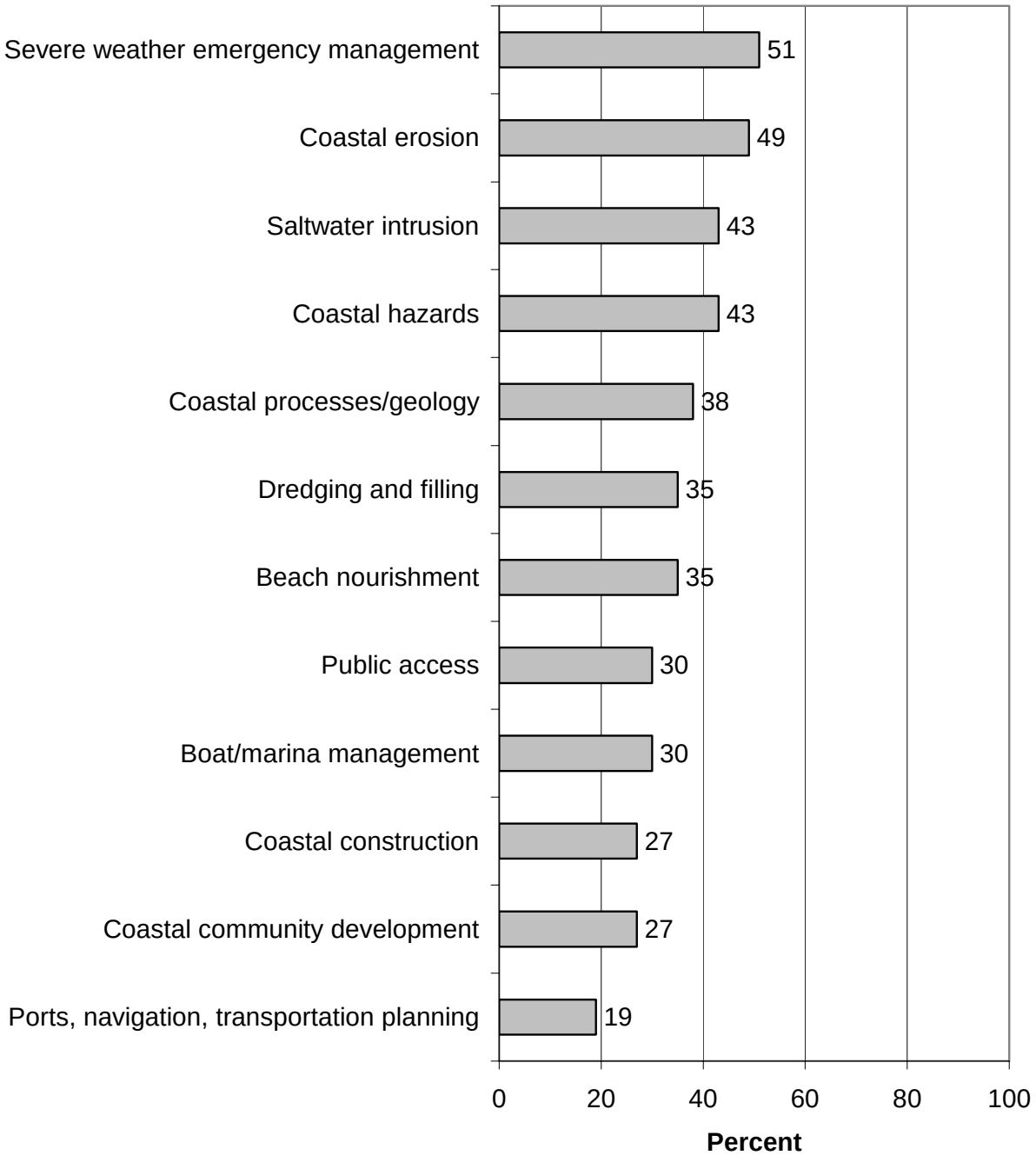
Q55-64. Habitat Issues for Which Volunteer Organization Members Have a High Professional Need for Coastal Resource Training and Information.



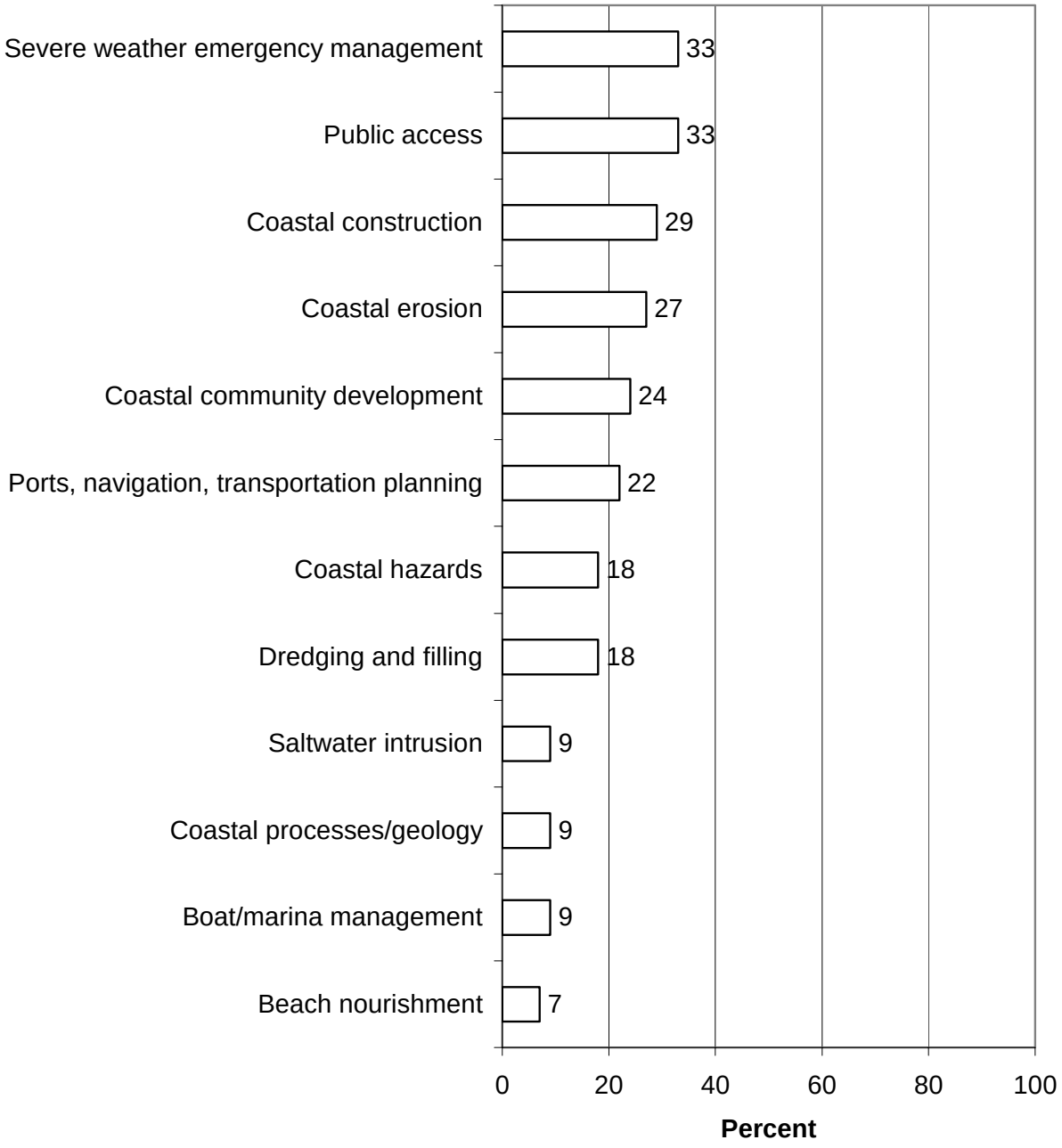
Q65-76. Coastal Issues for Which Business Organization Representatives Have a High Professional Need for Coastal Resource Training and Information.



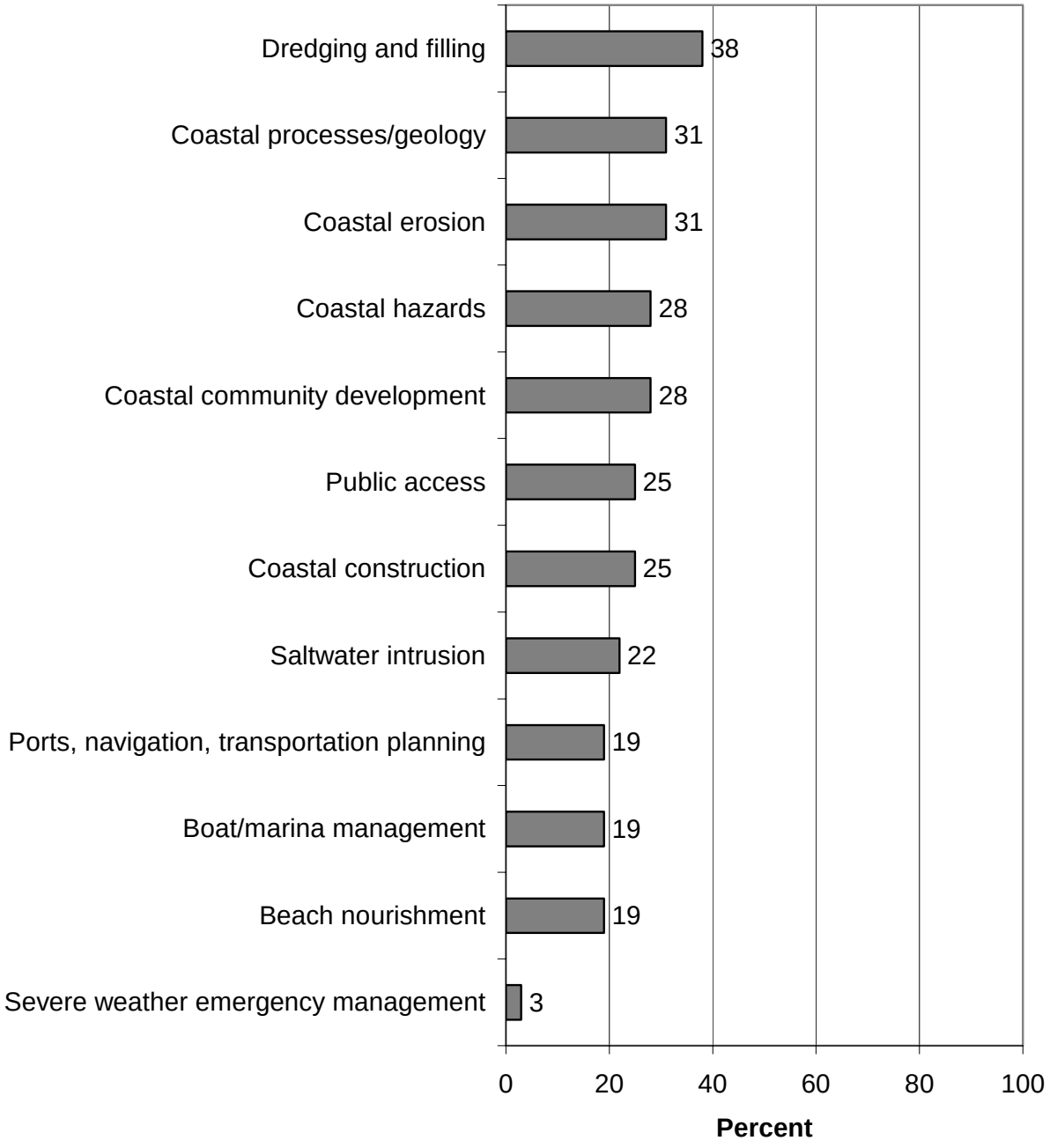
Q65-76. Coastal Issues for Which K-12 Educators Have a High Professional Need for Coastal Resource Training and Information.



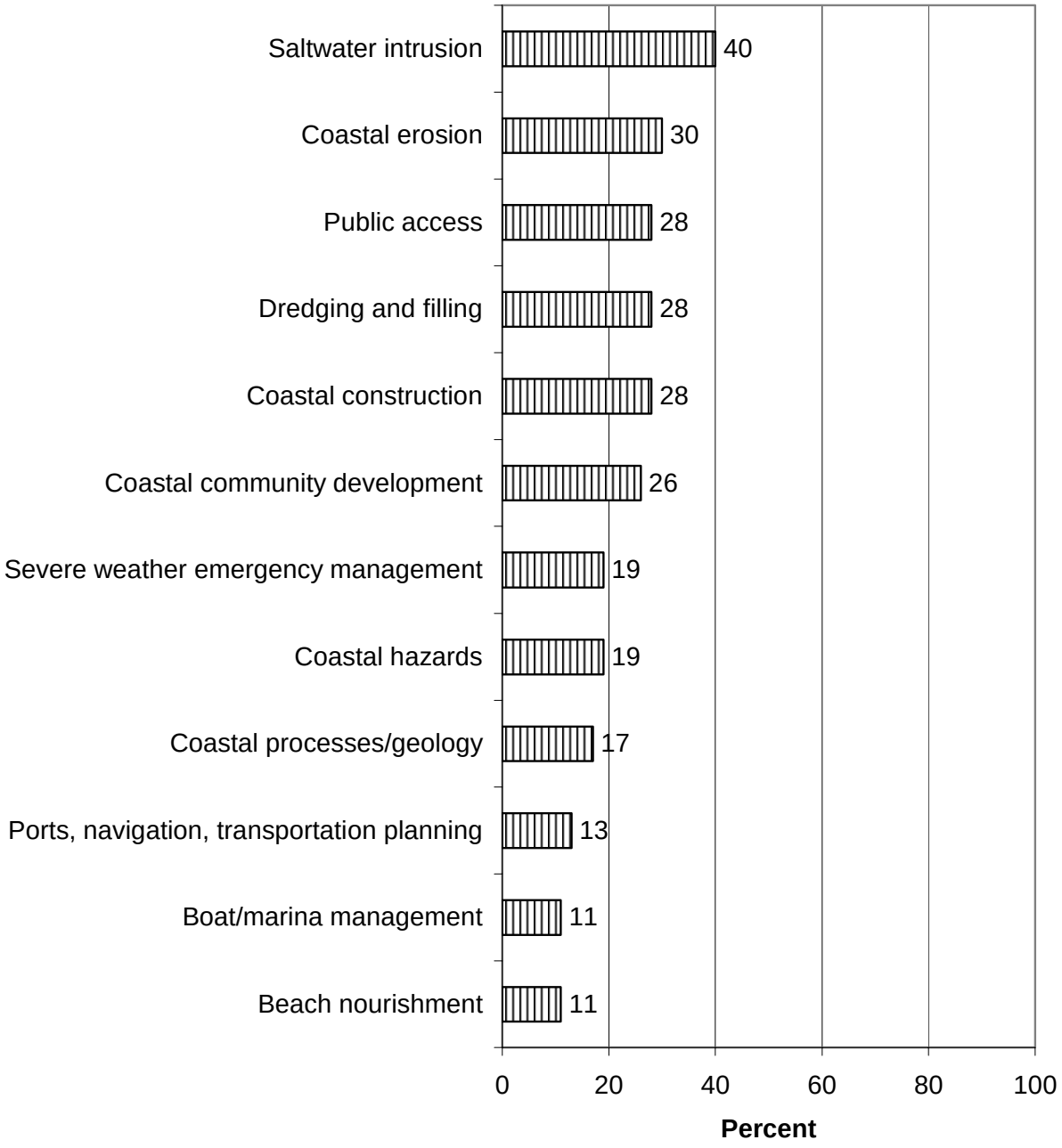
Q65-76. Coastal Issues for Which Local Government Officials Have a High Professional Need for Coastal Resource Training and Information.



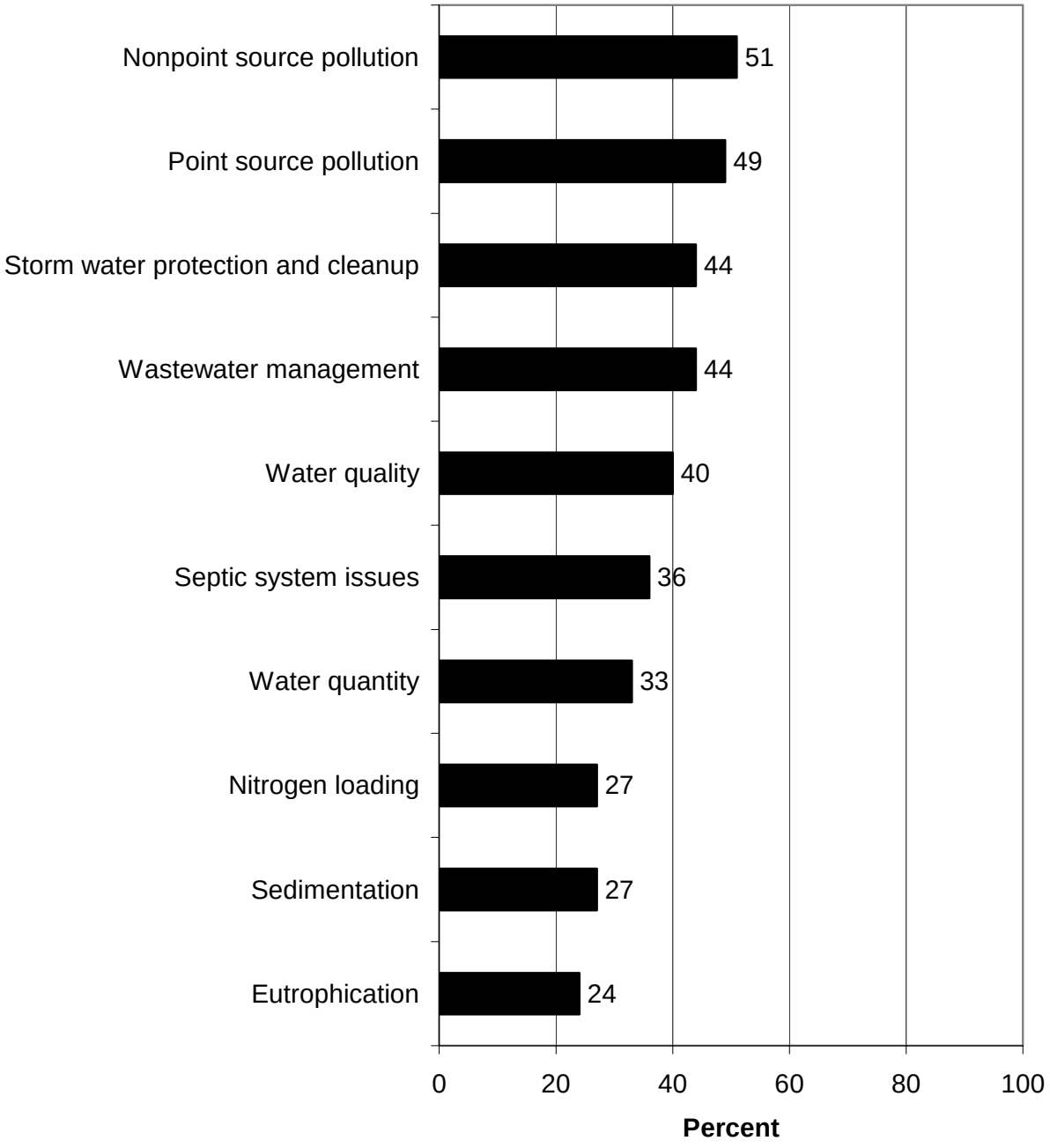
Q65-76. Coastal Issues for Which State Employees and Professional Association Members Have a High Professional Need for Coastal Resource Training and Information.



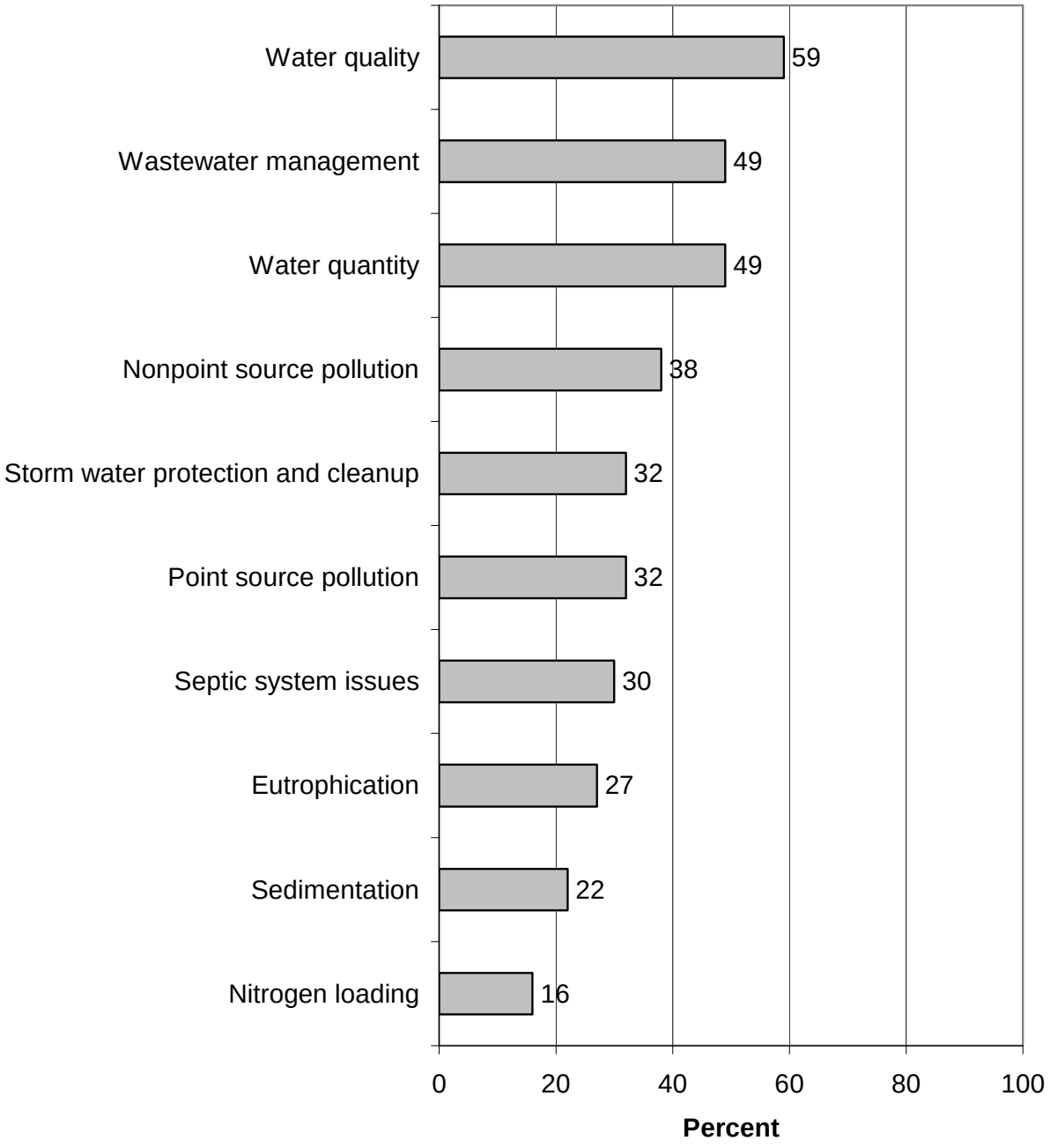
Q65-76. Coastal Issues for Which Volunteer Organization Members Have a High Professional Need for Coastal Resource Training and Information.



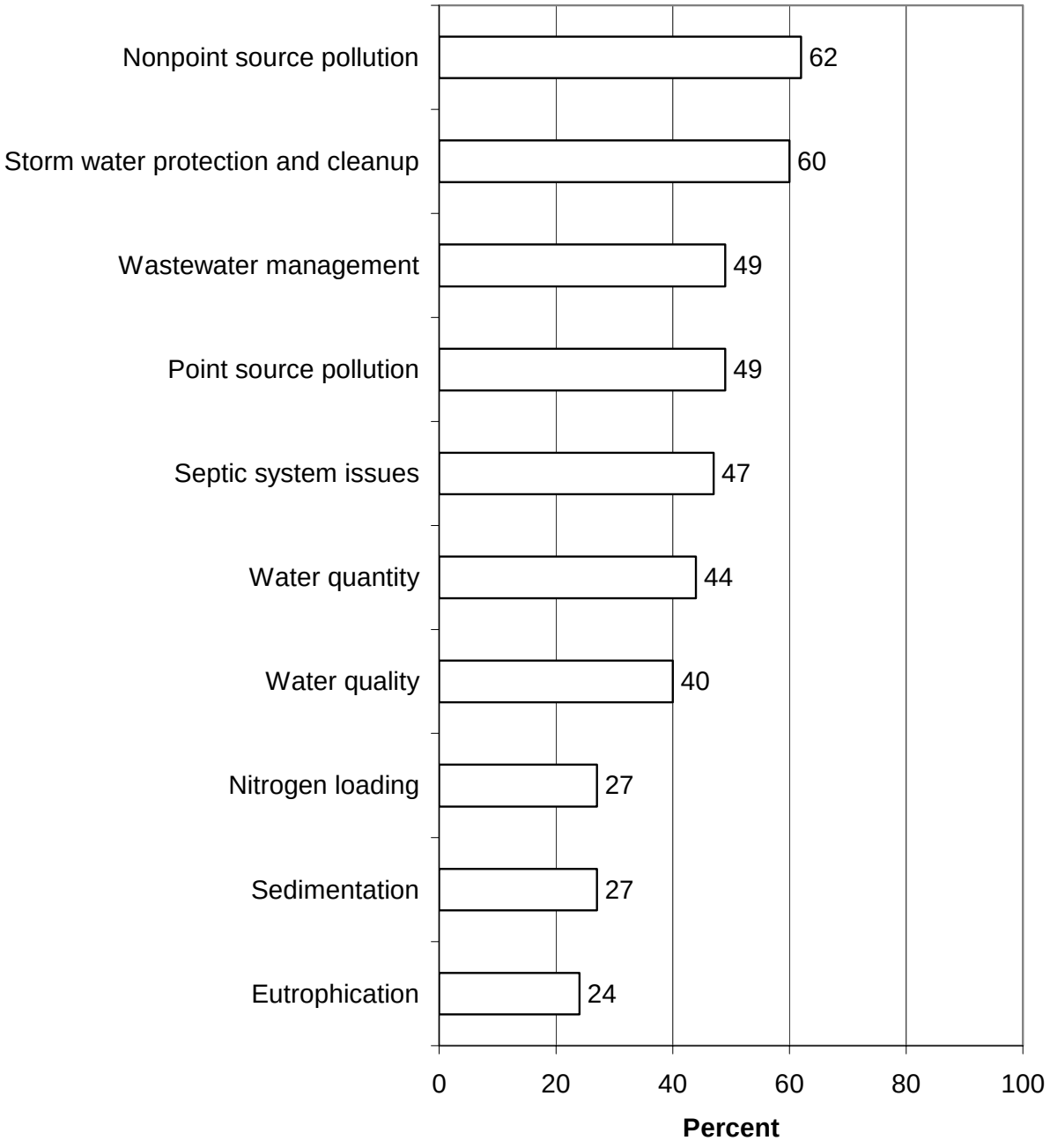
Q77-86. Water Quality Issues for Which Business Organization Representatives Have a High Professional Need for Coastal Resource Training and Information.



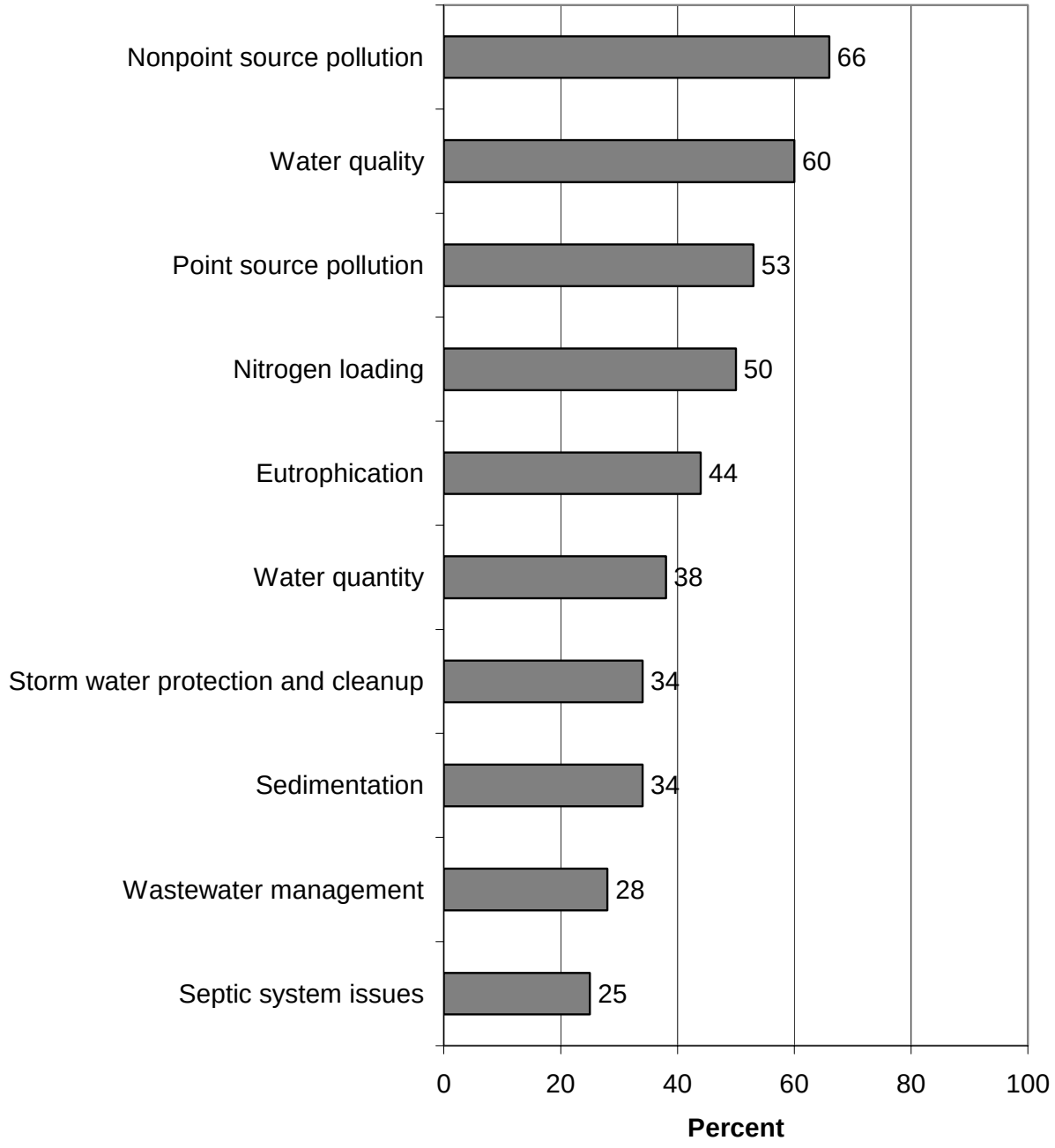
Q77-86. Water Quality Issues for Which K-12 Educators Have a High Professional Need for Coastal Resource Training and Information.



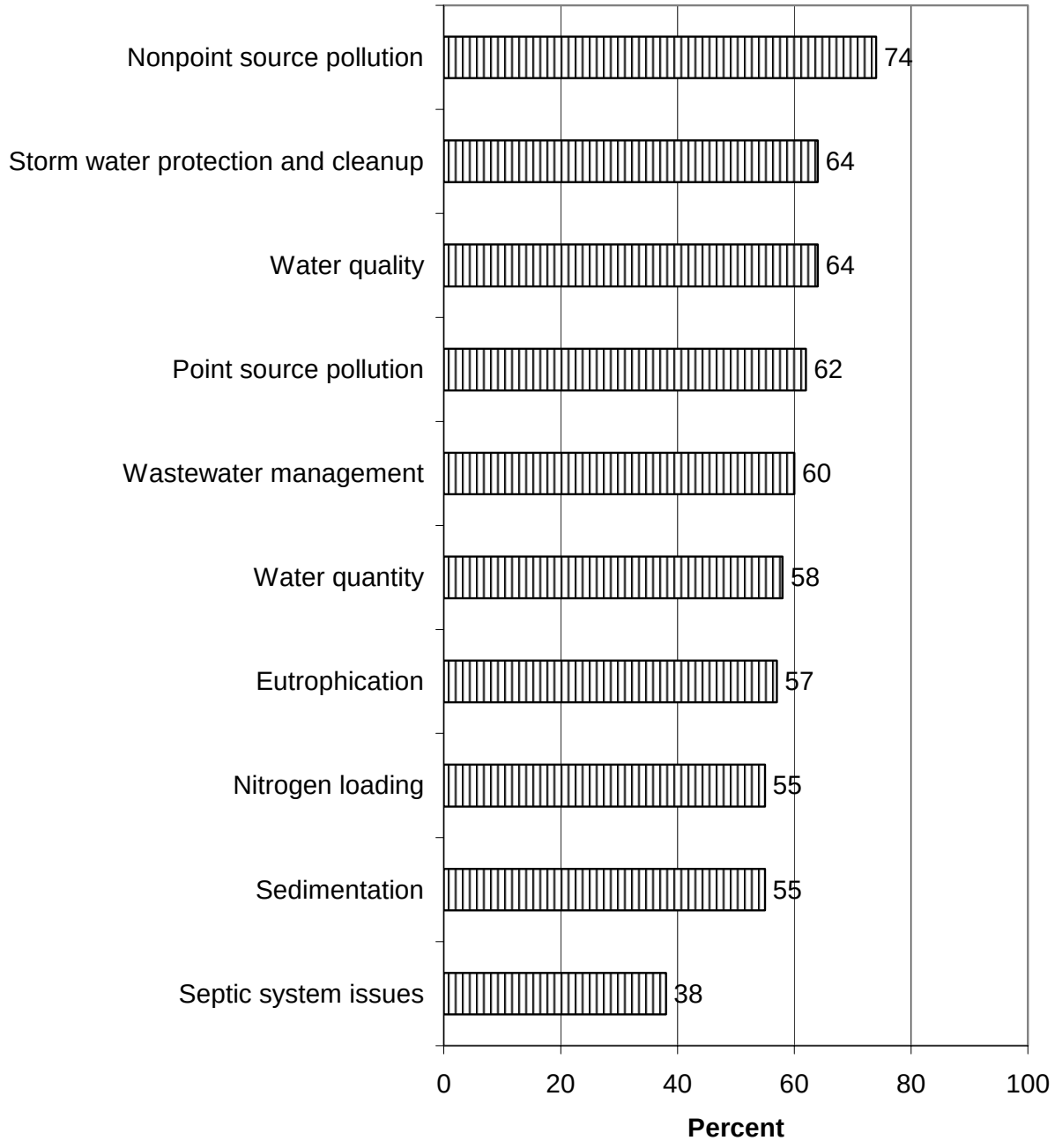
Q77-86. Water Quality Issues for Which Local Government Officials Have a High Professional Need for Coastal Resource Training and Information.



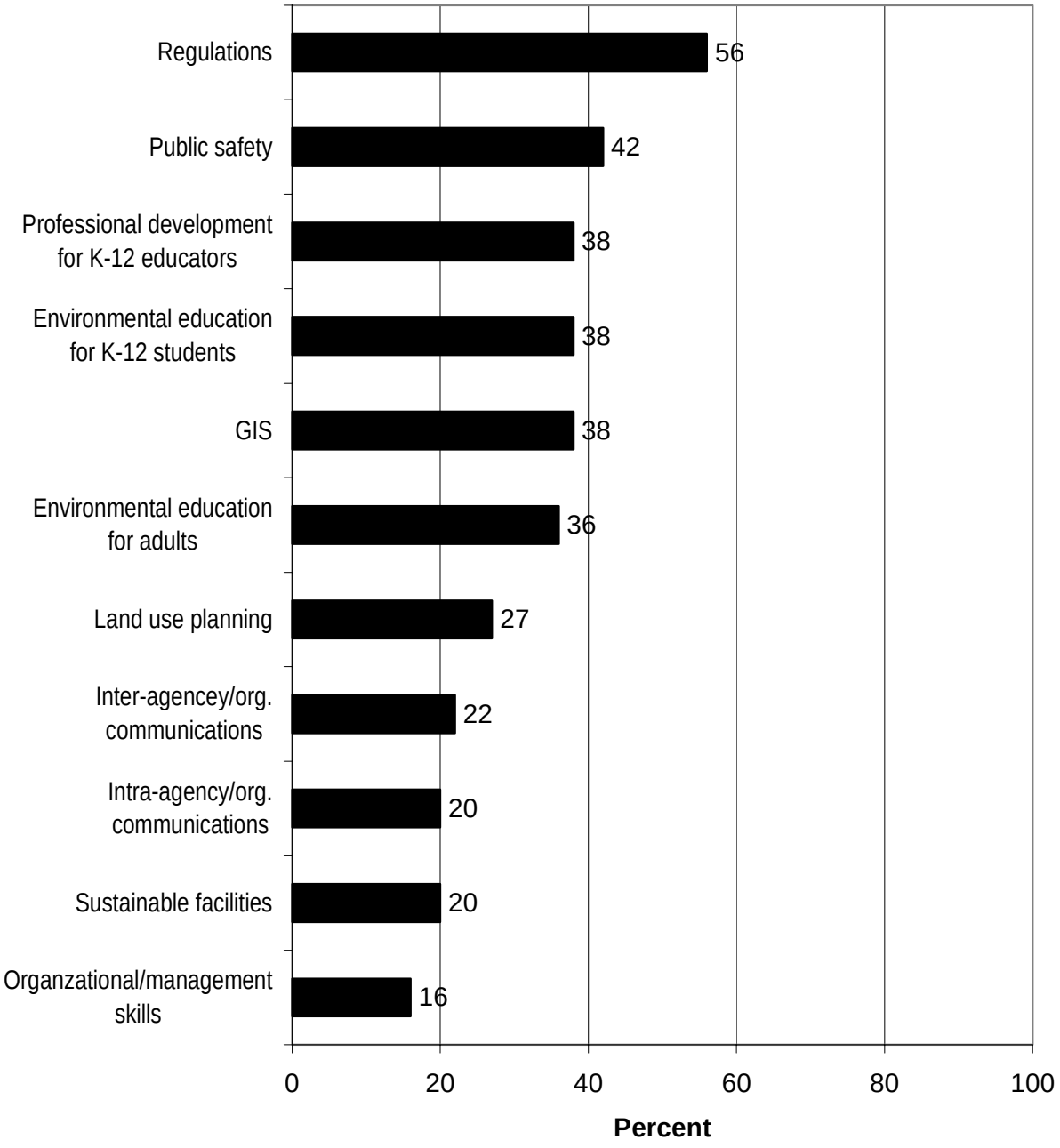
Q77-86. Water Quality Issues for Which State Employees and Professional Association Members Have a High Professional Need for Coastal Resource Training and Information.



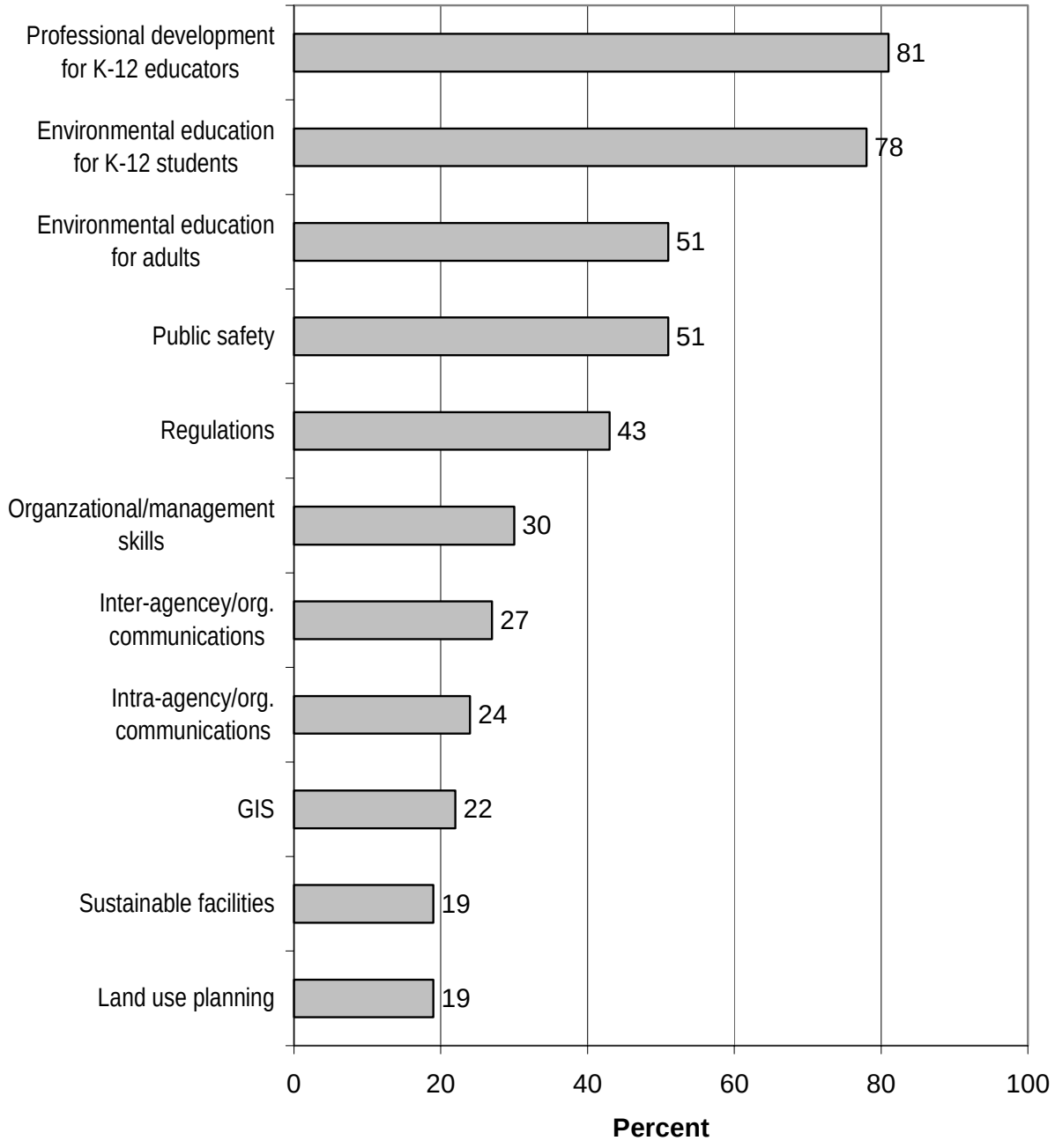
Q77-86. Water Quality Issues for Which Volunteer Organization Members Have a High Professional Need for Coastal Resource Training and Information.



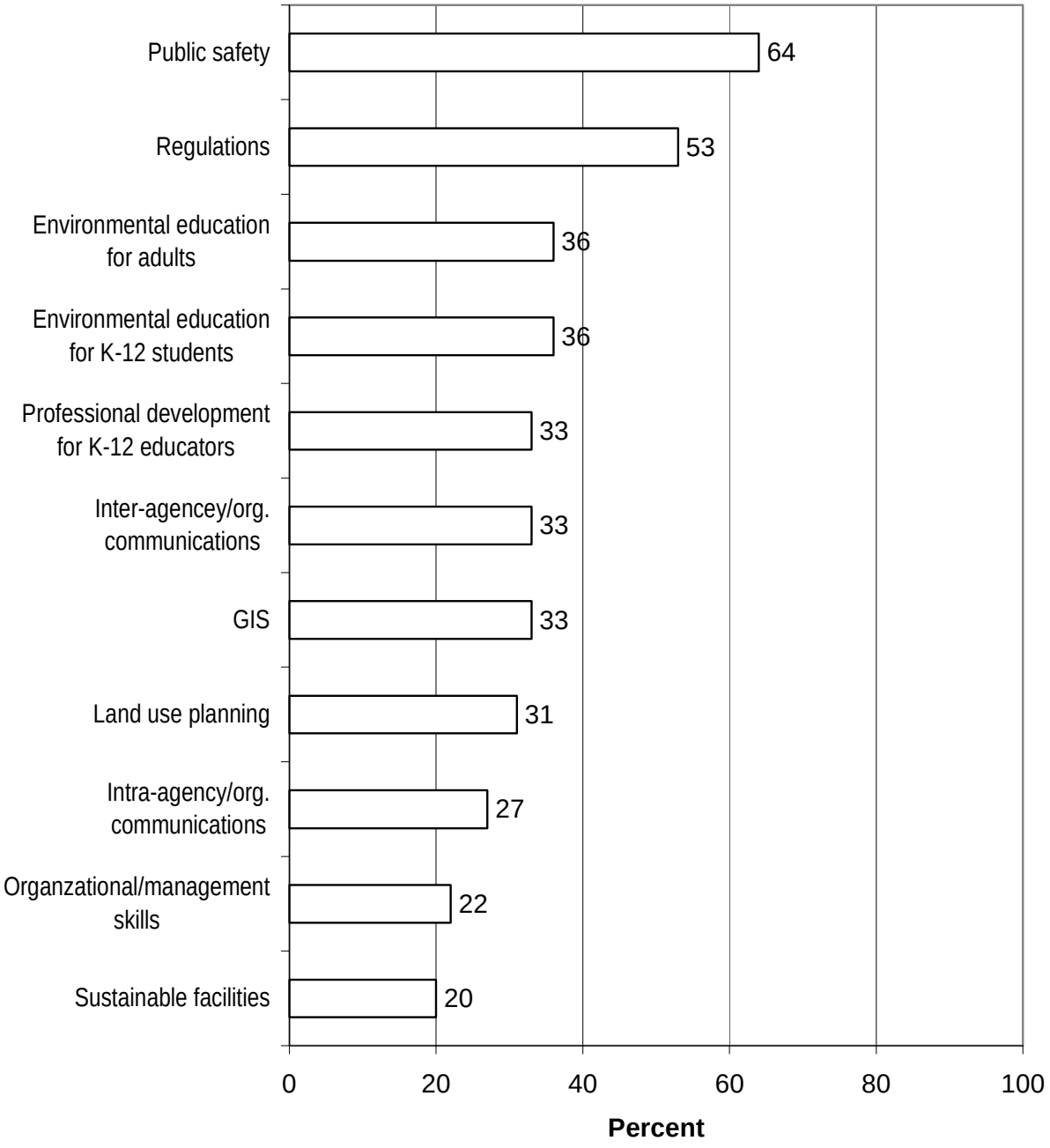
Q87-97. Education, Planning, and Regulation Issues for Which Business Organization Representatives Have a High Professional Need for Coastal Resource Training and Information.



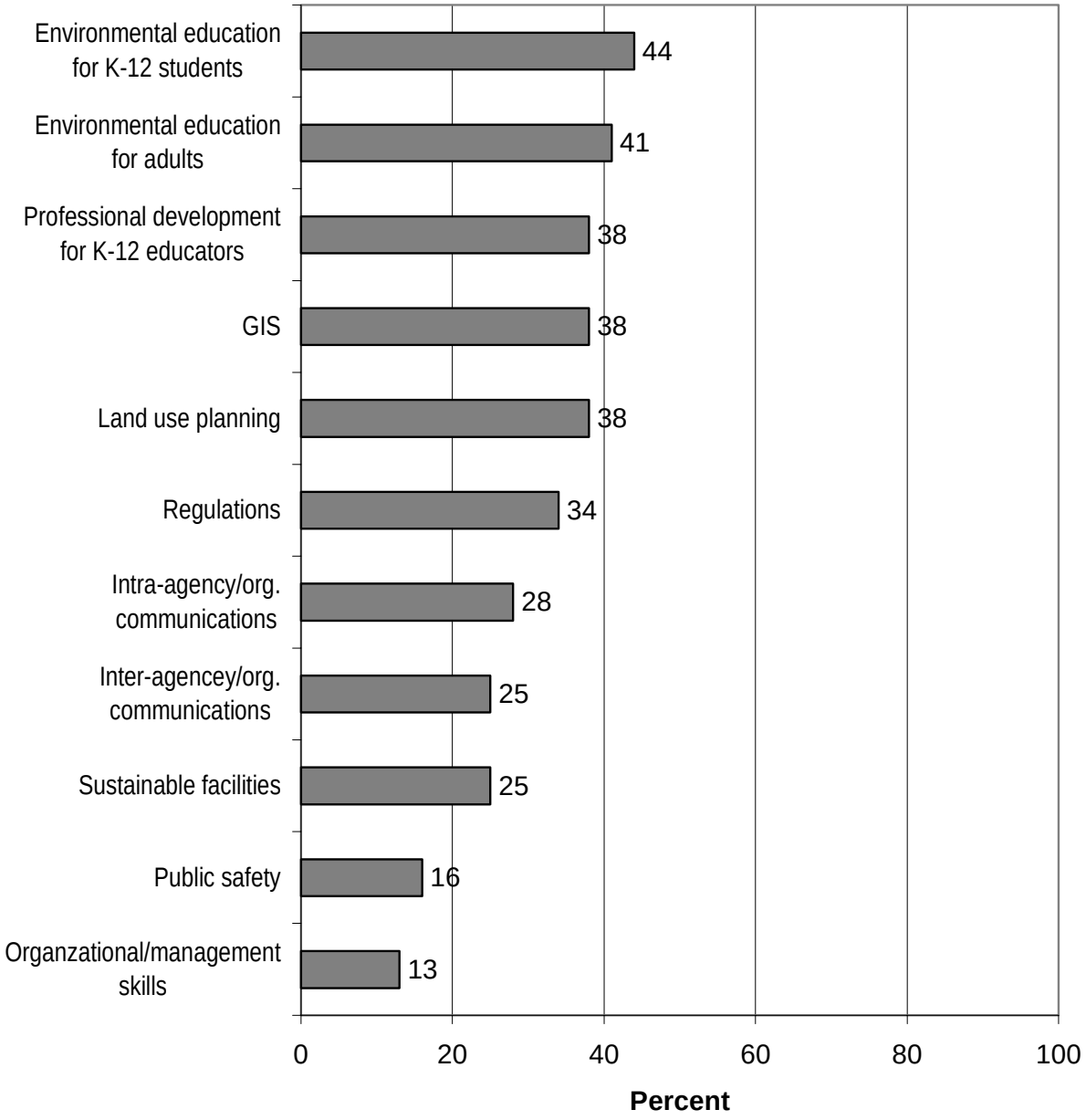
Q87-97. Education, Planning, and Regulation Issues for Which K-12 Educators Have a High Professional Need for Coastal Resource Training and Information.



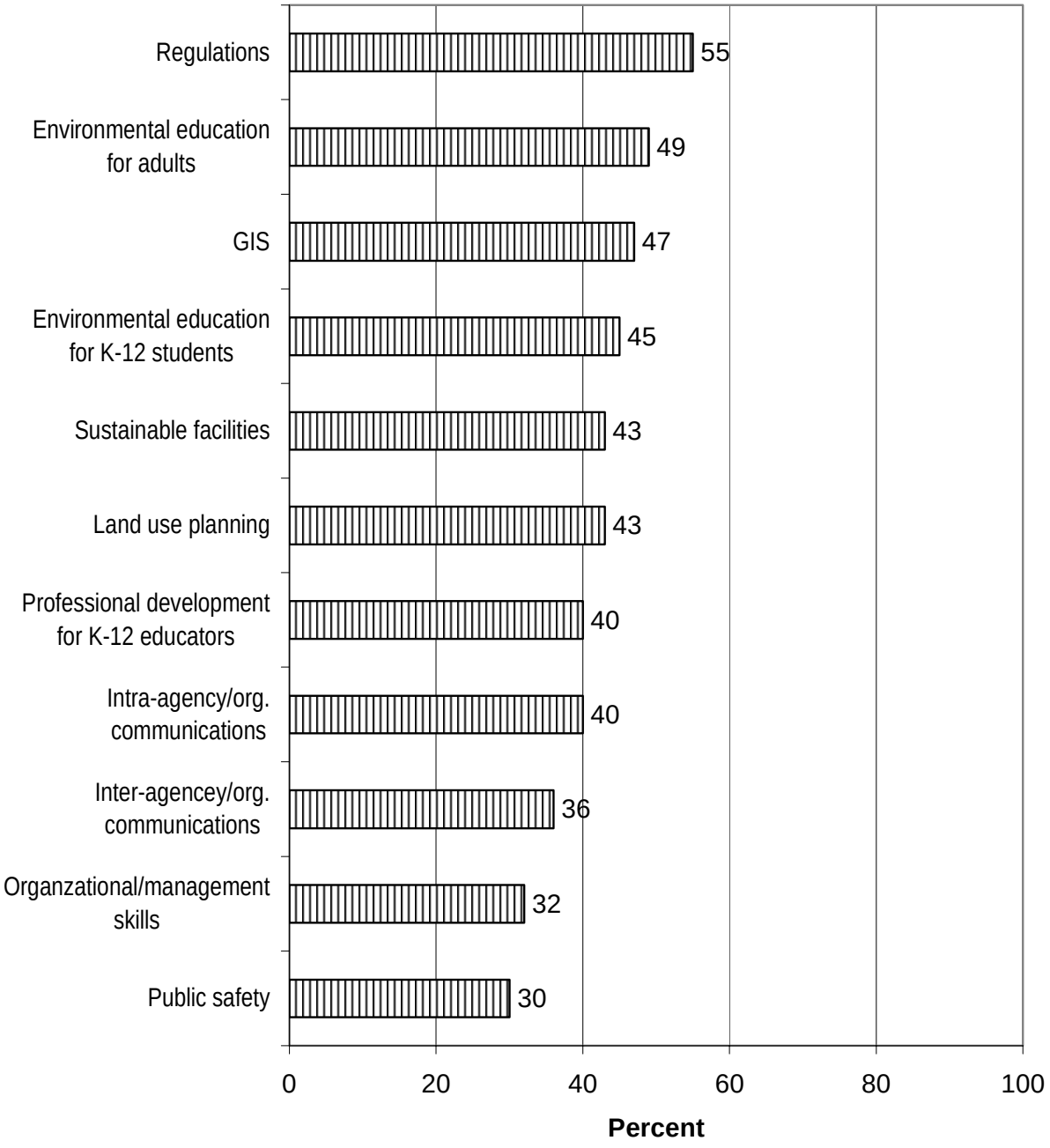
Q87-97. Education, Planning, and Regulation Issues for Which Local Government Officials Have a High Professional Need for Coastal Resource Training and Information.



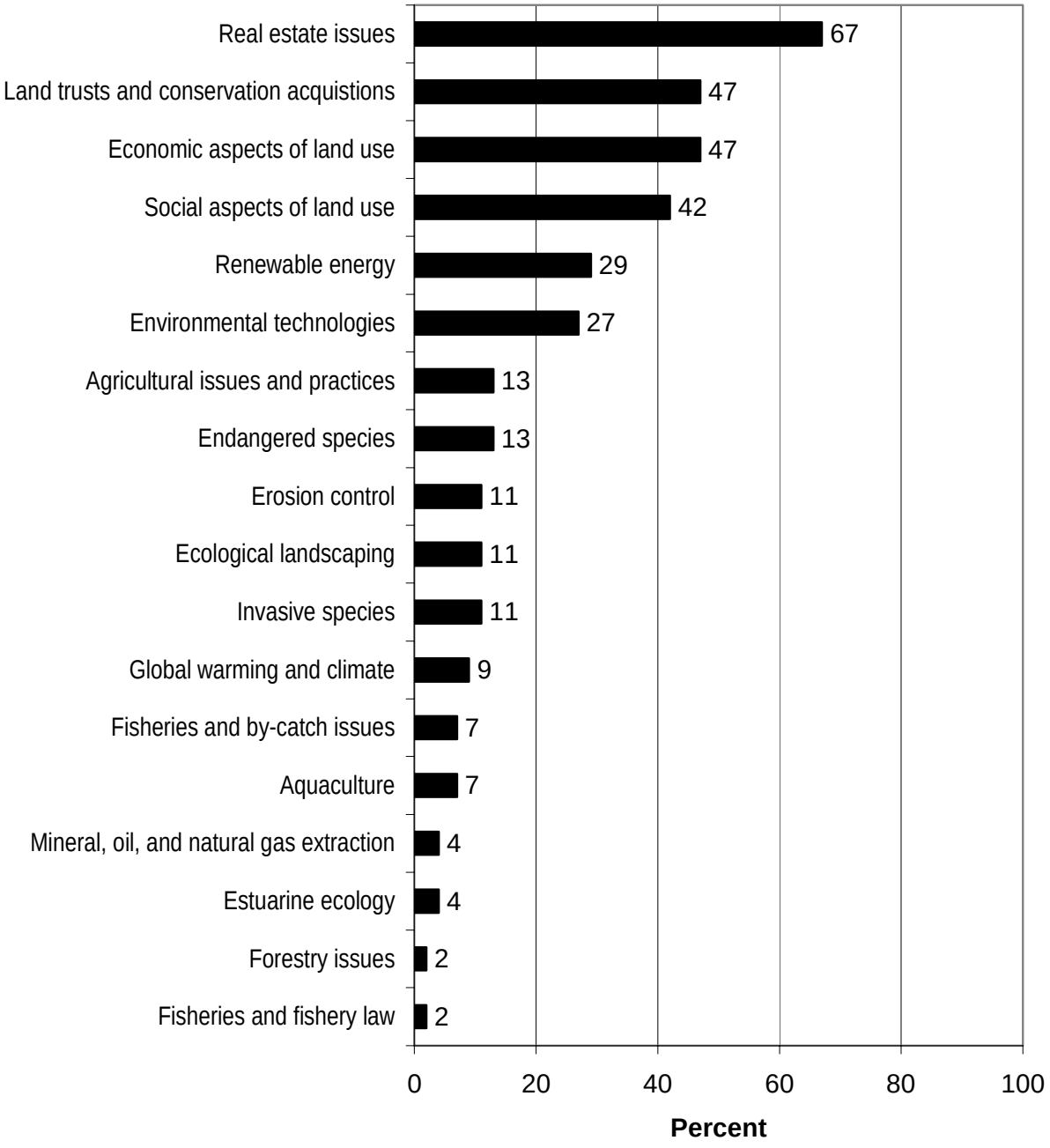
Q87-97. Education, Planning, and Regulation Issues for Which State Employees and Professional Association Members Have a High Professional Need for Coastal Resource Training and Information.



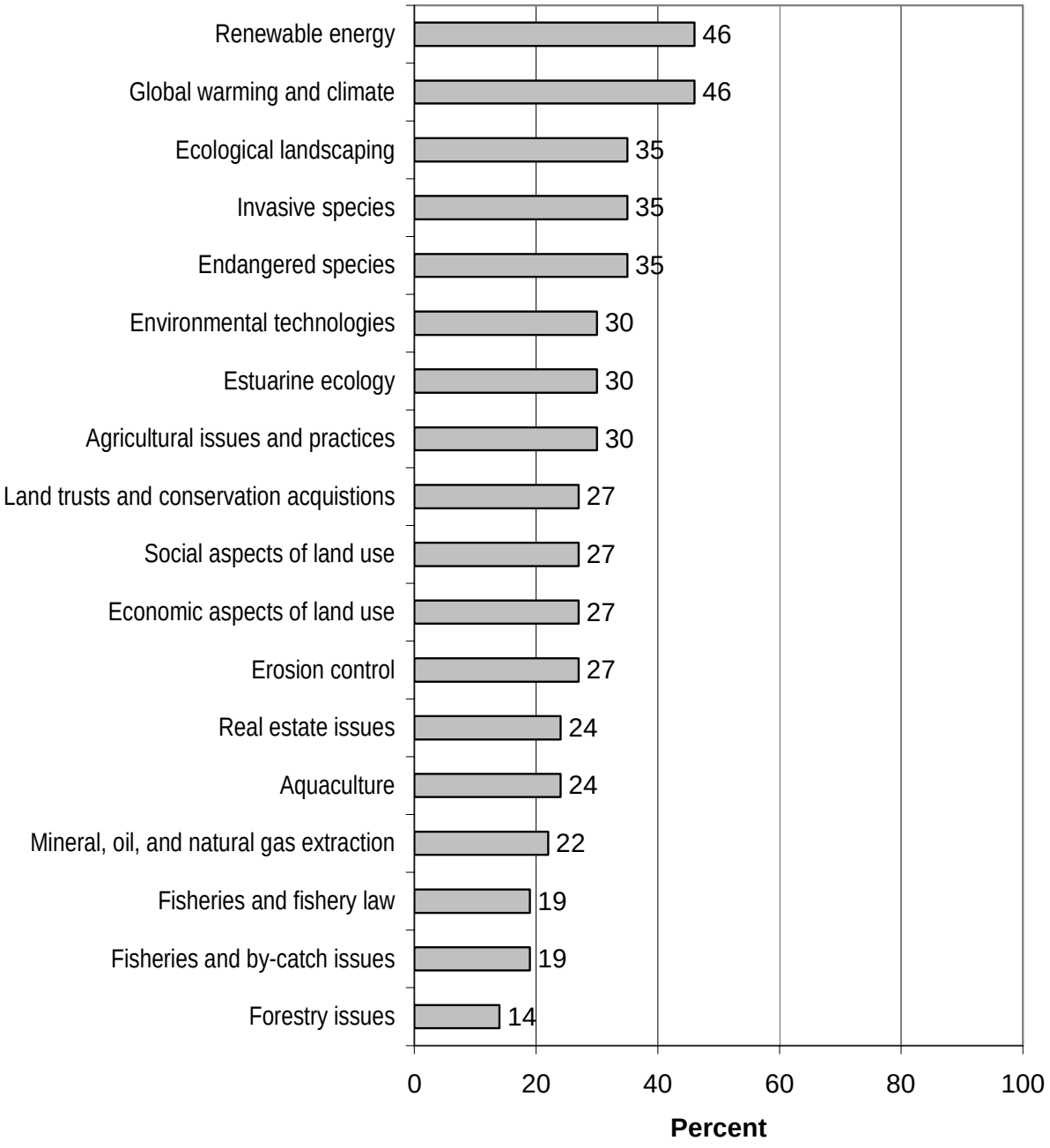
Q87-97. Education, Planning, and Regulation Issues for Which Volunteer Organization Members Have a High Professional Need for Coastal Resource Training and Information.



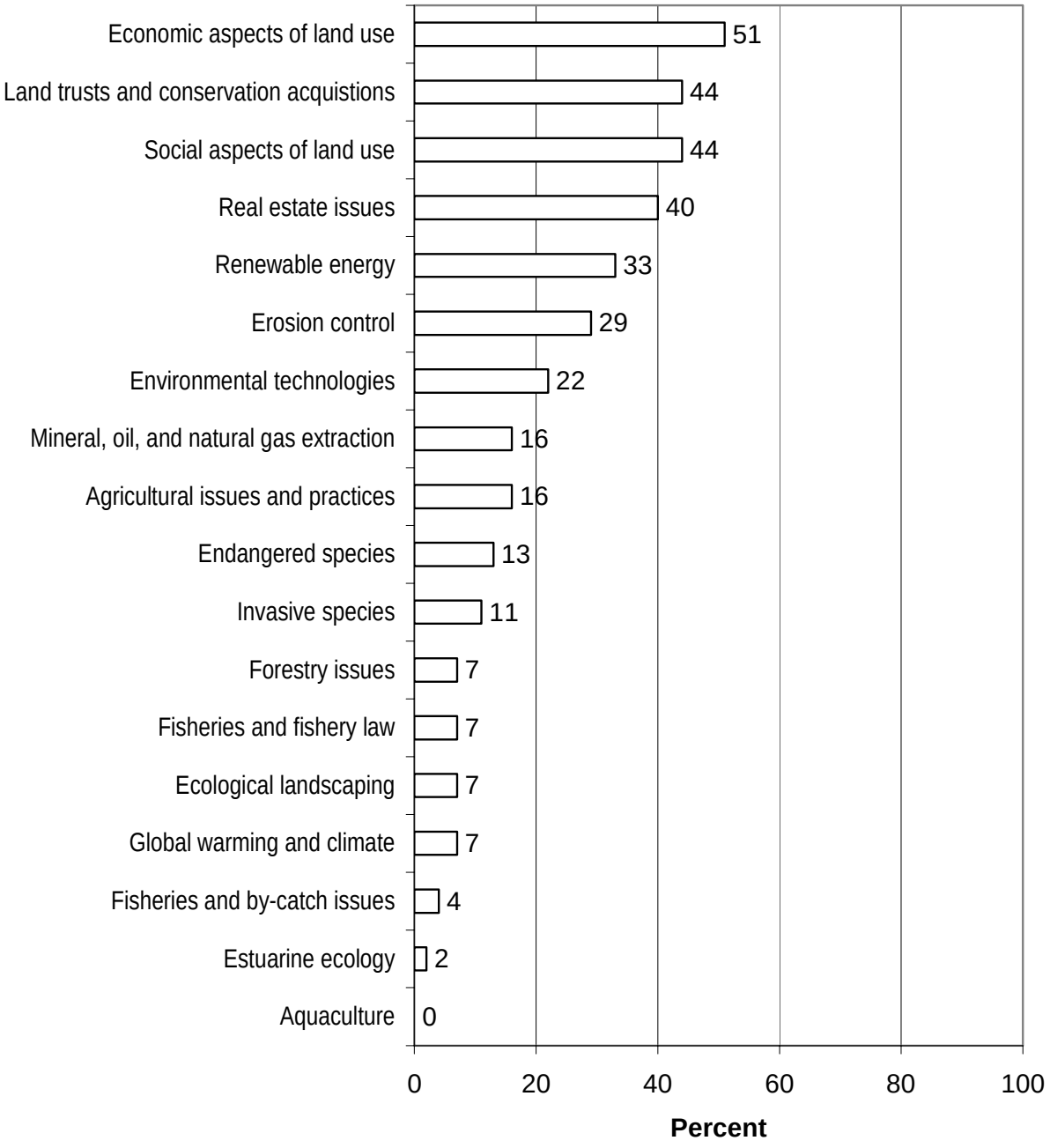
Q98-115. Resource Management Issues for Which Business Organization Representatives Have a High Professional Need for Coastal Resource Training and Information.



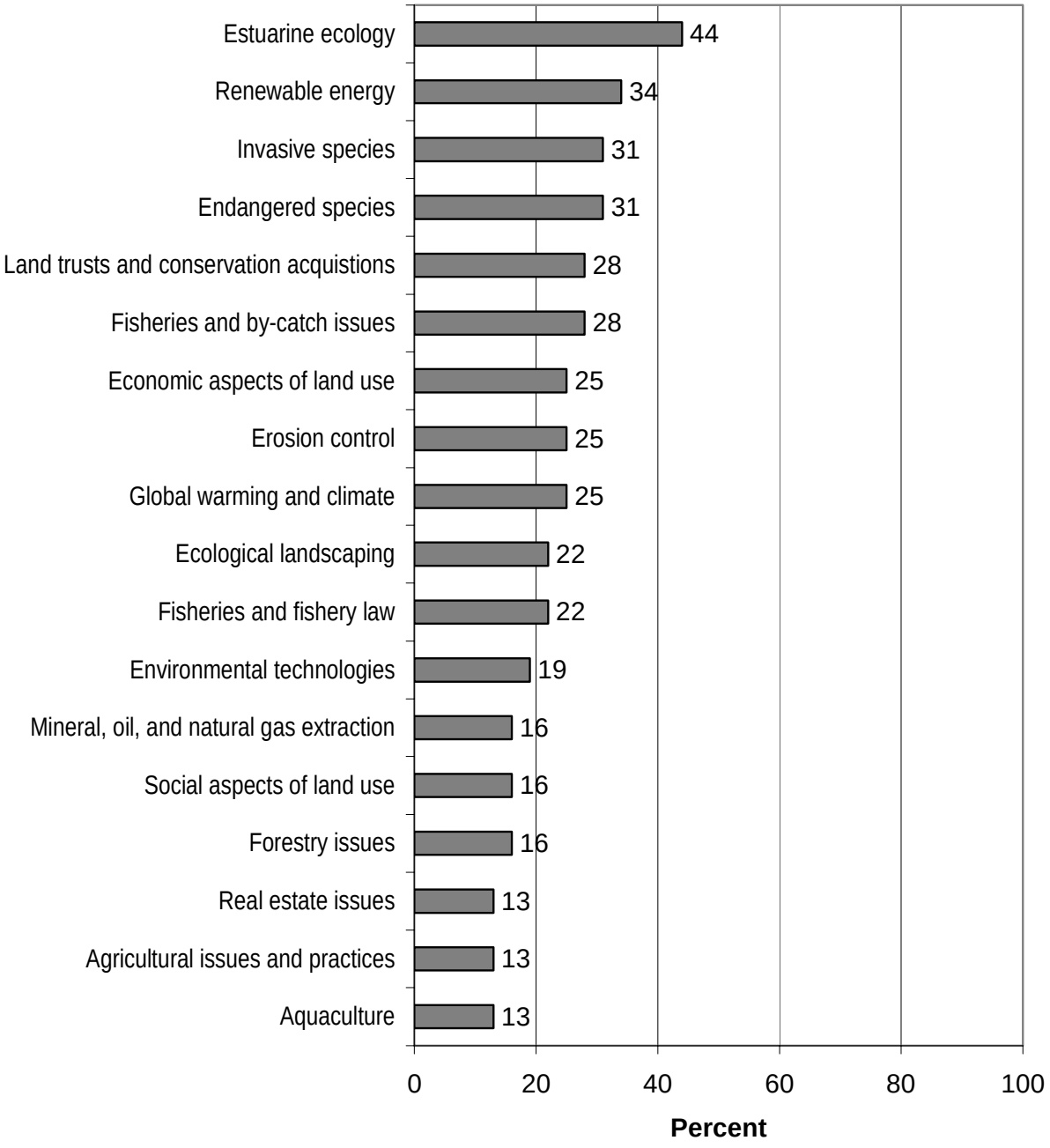
Q98-115. Resource Management Issues for Which K-12 Educators Have a High Professional Need for Coastal Resource Training and Information.



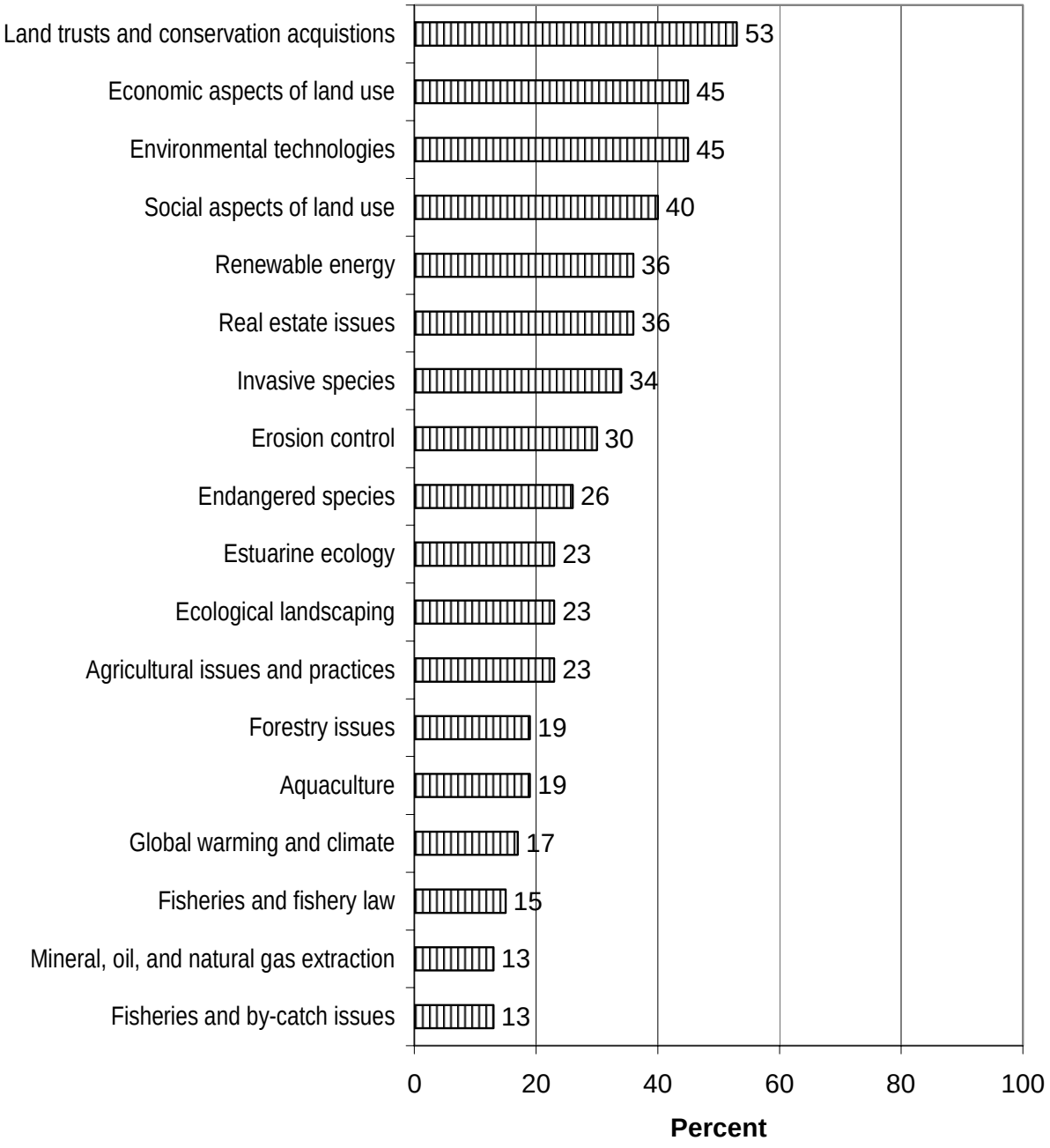
Q98-115. Resource Management Issues for Which Local Government Officials Have a High Professional Need for Coastal Resource Training and Information.



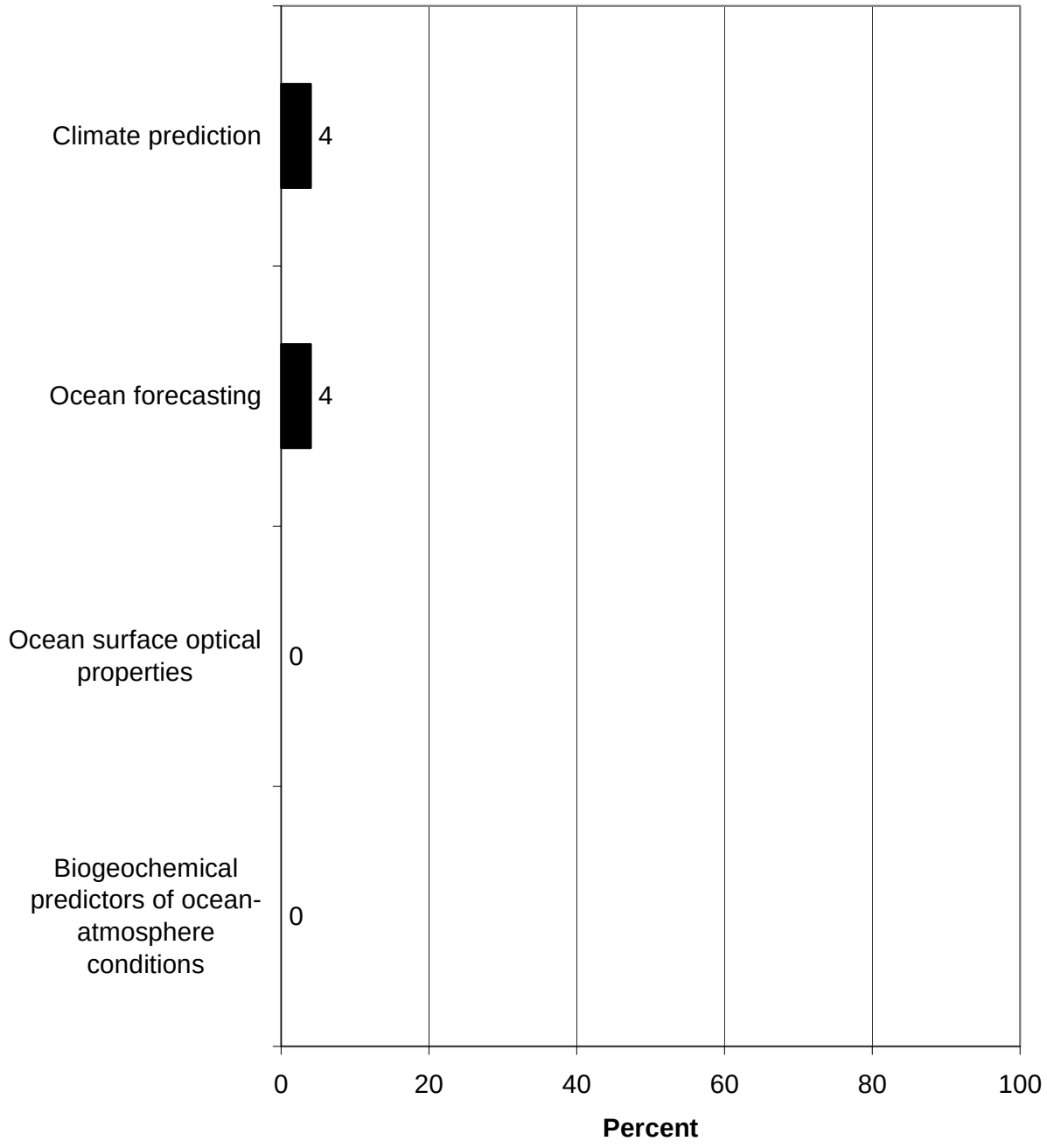
Q98-115. Resource Management Issues for Which State Employees and Professional Association Members Have a High Professional Need for Coastal Resource Training and Information.



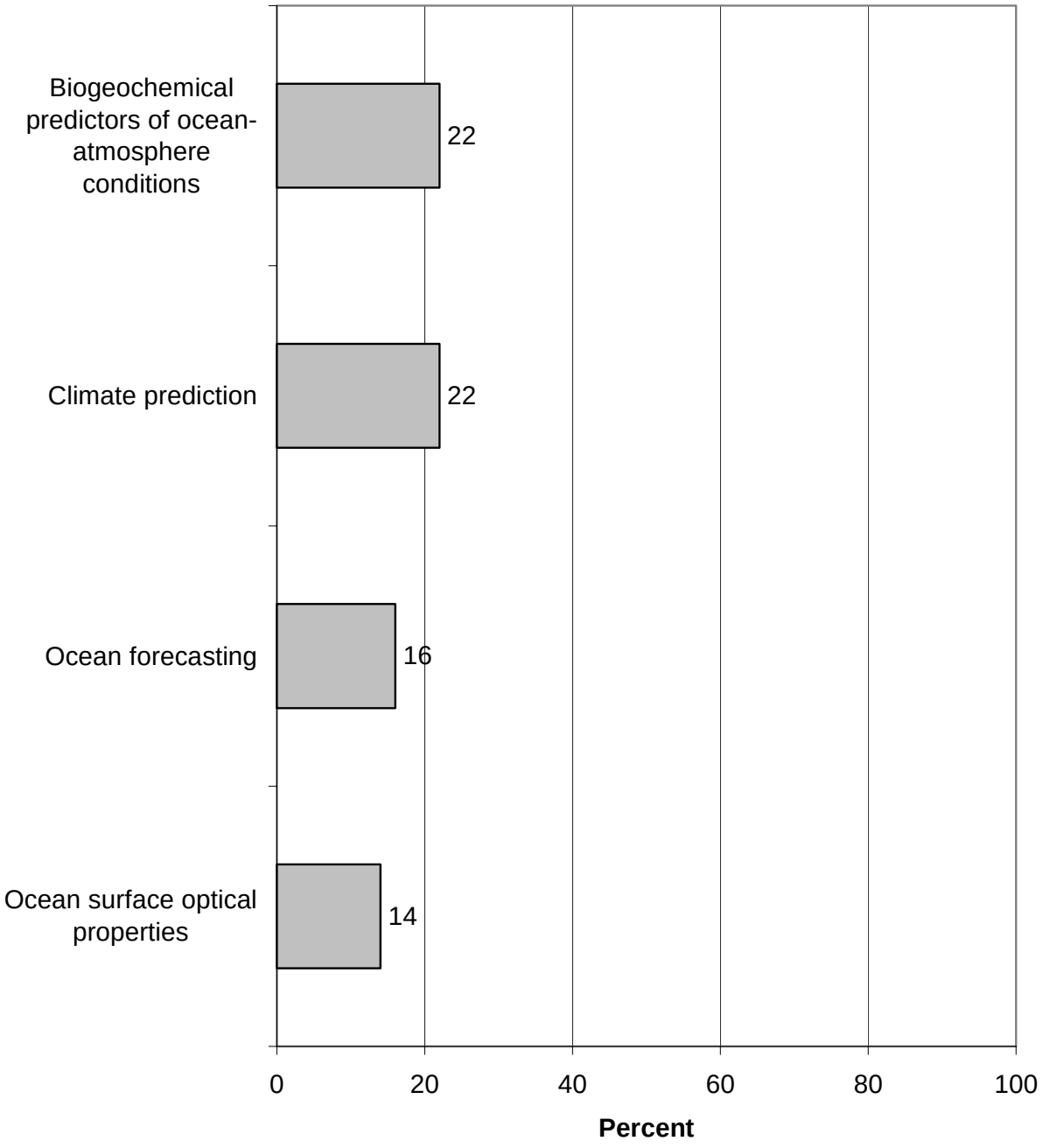
Q98-115. Resource Management Issues for Which Volunteer Organization Members Have a High Professional Need for Coastal Resource Training and Information.



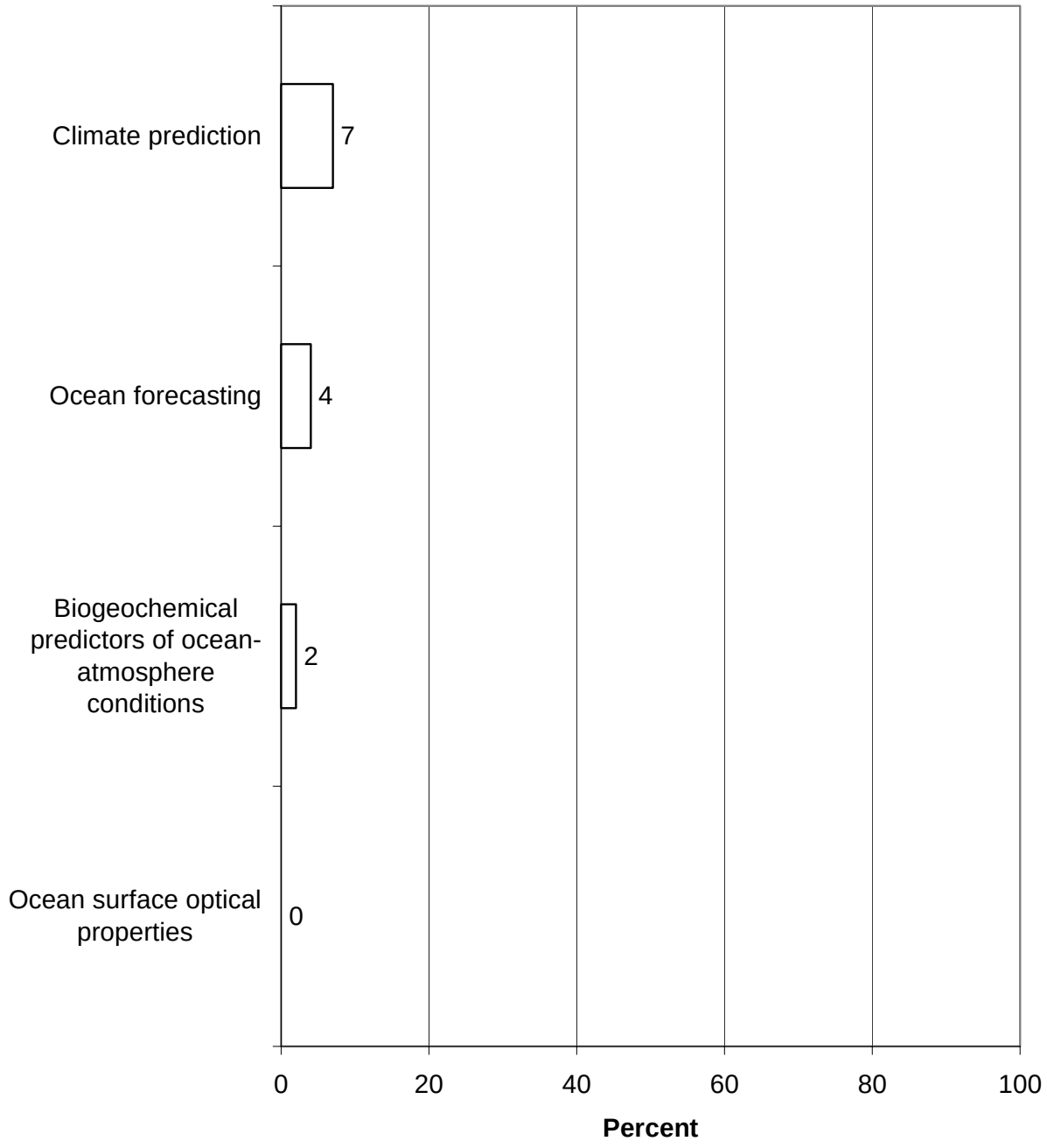
Q116-119. Ocean Sciences Topics for Which Business Organization Representatives Have a High Professional Need for Coastal Resource Training and Information.



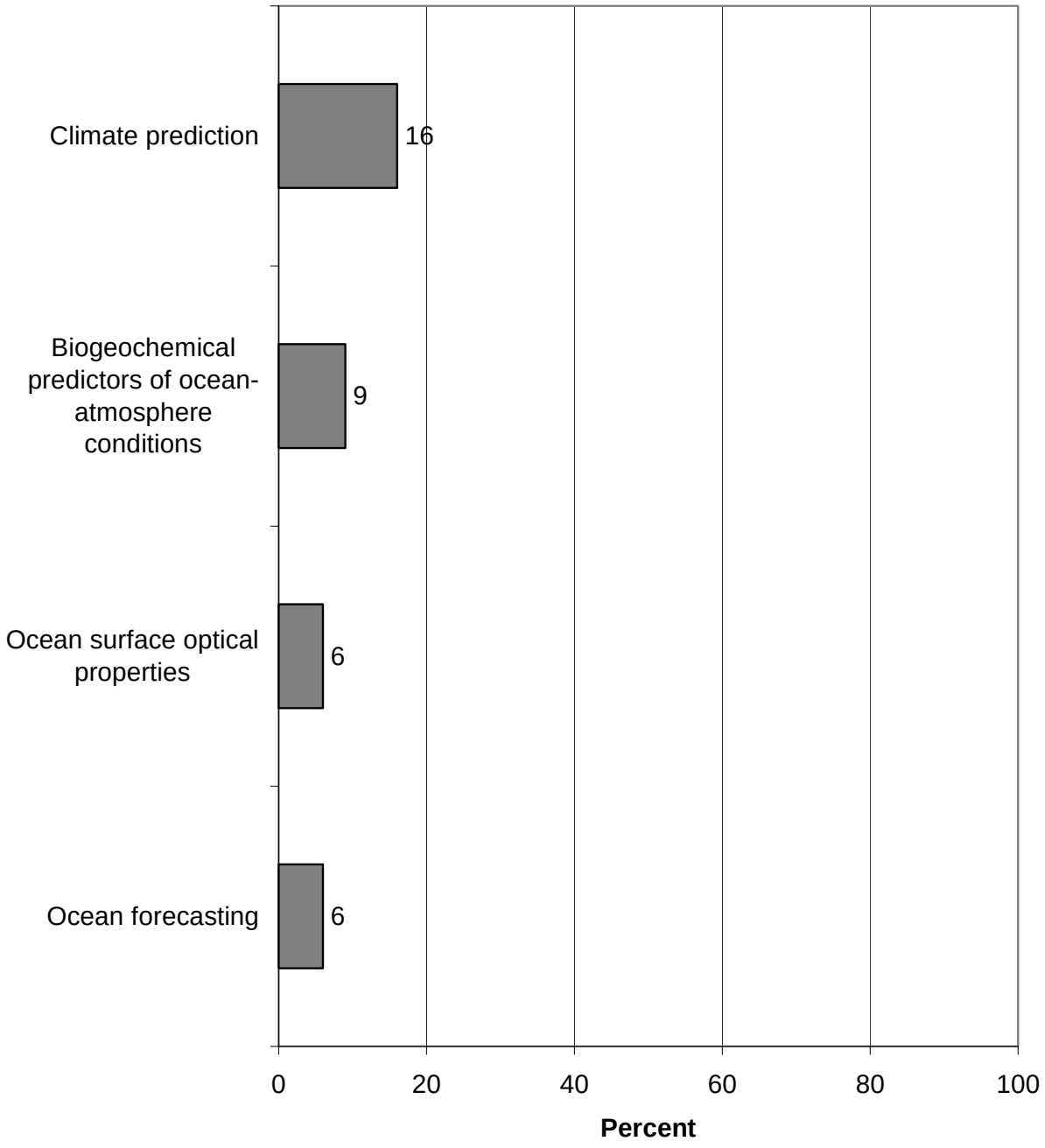
Q116-119. Ocean Sciences Topics for Which K-12 Educators Have a High Professional Need for Coastal Resource Training and Information.



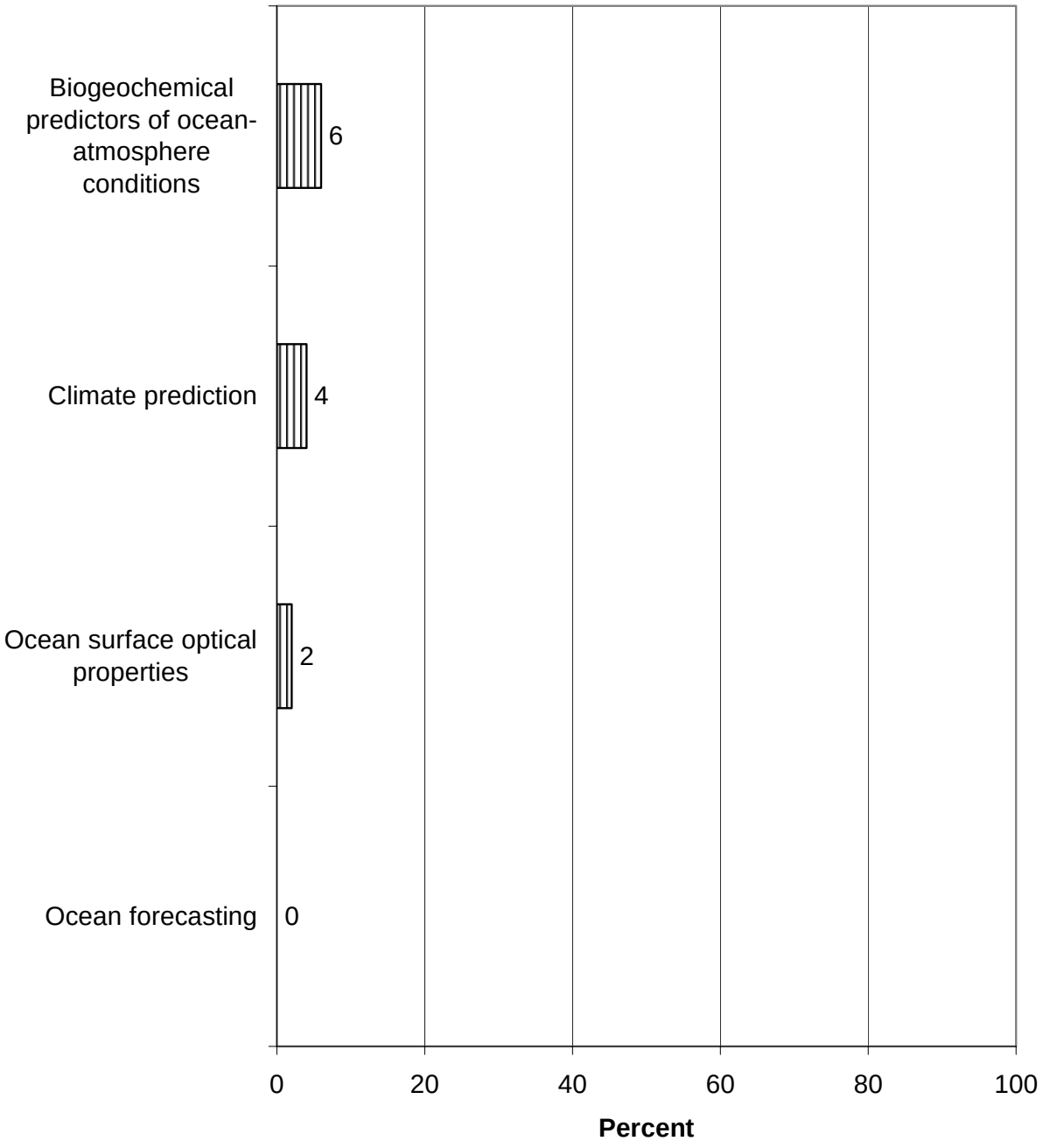
Q116-119. Ocean Sciences Topics for Which Local Government Officials Have a High Professional Need for Coastal Resource Training and Information.



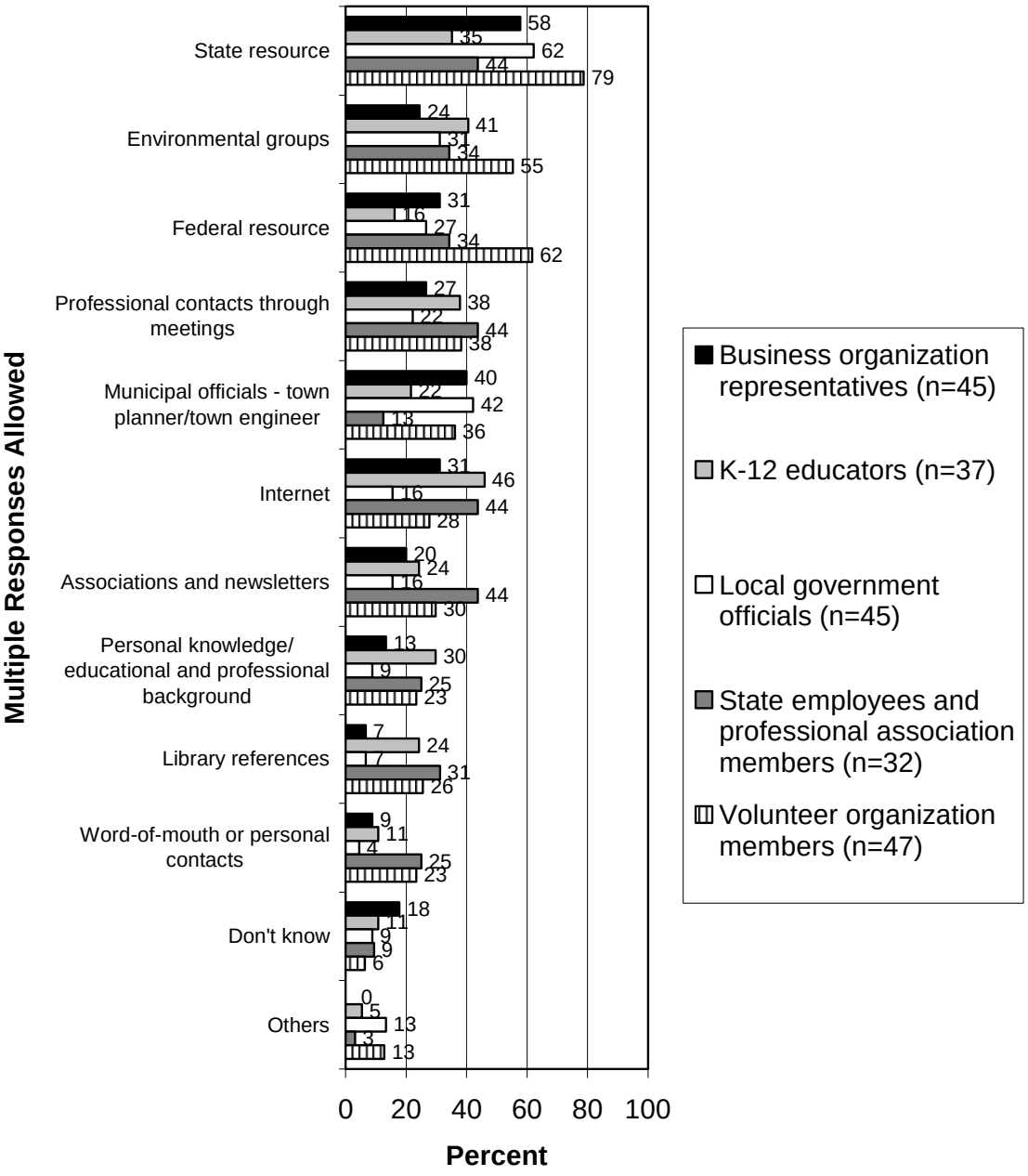
Q116-119. Ocean Sciences Topics for Which State Employees and Professional Association Members Have a High Professional Need for Coastal Resource Training and Information.



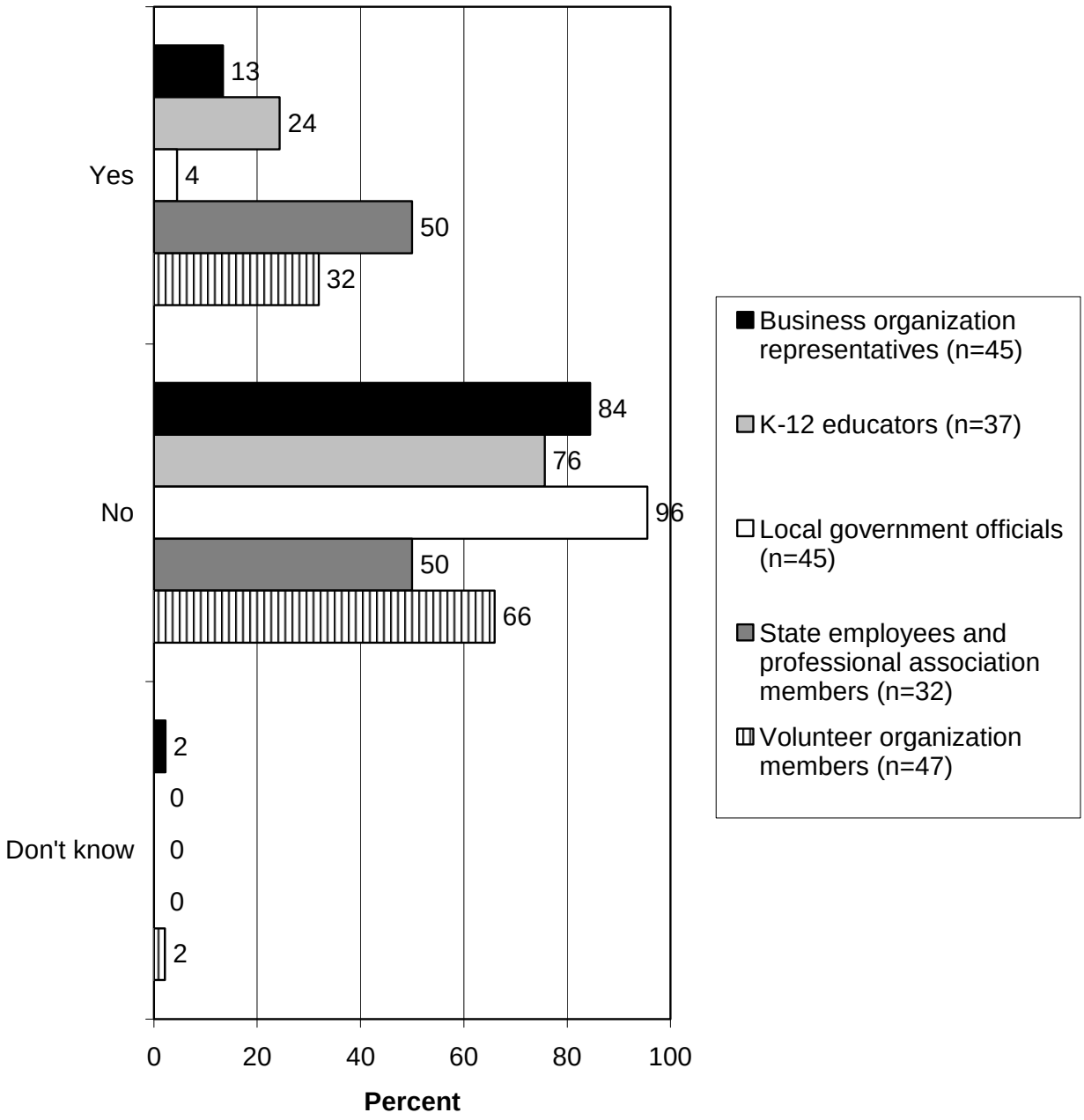
Q116-119. Ocean Sciences Topics for Which Volunteer Organization Members Have a High Professional Need for Coastal Resource Training and Information.



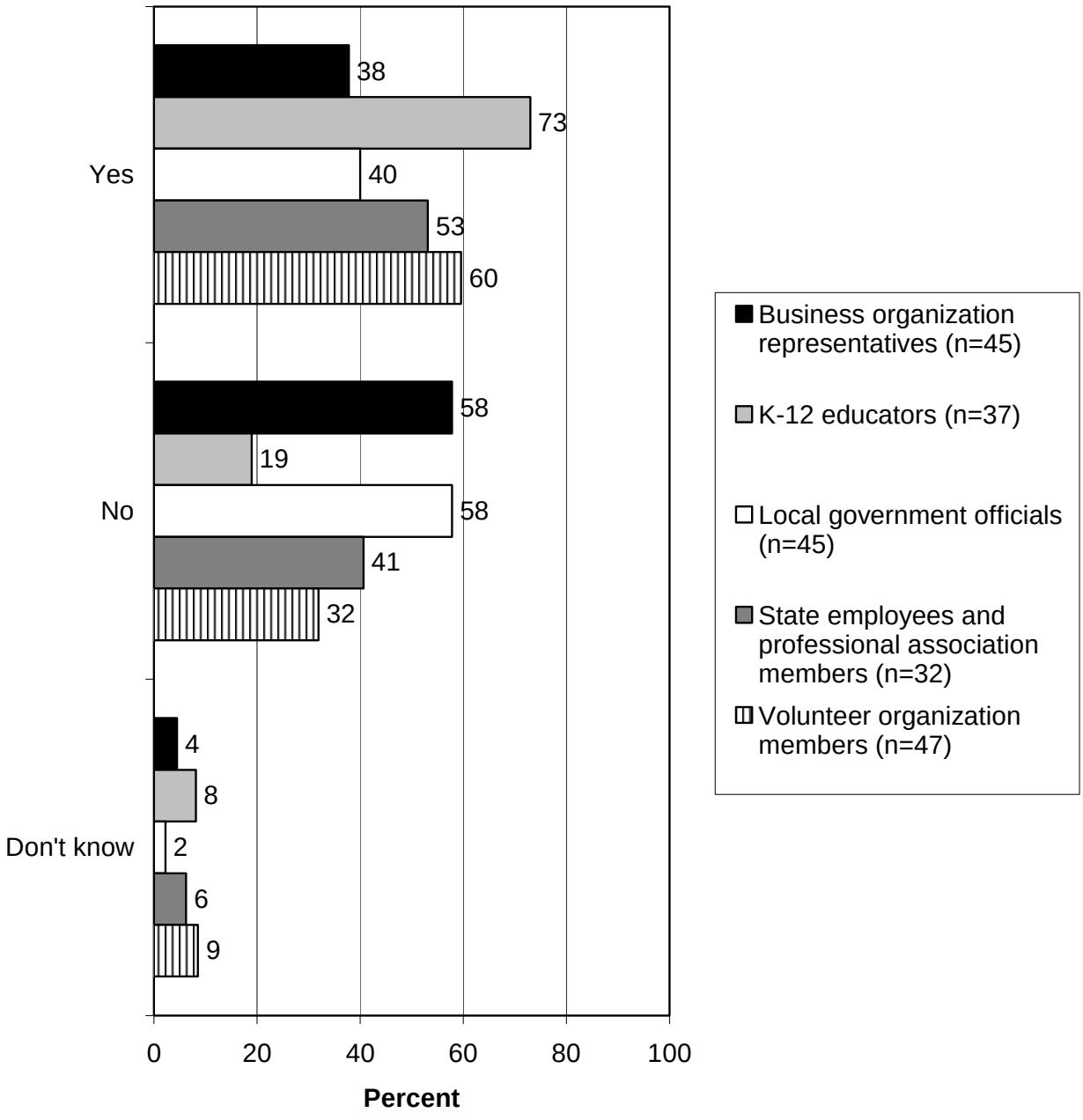
Q121. From which sources do you currently receive the information you need for making coastal resource management decisions?



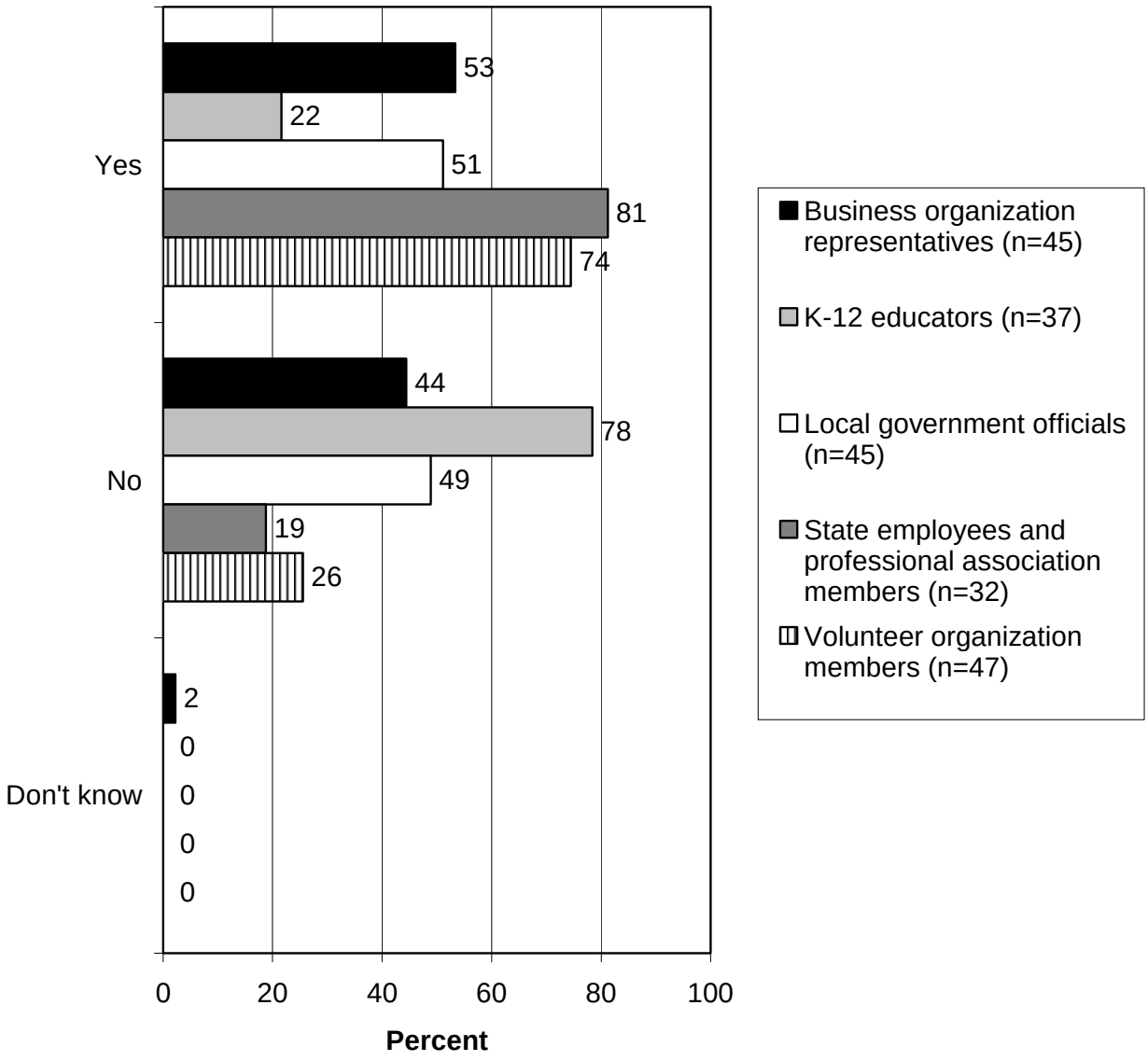
Q123. Have you ever used real-time science data in your job?



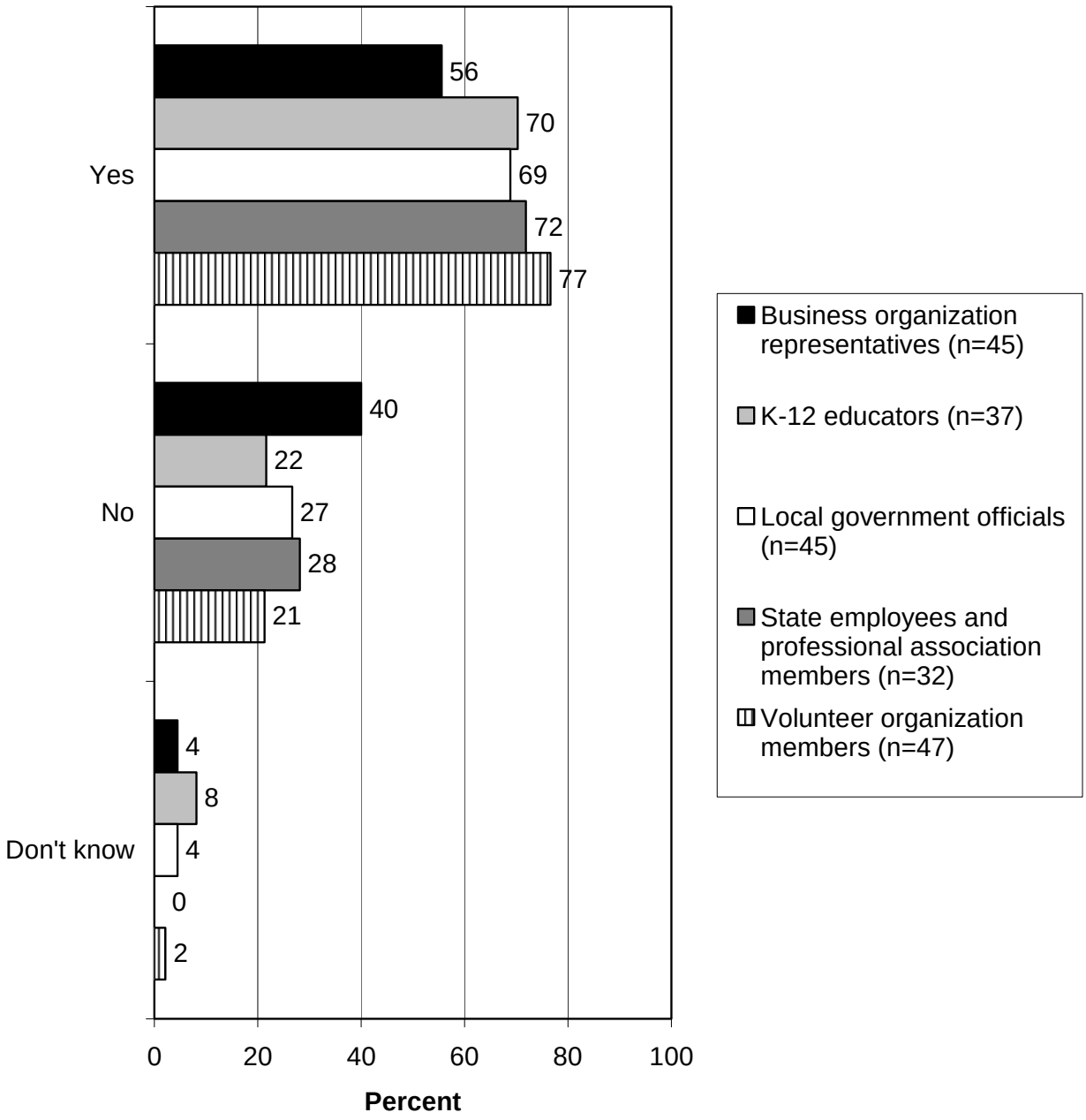
Q125. Are you interested in learning more about real-time science data?



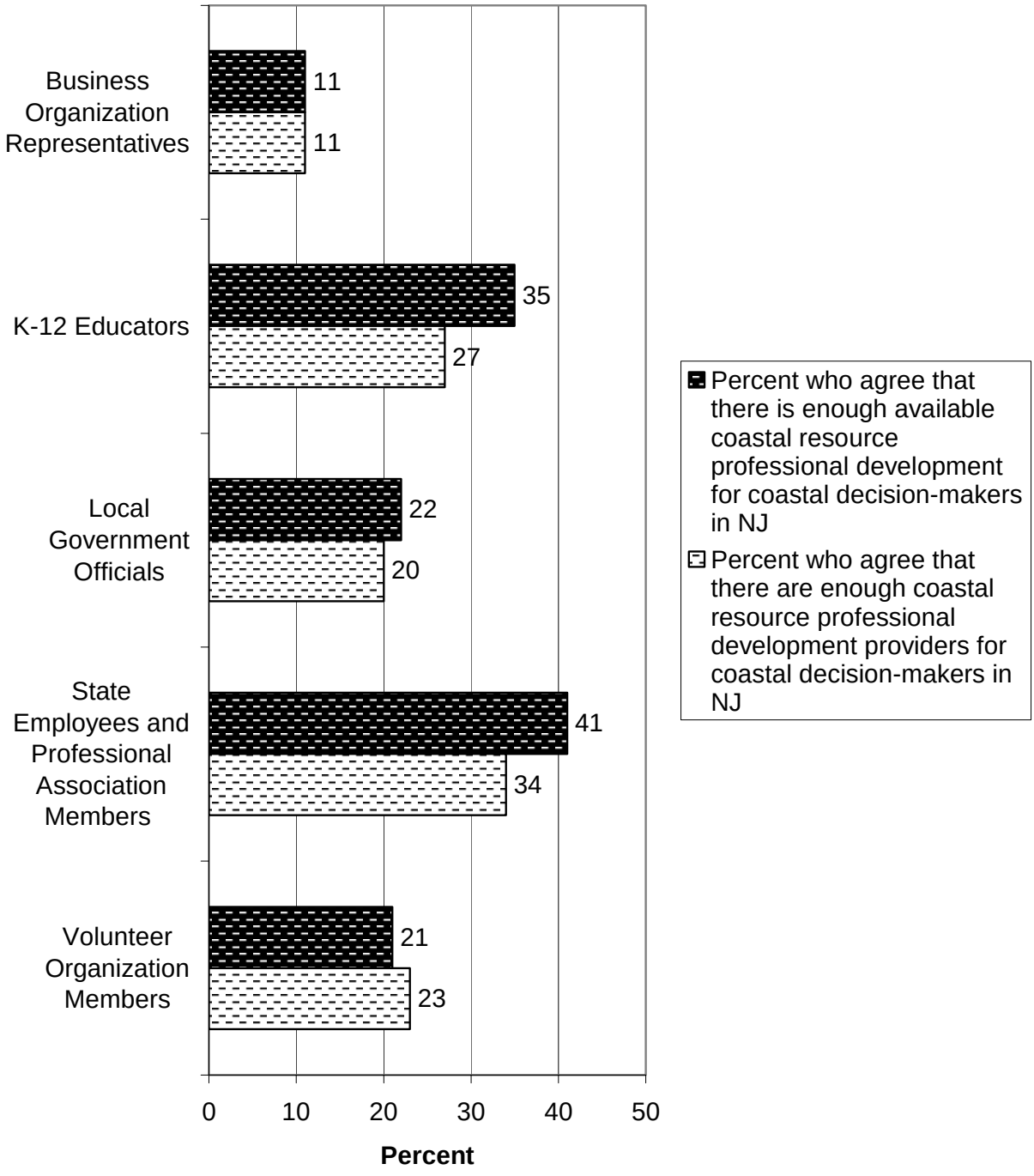
Q126. Have you ever used GIS in your job?



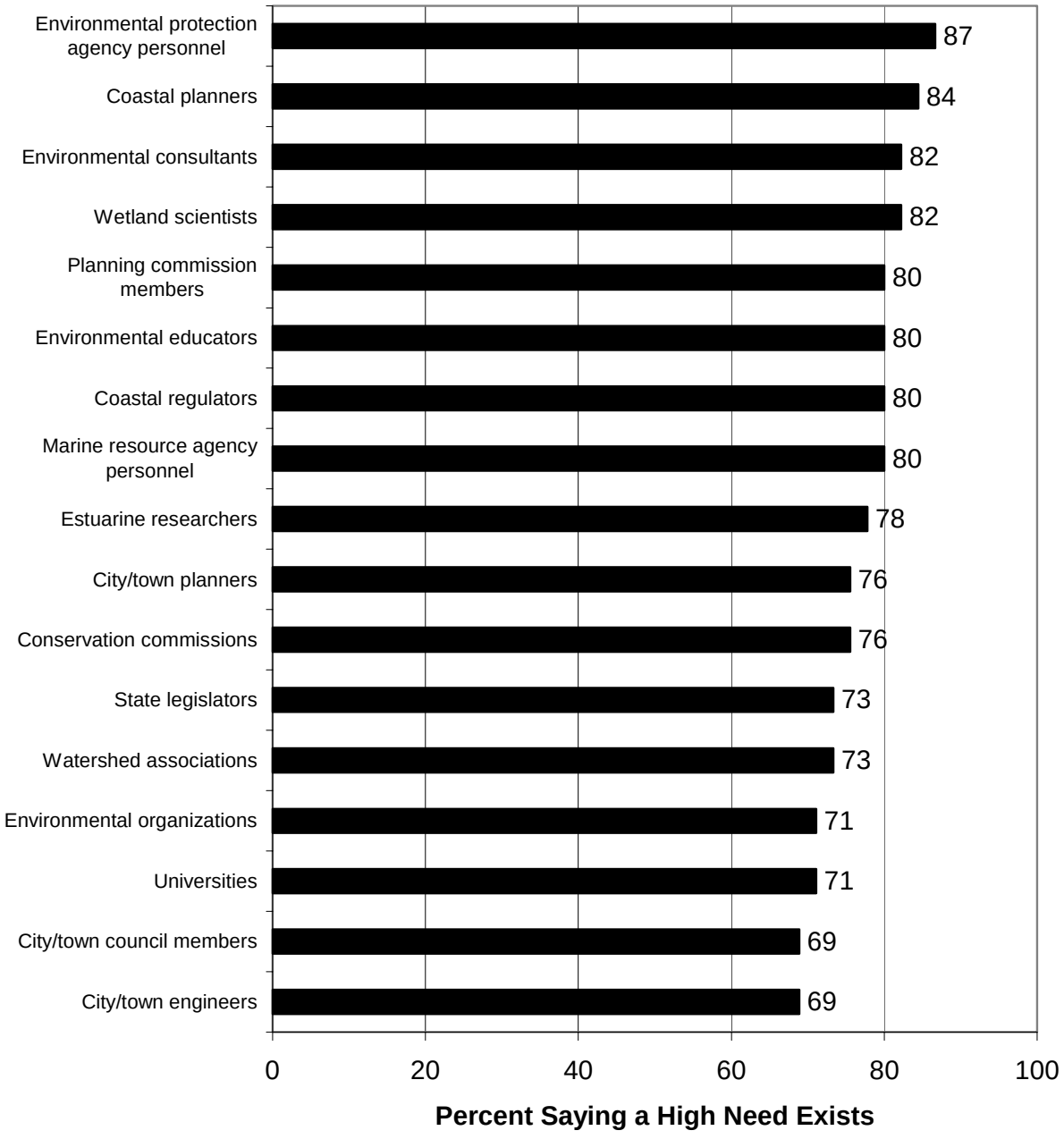
Q128. Are you interested in learning more about GIS?



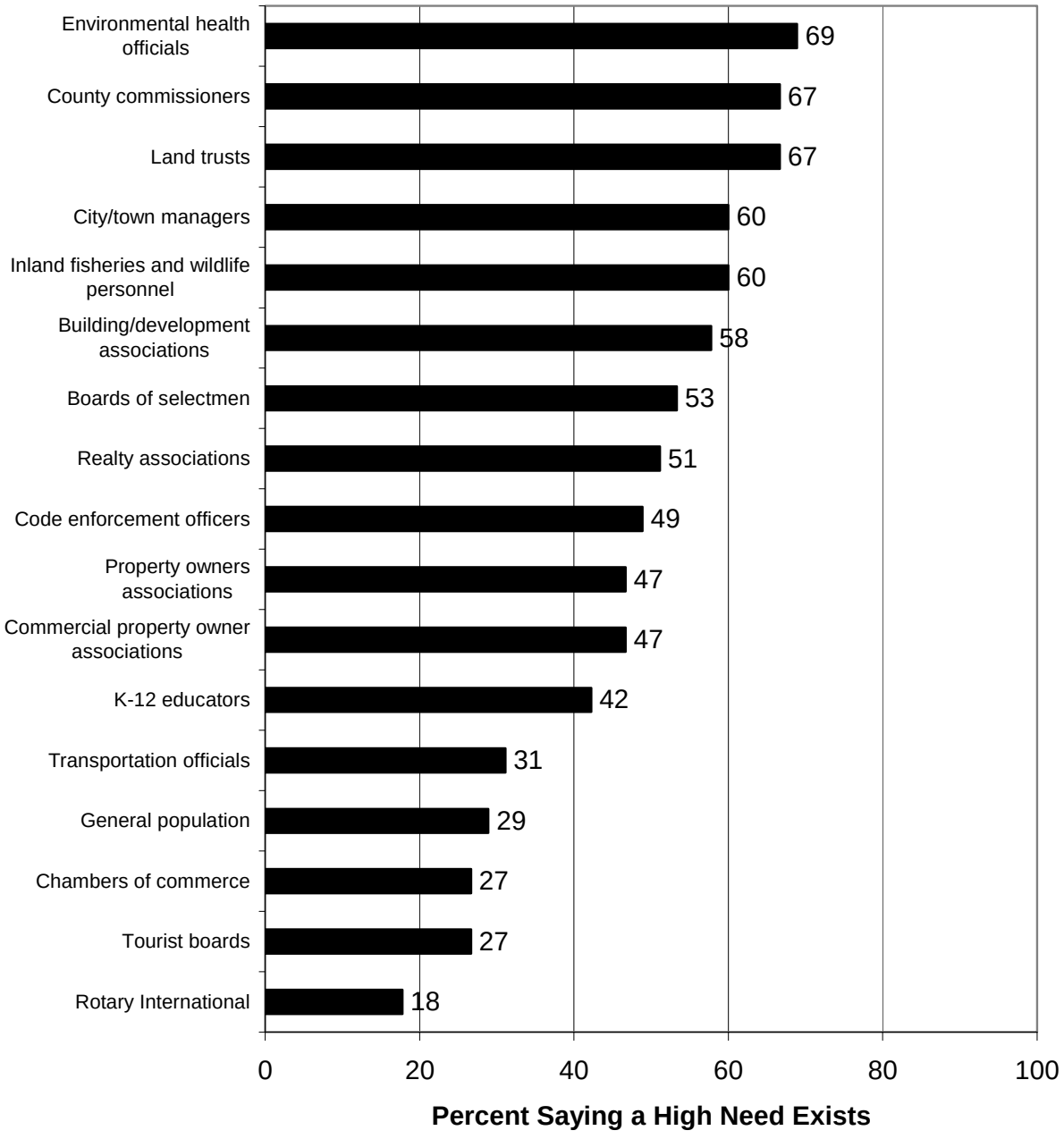
Q208-209. Perceived Relationship Between Coastal Training and Coastal Training Providers



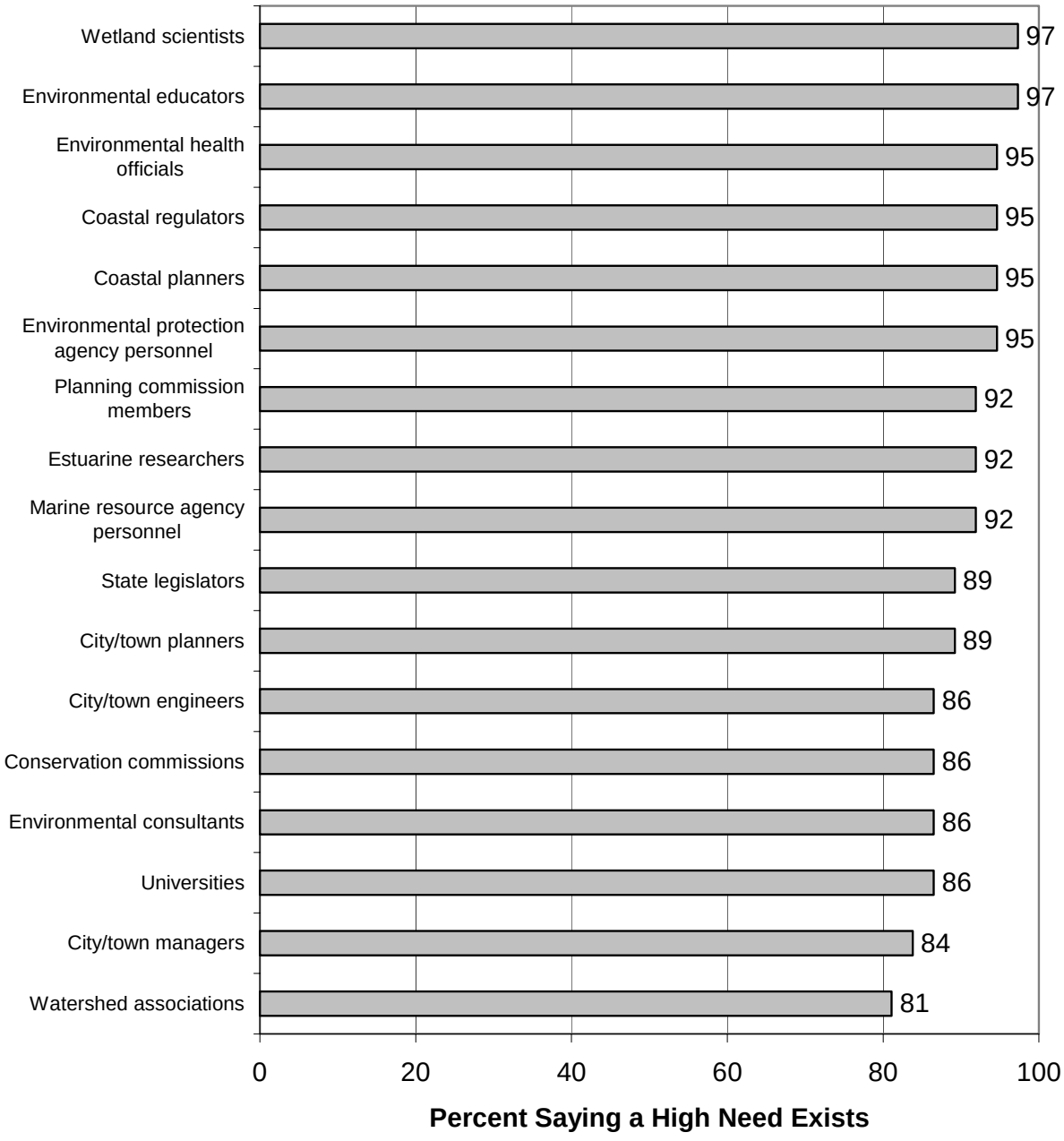
Q210-243. Groups that Business Organization Representatives Think Have the Highest Needs for Coastal Resource Information and Professional Development (Part 1).



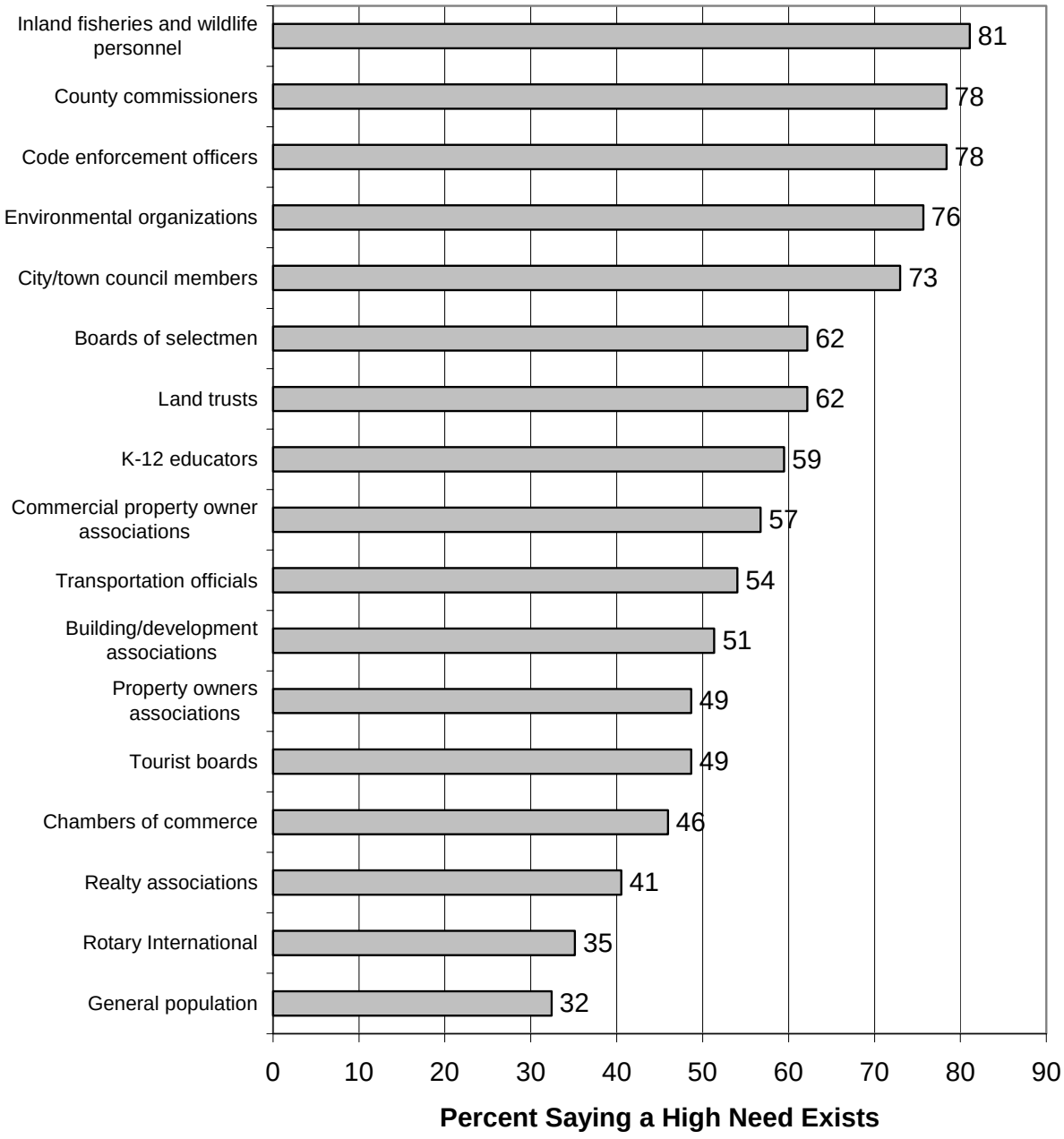
Q210-243. Groups that Business Organization Representatives Think Have the Highest Needs for Coastal Resource Information and Professional Development (Part 2).



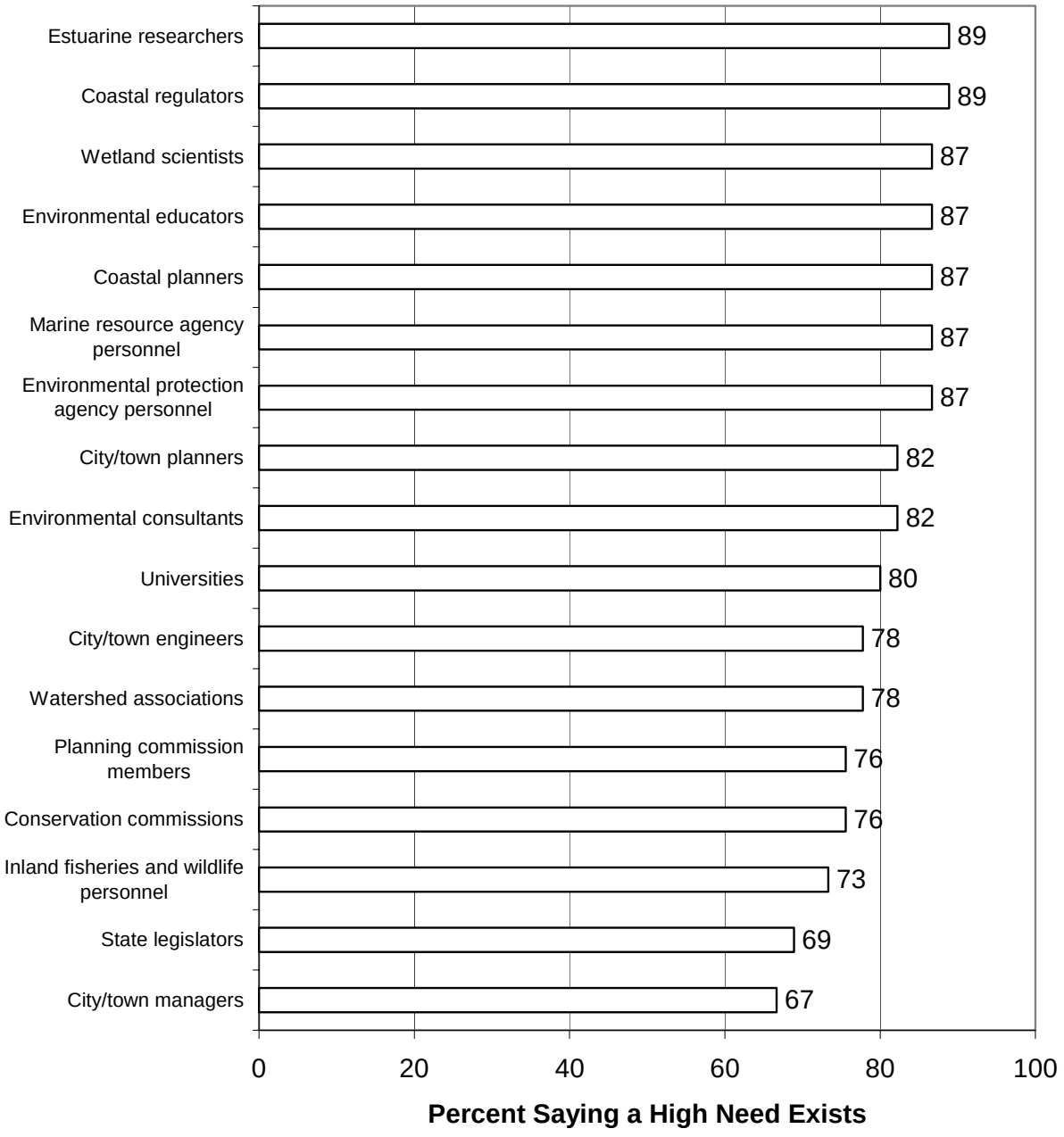
Q210-243. Groups that K-12 Educators Think Have the Highest Needs for Coastal Resource Information and Professional Development (Part 1).



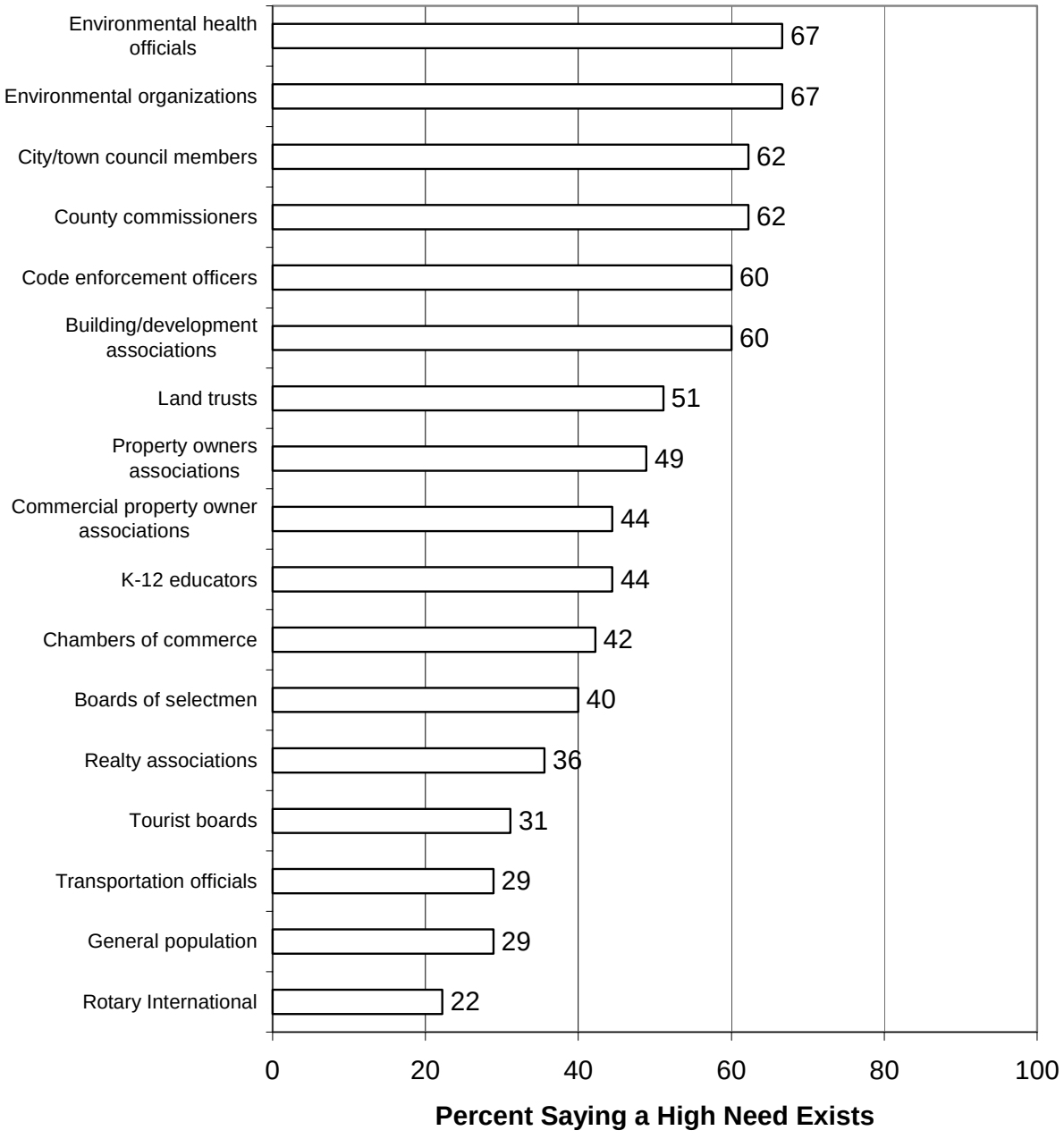
Q210-243. Groups that K-12 Educators Think Have the Highest Needs for Coastal Resource Information and Professional Development (Part 2).



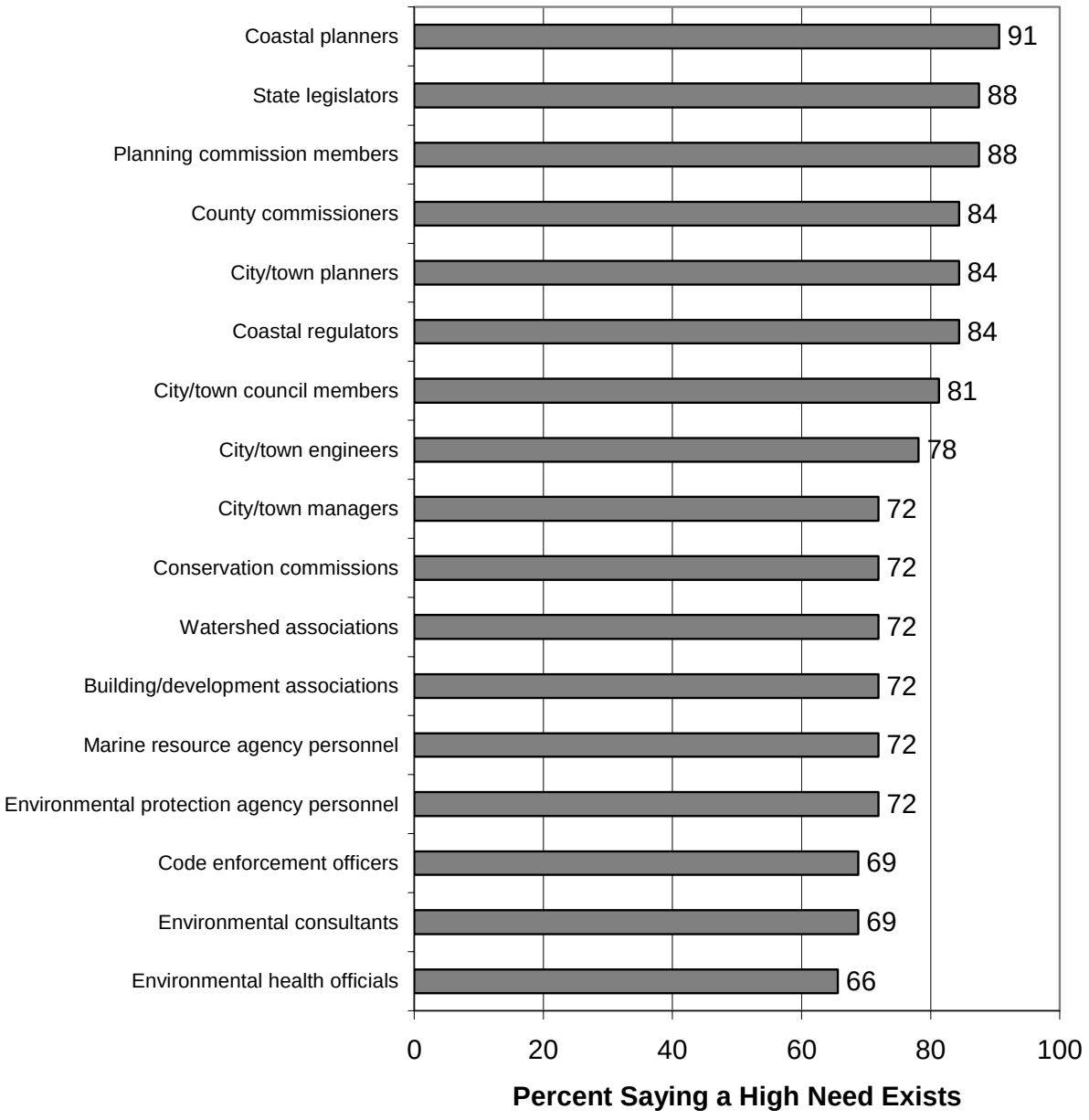
Q210-243. Groups that Local Government Officials Think Have the Highest Needs for Coastal Resource Information and Professional Development (Part 1).



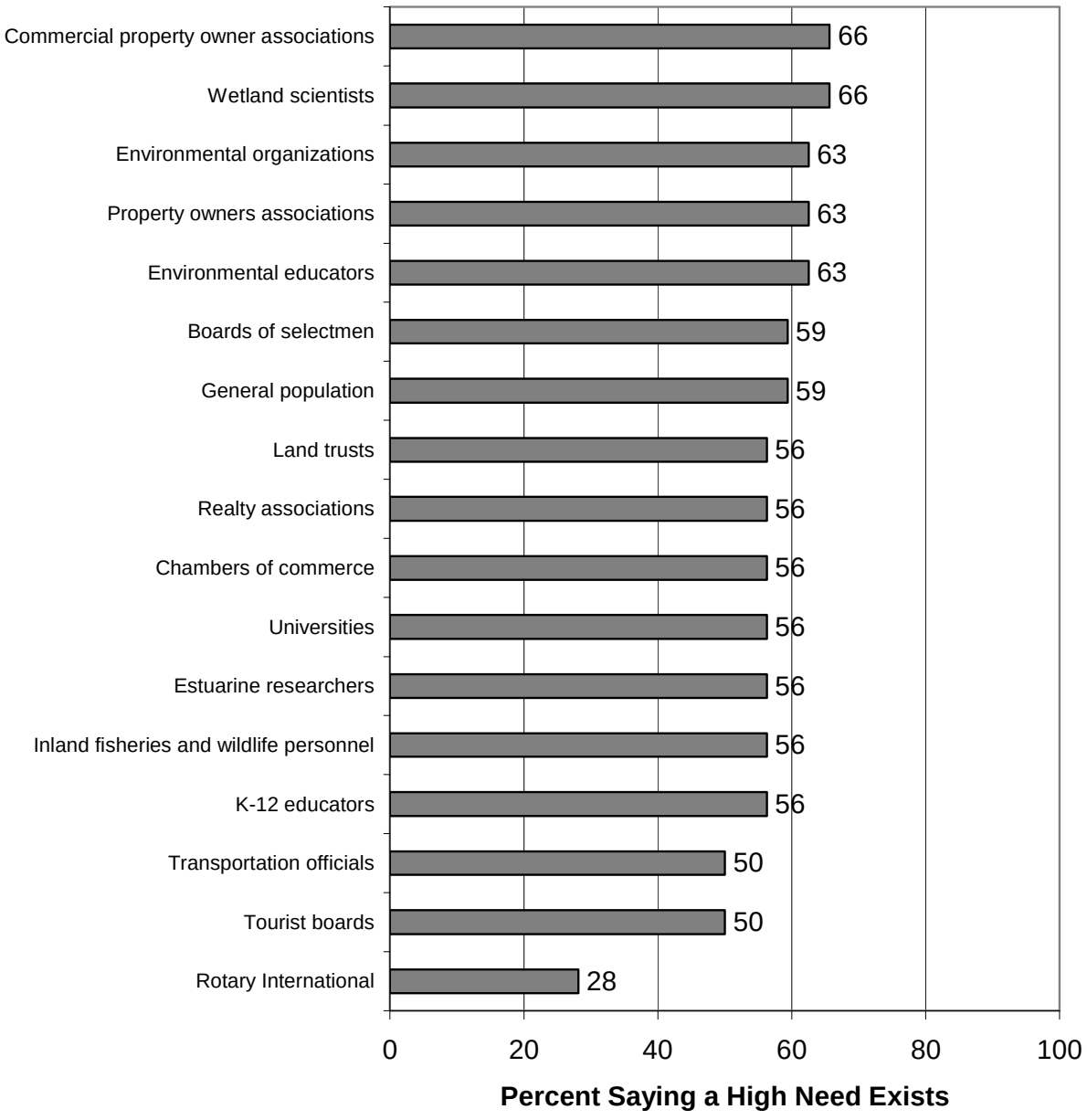
Q210-243. Groups that Local Government Officials Think Have the Highest Needs for Coastal Resource Information and Professional Development (Part 2).



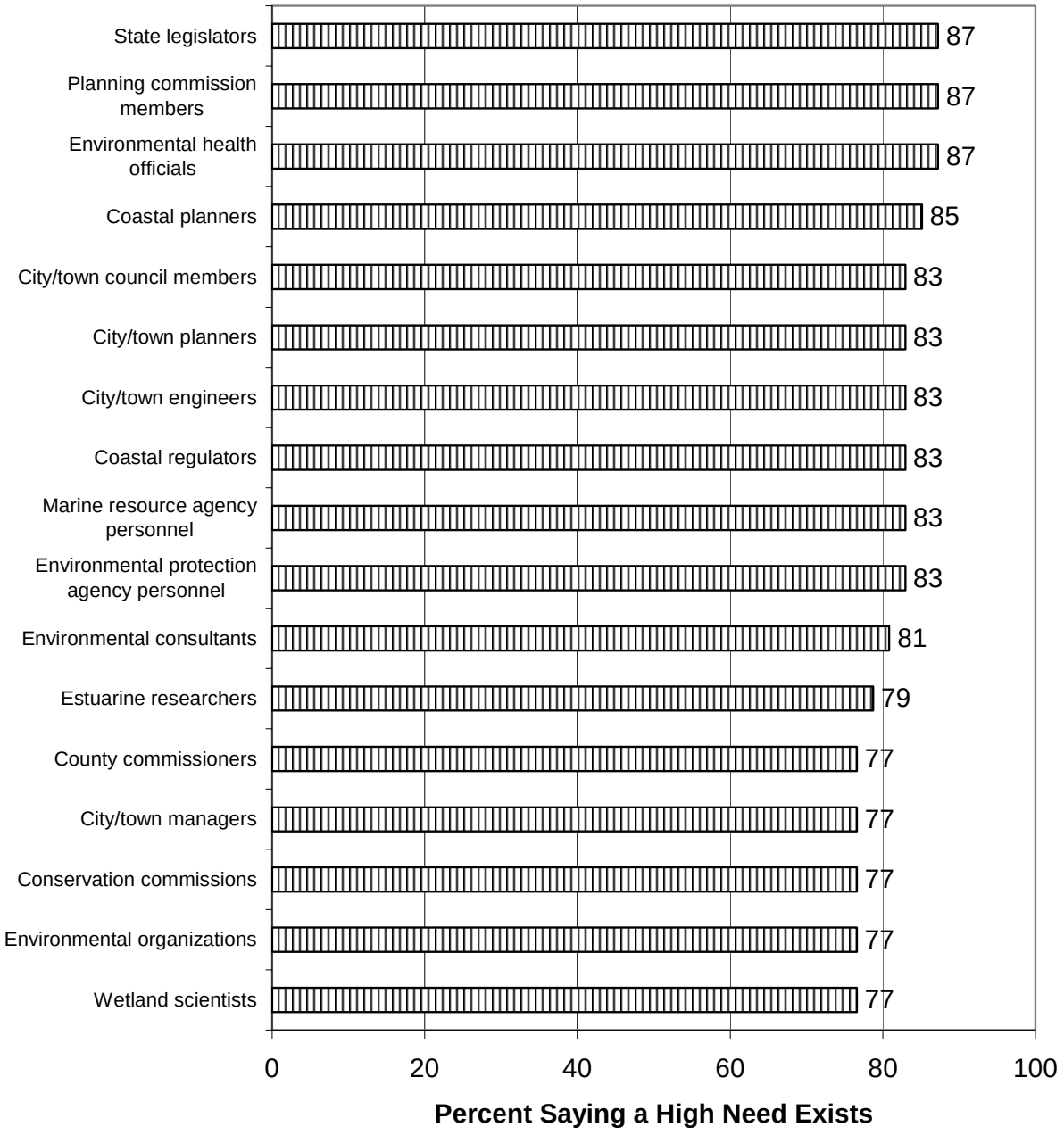
Q210-243. Groups that State Employees and Professional Association Members Think Have the Highest Needs for Coastal Resource Information and Professional Development (Part 1).



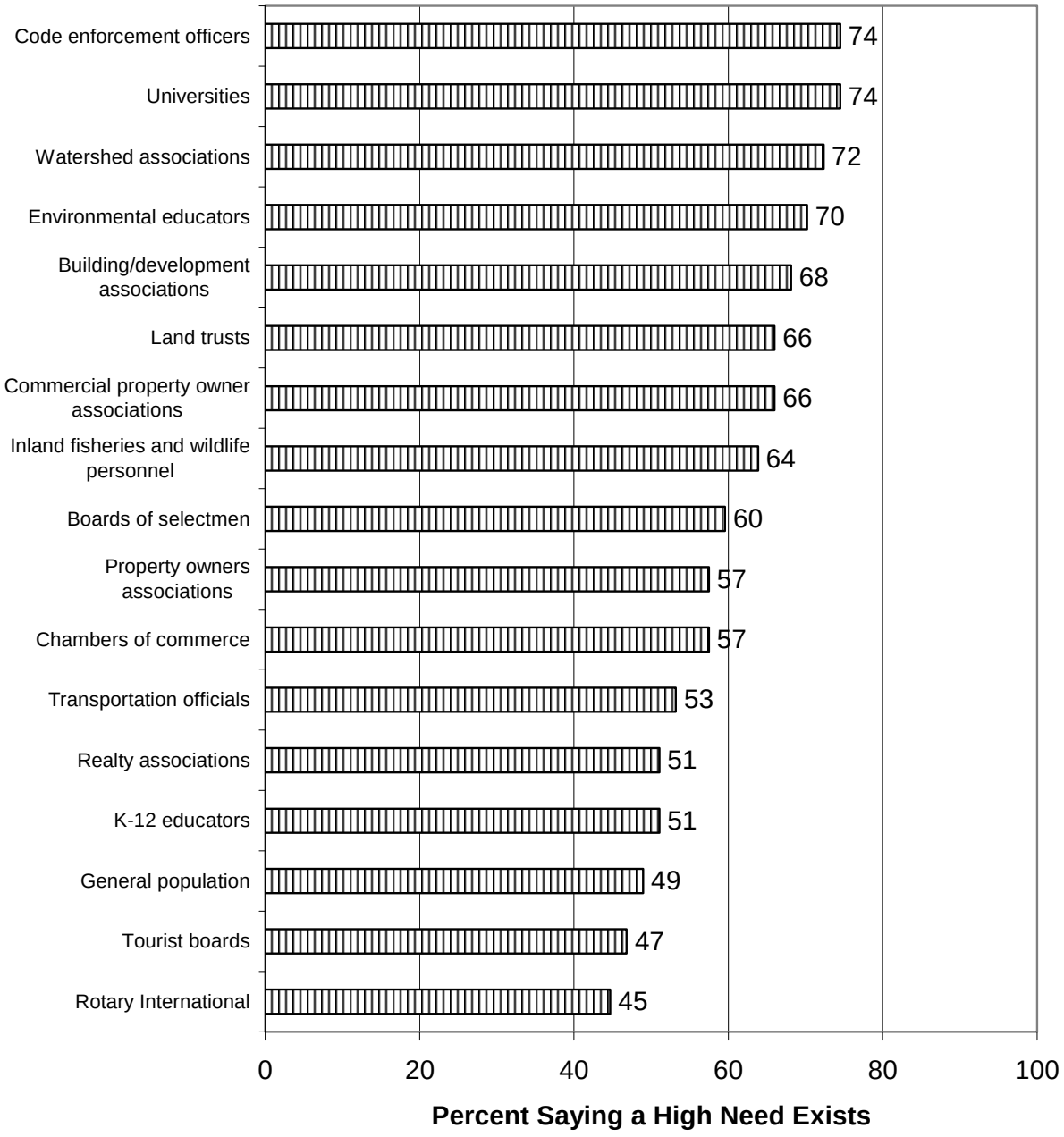
Q210-243. Groups that State Employees and Professional Association Members Think Have the Highest Needs for Coastal Resource Information and Professional Development (Part 2).



Q210-243. Groups that Volunteer Organization Members Think Have the Highest Needs for Coastal Resource Information and Professional Development (Part 1).



Q210-243. Groups that Volunteer Organization Members Think Have the Highest Needs for Coastal Resource Information and Professional Development (Part 2).

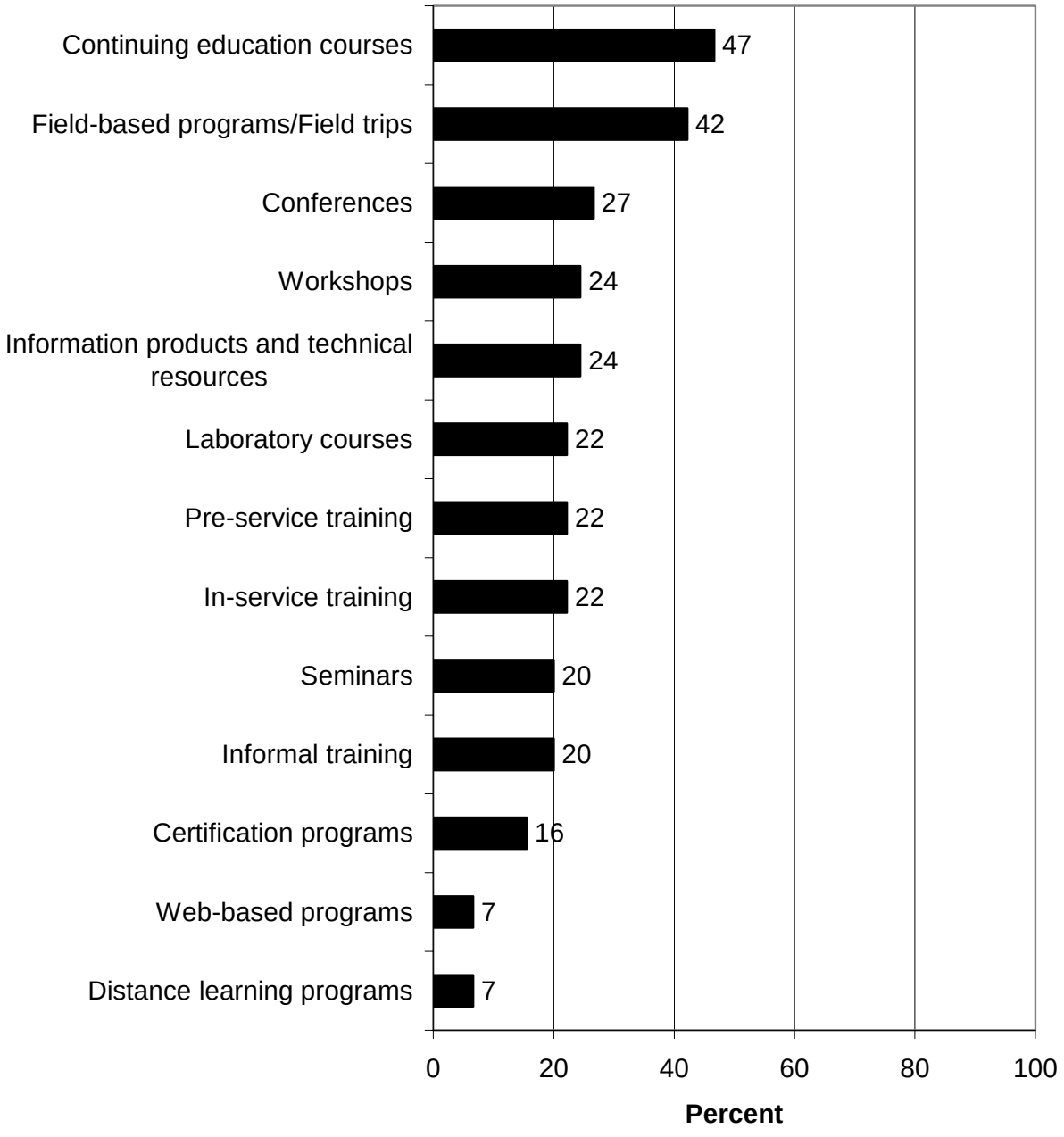


RATINGS OF VARIOUS FORMATS FOR COASTAL TRAINING AND EFFECTIVENESS OF VARIOUS LEARNING TECHNIQUES

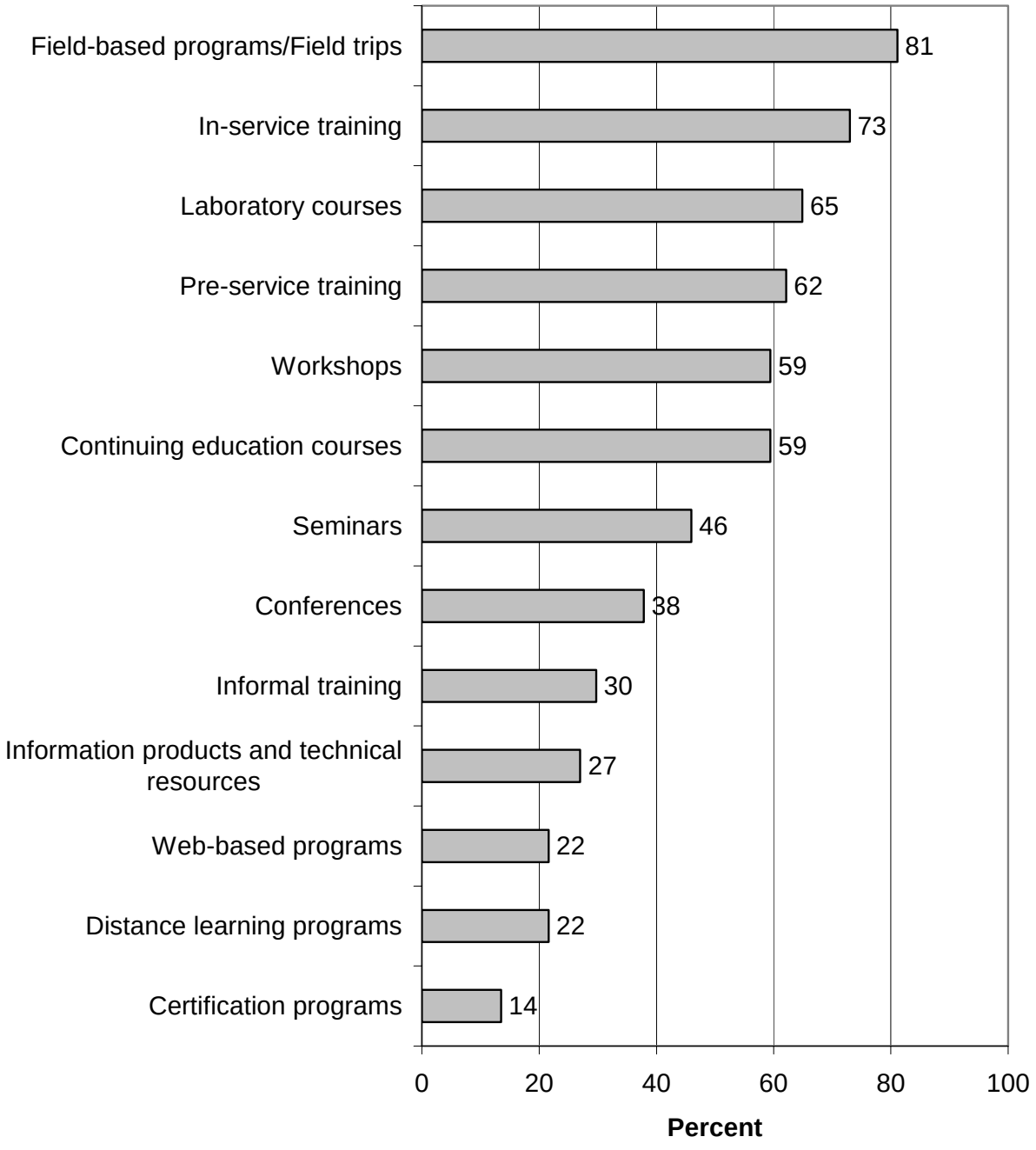
Ratings of Various Formats for Coastal Training

- The answers regarding the professional development formats that would be very effective for respondents to use in learning about coastal resource issues varied according to the group being surveyed. Nonetheless, the formats that are at or near the top of the list for all groups are field-based programs/field trips (at the top of the list for all groups except business organization representatives), continuing education courses, and workshops.
  - For business organization representatives, no format had a majority of respondents saying it is very effective. The top formats for learning coastal resource issues are continuing education courses (47% said this format would be very effective) and field-based programs/field trips (42%).
  - For K-12 educators, the top formats are field-based programs/field trips (81%), in-service training (73%), laboratory courses (65%), pre-service training (62%), workshops (59%), and continuing education courses (59%).
  - For local government officials, no format had a majority of respondents saying it is very effective. The top formats are field-based programs/field trips (42%) and continuing education courses (36%).
  - For state employees and professional association members, the top formats are field-based programs/field trips (66%), workshops (53%), and conferences (50%).
  - For volunteer organization members, the top format is field-based programs/field trips (64%). No other format had a majority of respondents saying it is very effective.

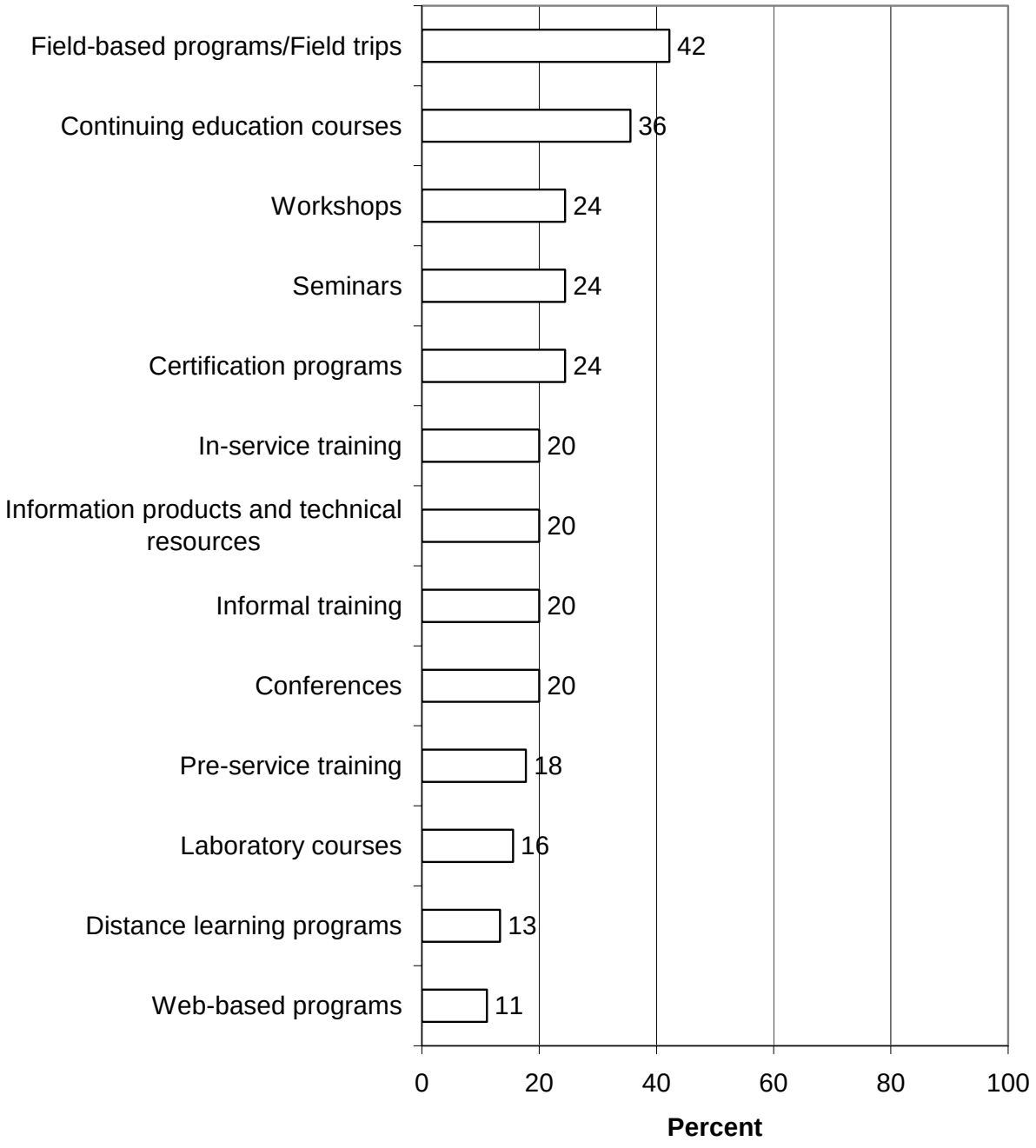
Q129-141. Professional Development Formats for Learning Coastal Resource Issues that Business Organization Representatives Said Would be Very Effective.



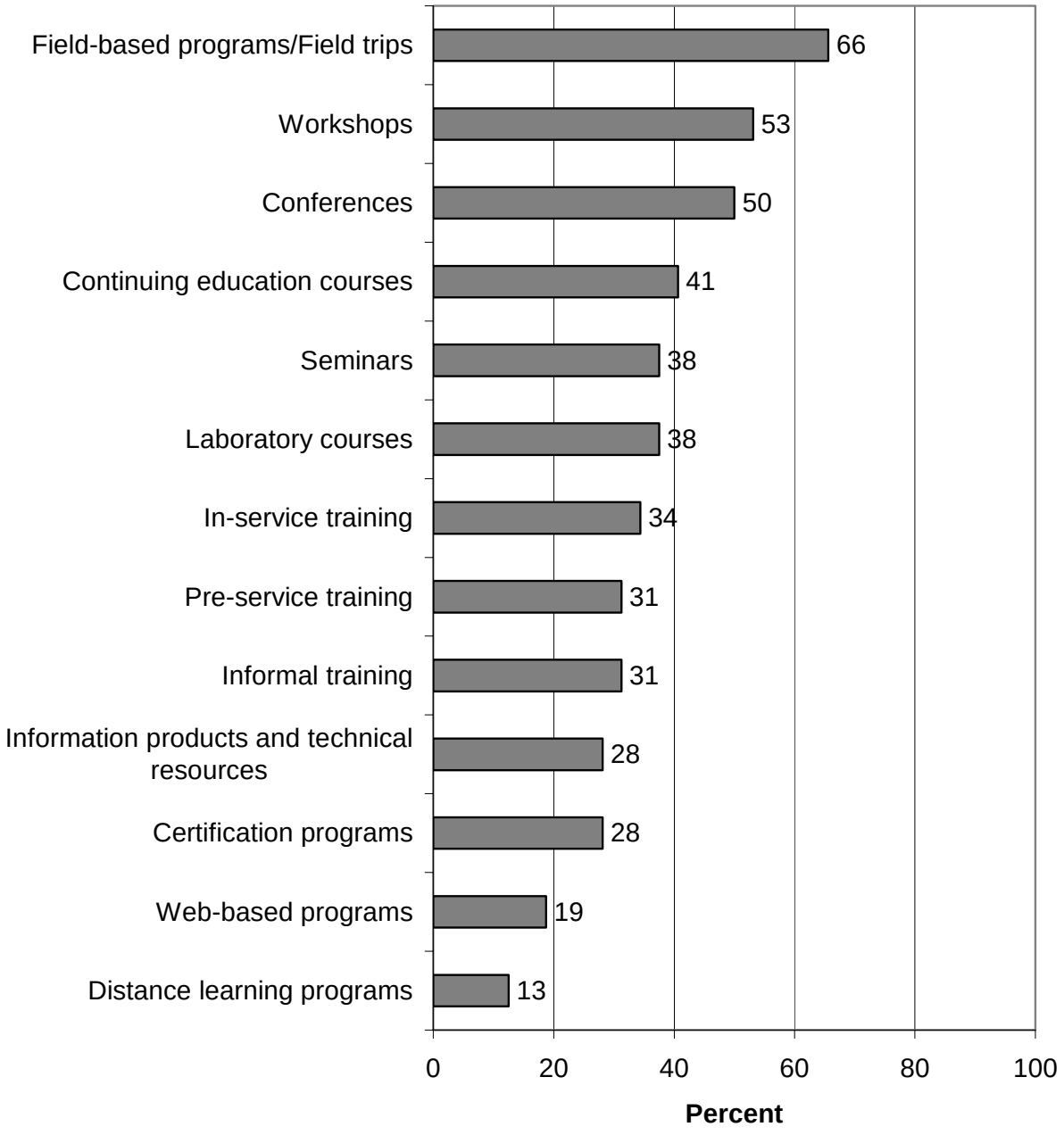
Q129-141. Professional Development Formats for Learning Coastal Resource Issues that K-12 Educators Said Would be Very Effective.



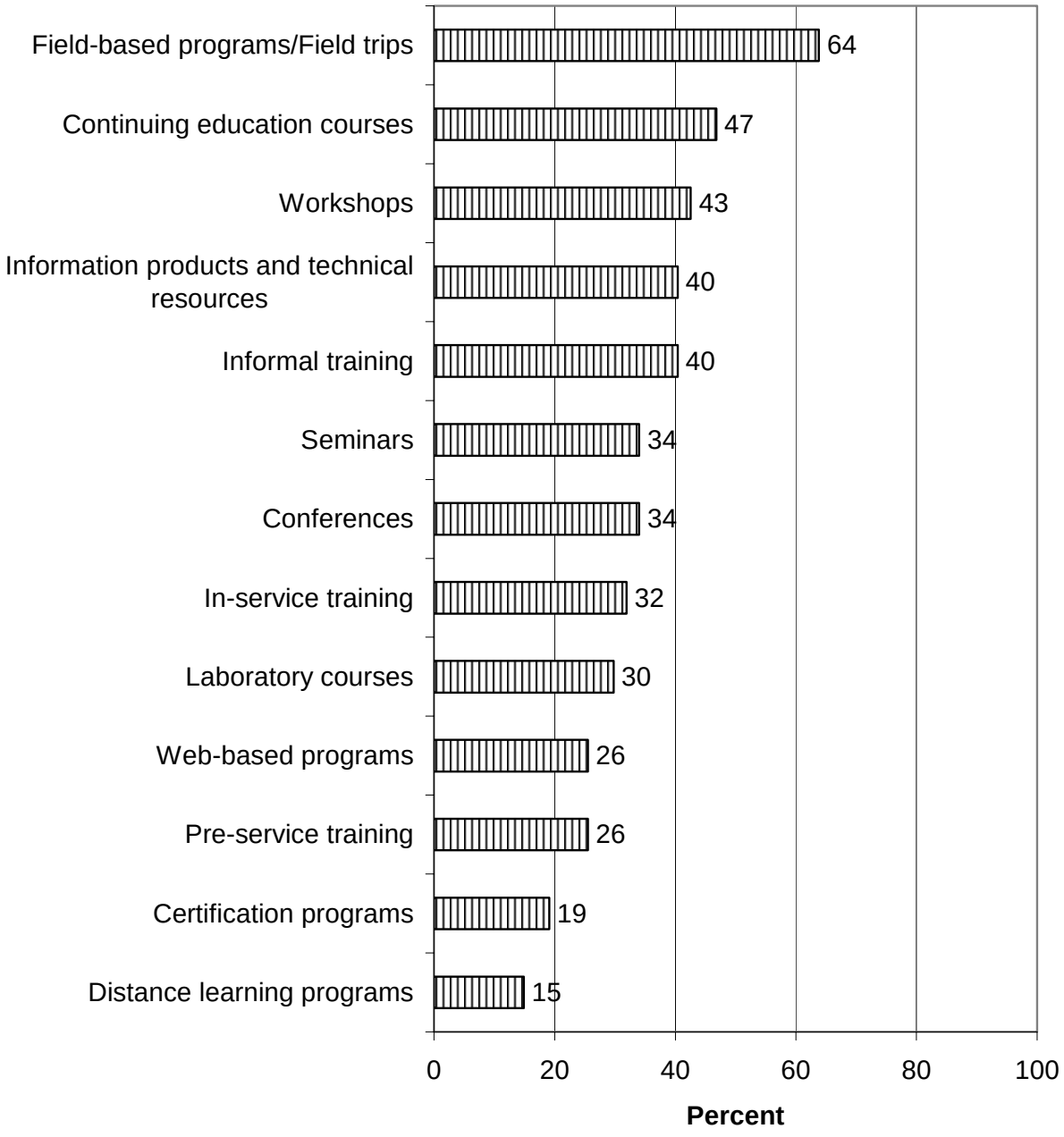
Q129-141. Professional Development Formats for Learning Coastal Resource Issues that Local Government Officials Said Would be Very Effective.



Q129-141. Professional Development Formats for Learning Coastal Resource Issues that State Employees and Professional Association Members Said Would be Very Effective.



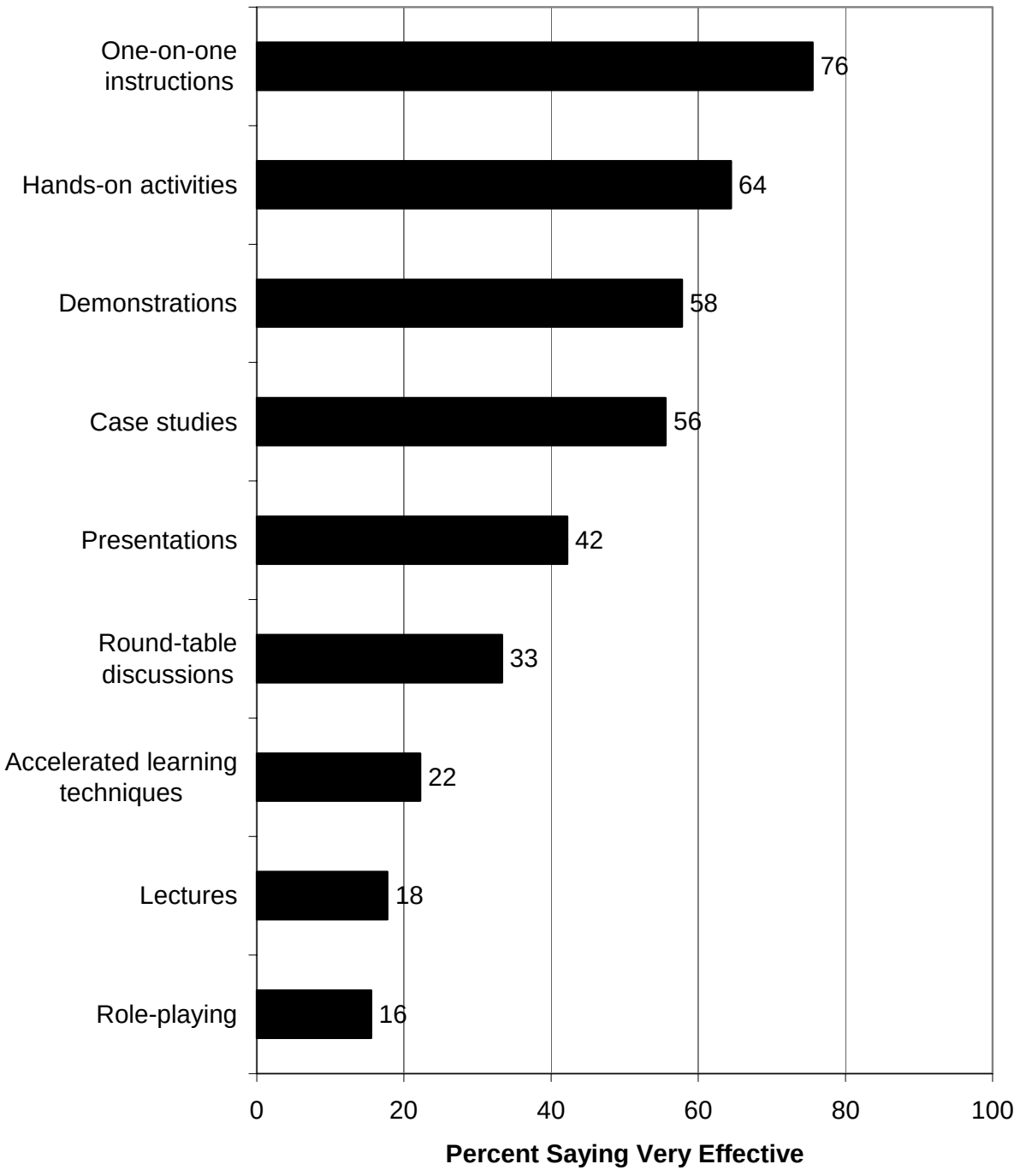
Q129-141. Professional Development Formats for Learning Coastal Resource Issues that Volunteer Organization Members Said Would be Very Effective.



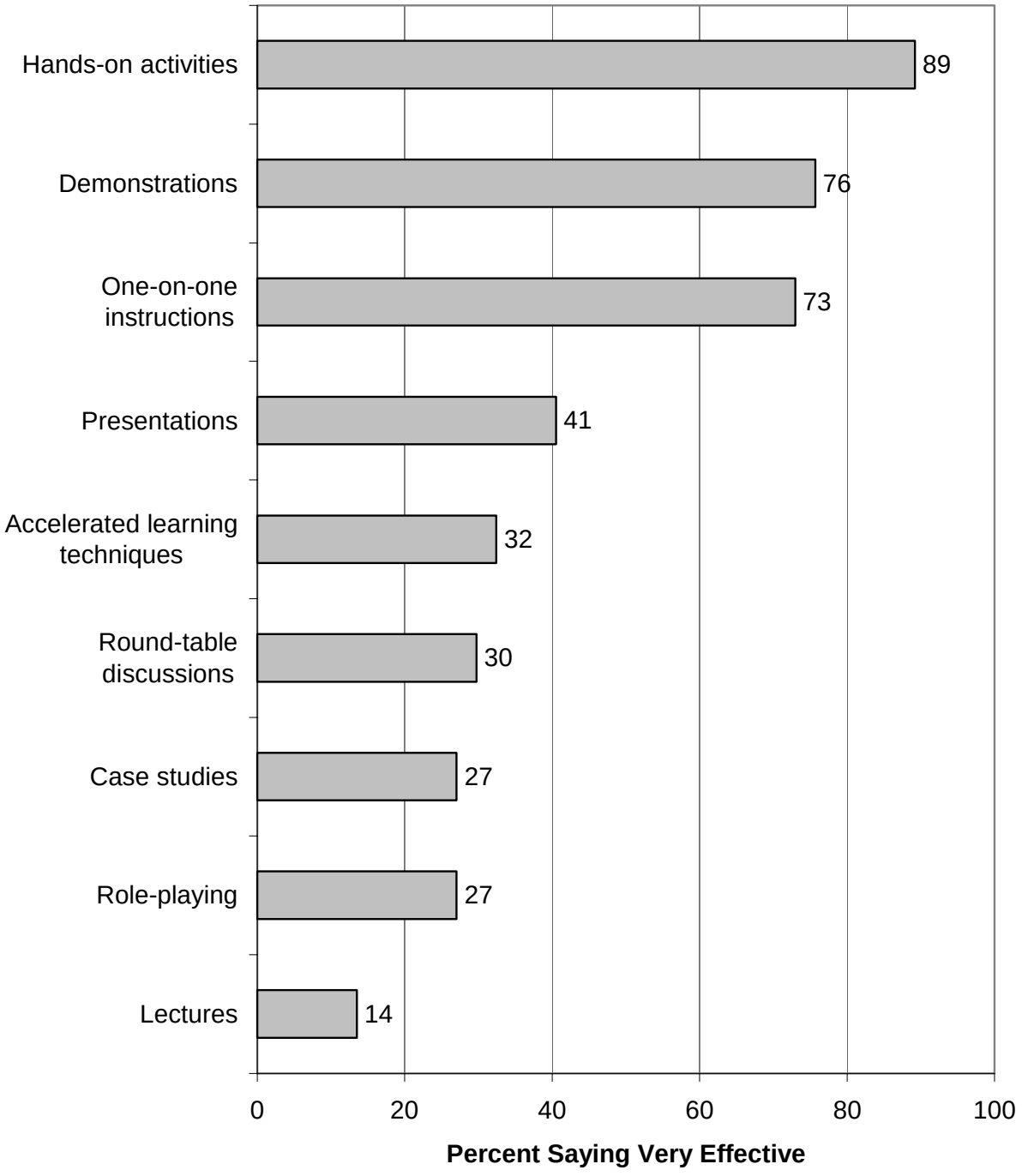
Effectiveness of Various Learning Techniques

- The top three learning techniques for all groups, although not always in the same order, are one-on-one instructions, hands-on activities, and demonstrations.
  - For business organization representatives, the following techniques had a majority of respondents saying that the given technique is very effective: one-on-one instruction (76%), hands-on activities (64%), demonstrations (58%), and case studies (56%).
  - For K-12 educators, the following techniques had a majority of respondents saying that the given technique is very effective: hands-on activities (89%), demonstrations (76%), and one-on-one instruction (73%).
  - For local government officials, the following techniques had a majority of respondents saying that the given technique is very effective: one-on-one instruction (58%) and hands-on activities (51%).
  - For state employees and professional association members, the following techniques had a majority (or exactly 50%) of respondents saying that the given technique is very effective: hands-on activities (84%), one-on-one instruction (66%), demonstrations (56%), and case studies (50%).
  - For volunteer organization members, the following techniques had a majority of respondents saying that the given technique is very effective: hands-on activities (79%), one-on-one instruction (70%), and demonstrations (55%).

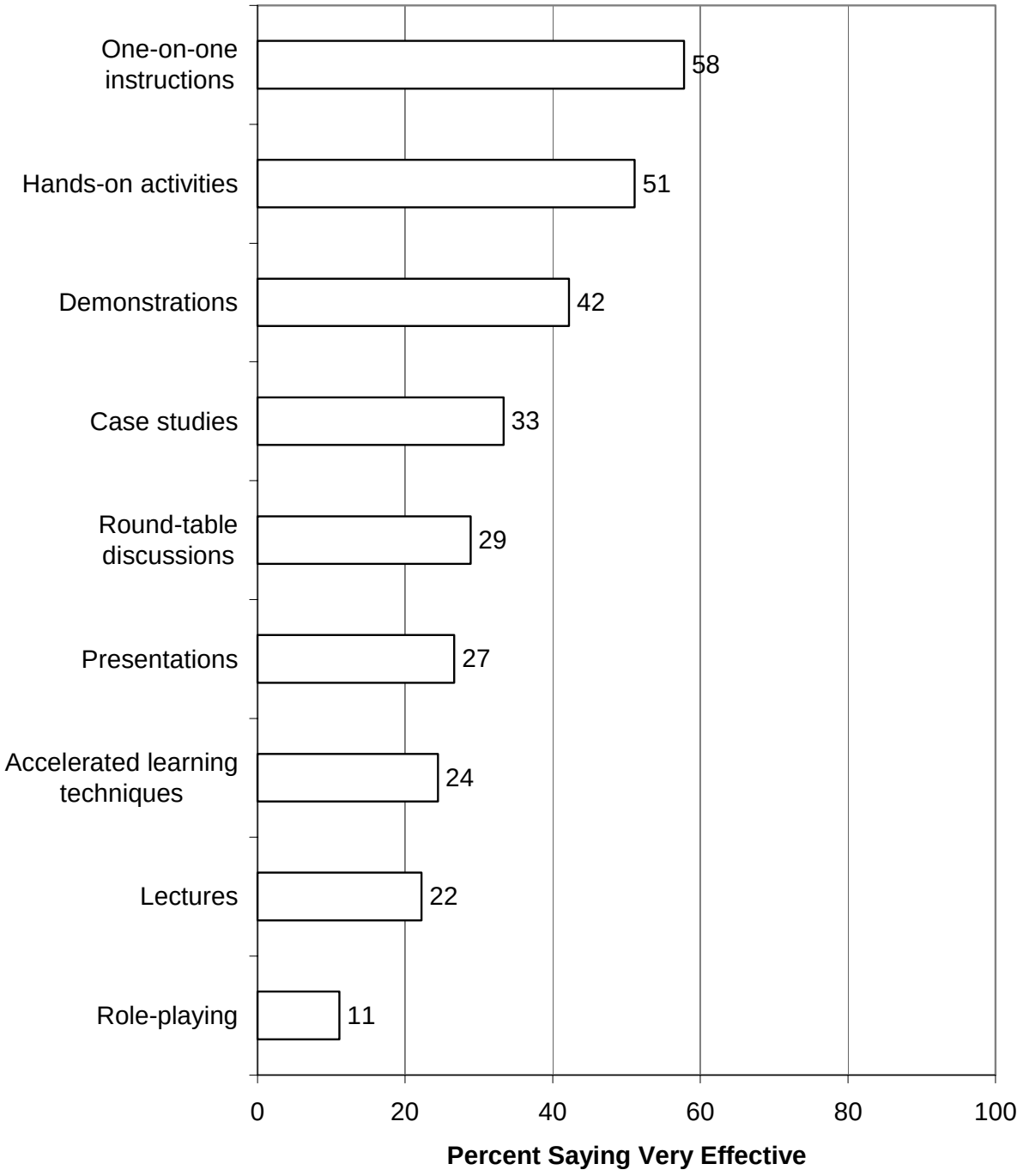
Q142-150. Most Effective Learning Techniques for Business Organization Representatives.



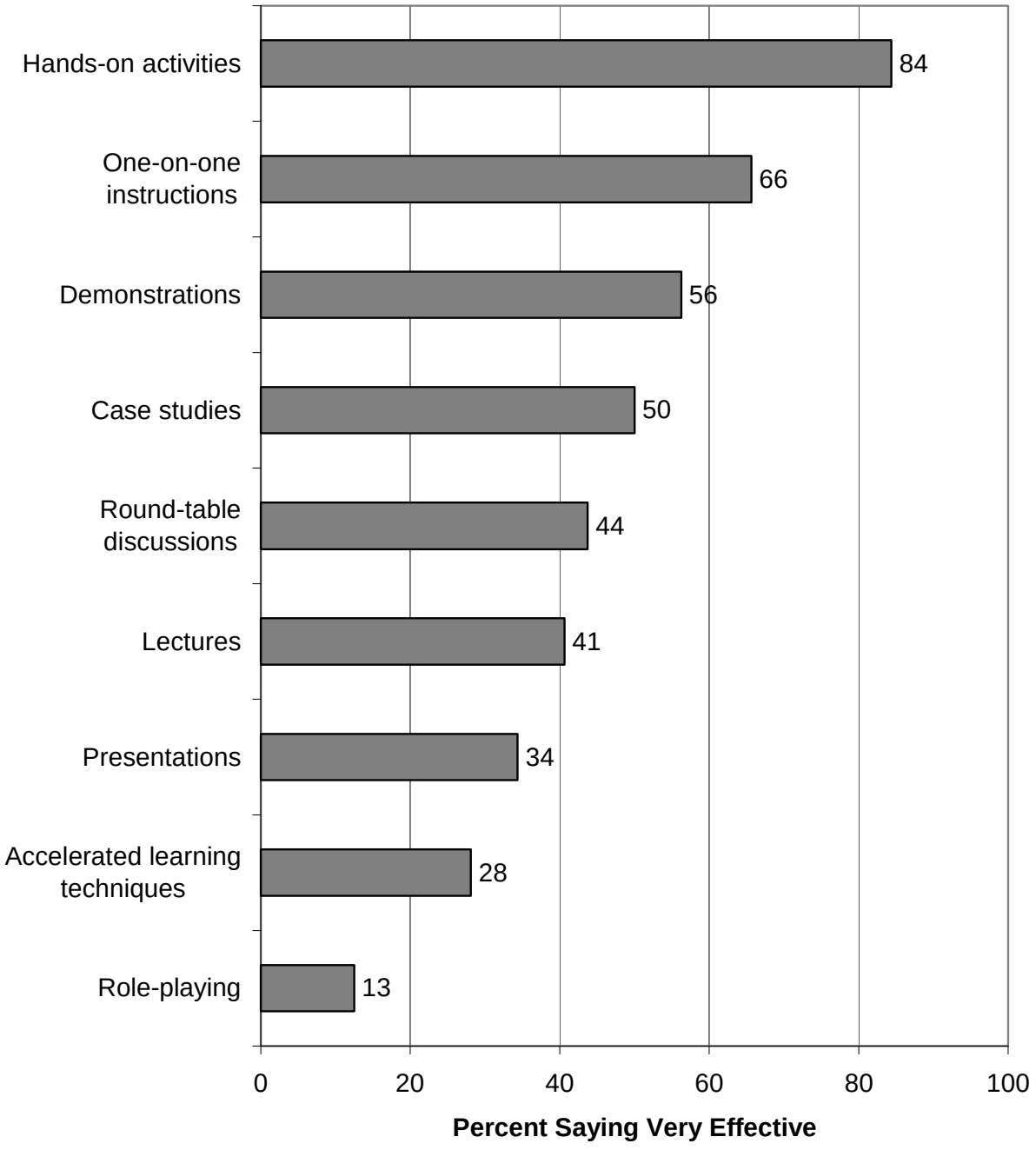
Q142-150. Most Effective Learning Techniques for K-12 Educators.



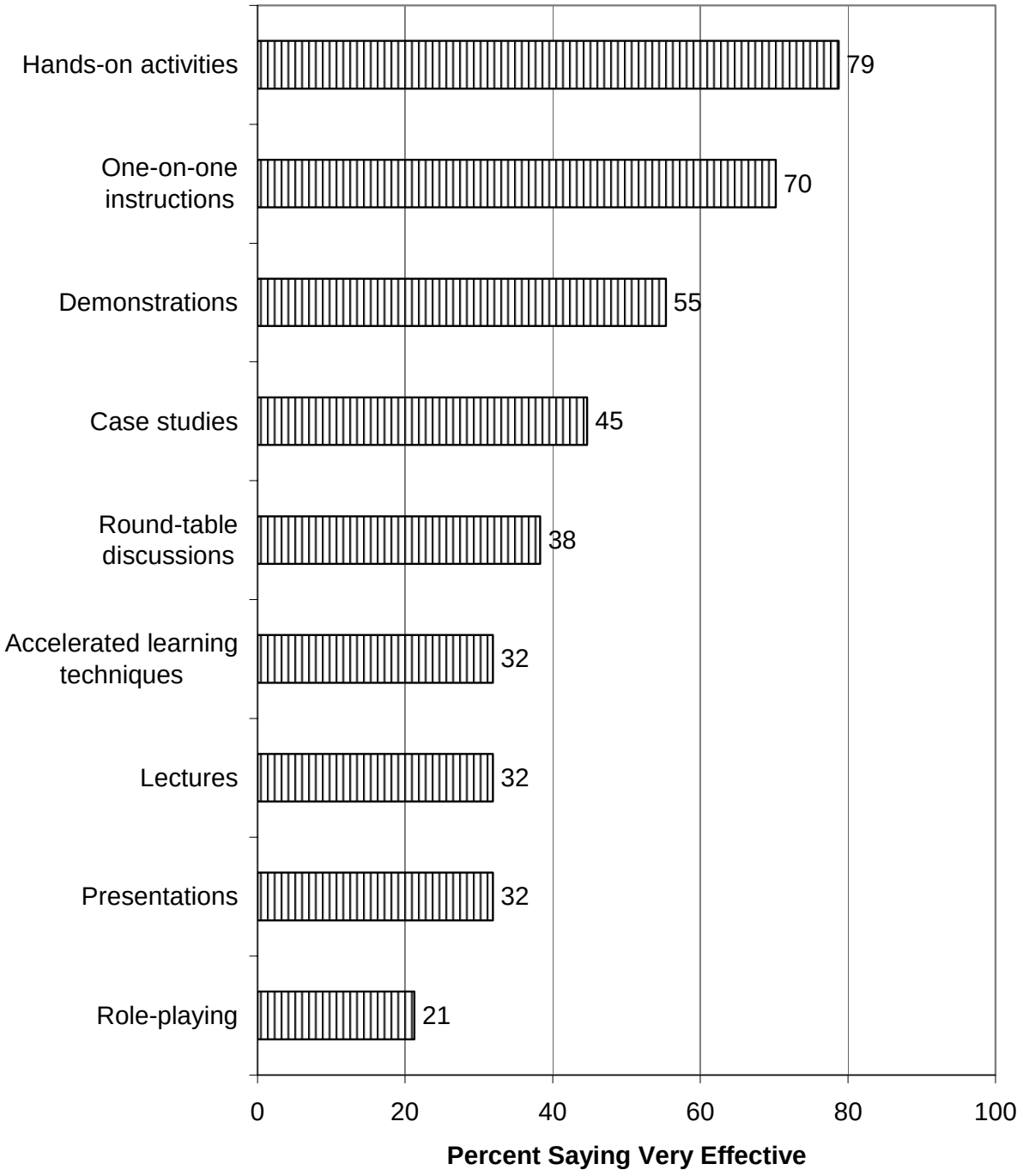
Q142-150. Most Effective Learning Techniques for Local Government Officials.



Q142-150. Most Effective Learning Techniques for State Employees and Professional Association Members.



Q142-150. Most Effective Learning Techniques for Volunteer Organization Members.

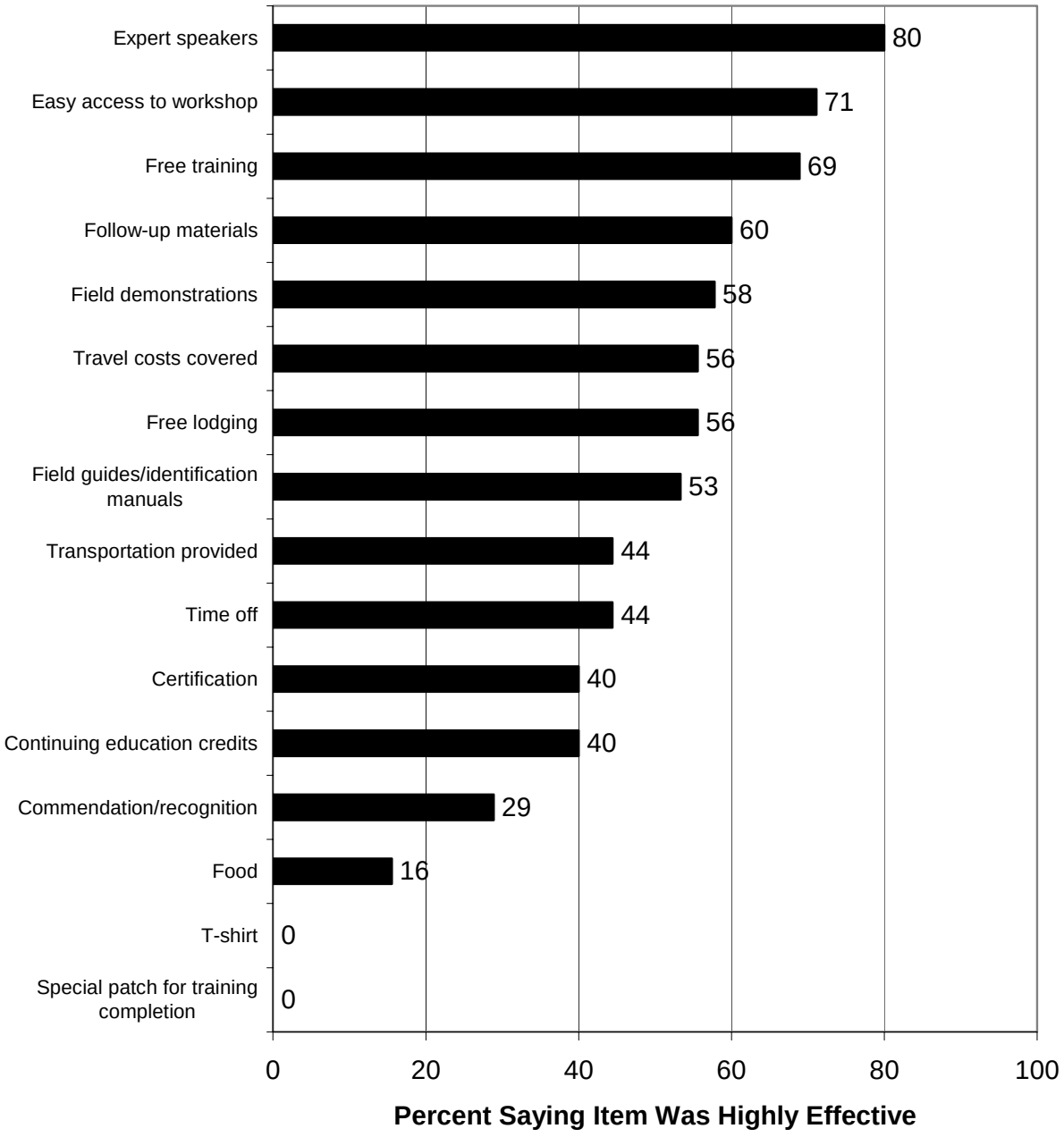


ENCOURAGING PARTICIPATION IN COASTAL RESOURCE PROFESSIONAL DEVELOPMENT PROGRAMS

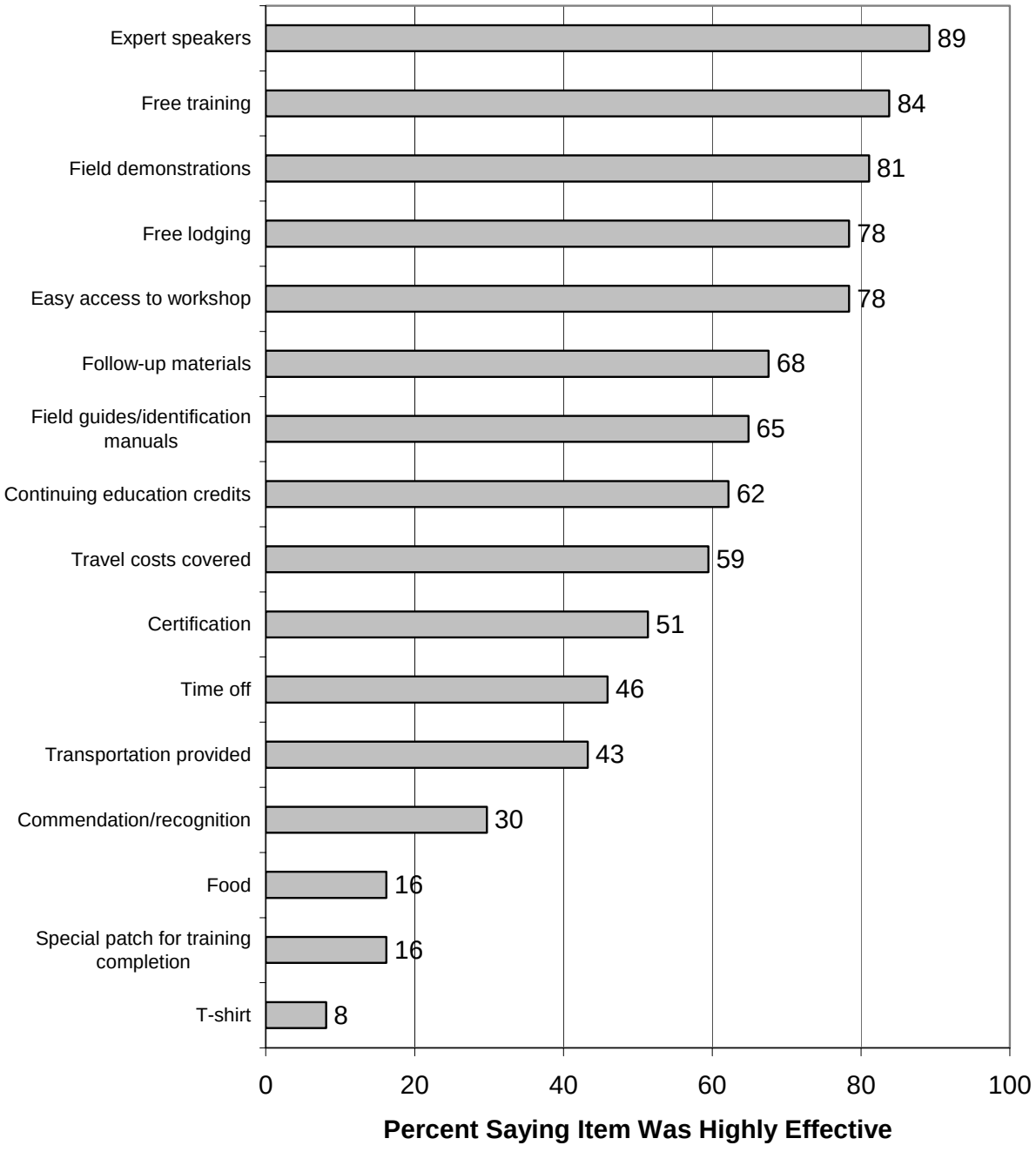
Incentives to Encourage Participation in Coastal Resource Professional Development Programs

- The most common answer among all groups except state employees and professional association members regarding the most effective means to encourage attendance at a training/education/outreach session is expert speakers. Other important means are easy access to workshop, free training, and field demonstrations. The items at the bottom of the list for all groups are t-shirts and a special patch for training completion.
  - The top answers among business organization representatives are expert speakers (80%), easy access to workshop (71%), and free training (69%).
  - The top answers among K-12 educators are expert speakers (89%), free training (84%), and field demonstrations (81%).
  - The top answers among local government officials are expert speakers (76%), free training (56%), and easy access to workshop (56%).
  - The top answers among state employees and professional association members are free training (84%), easy access to workshop (84%), field demonstrations (81%), and expert speakers (81%).
  - The top answers among volunteer organization members are expert speakers (89%), free training (81%), and easy access to workshop (74%).

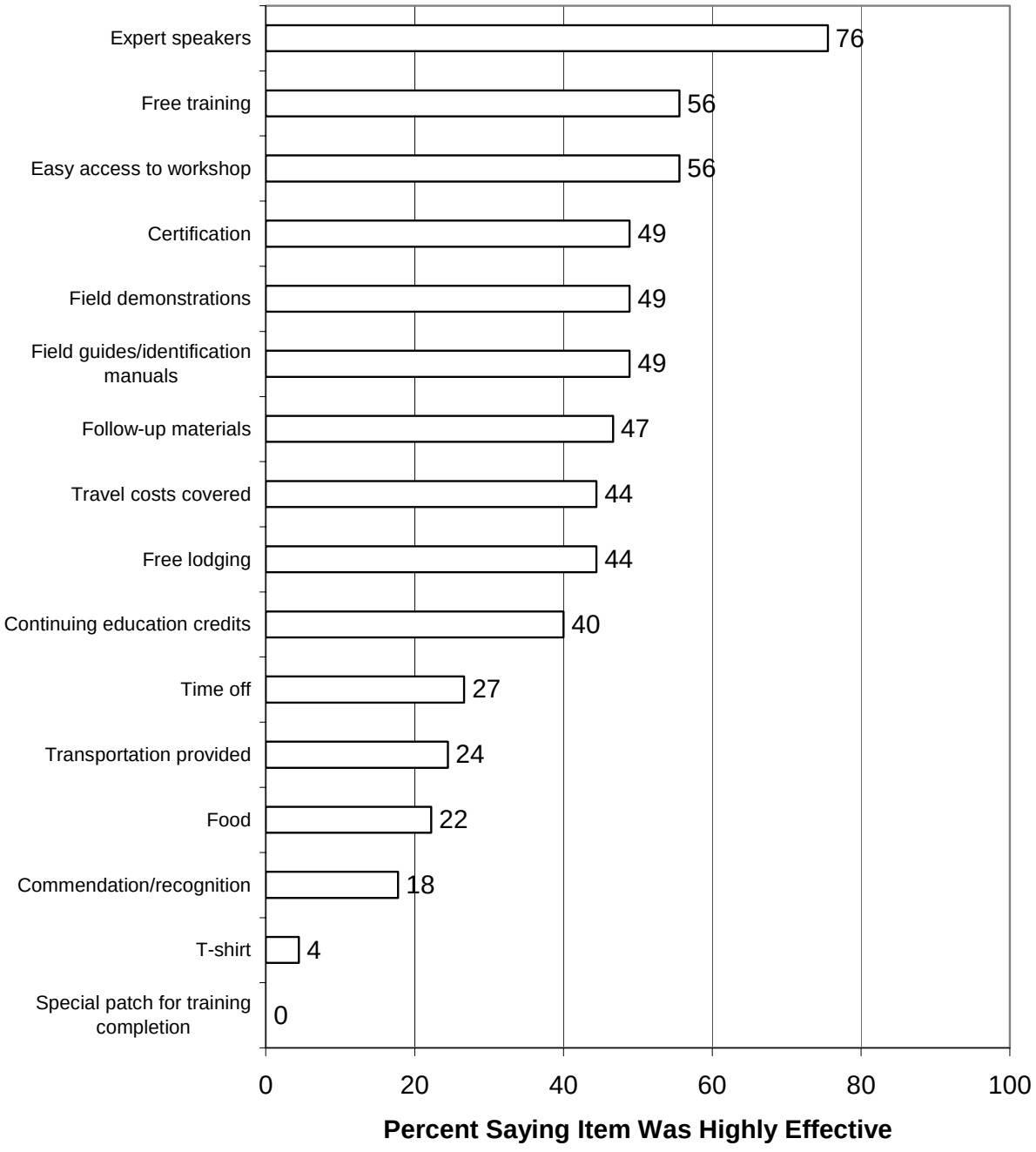
Q157-172. Most Effective Means to Encourage Attendance at a Training/Education/Outreach Session for Business Organization Representatives.



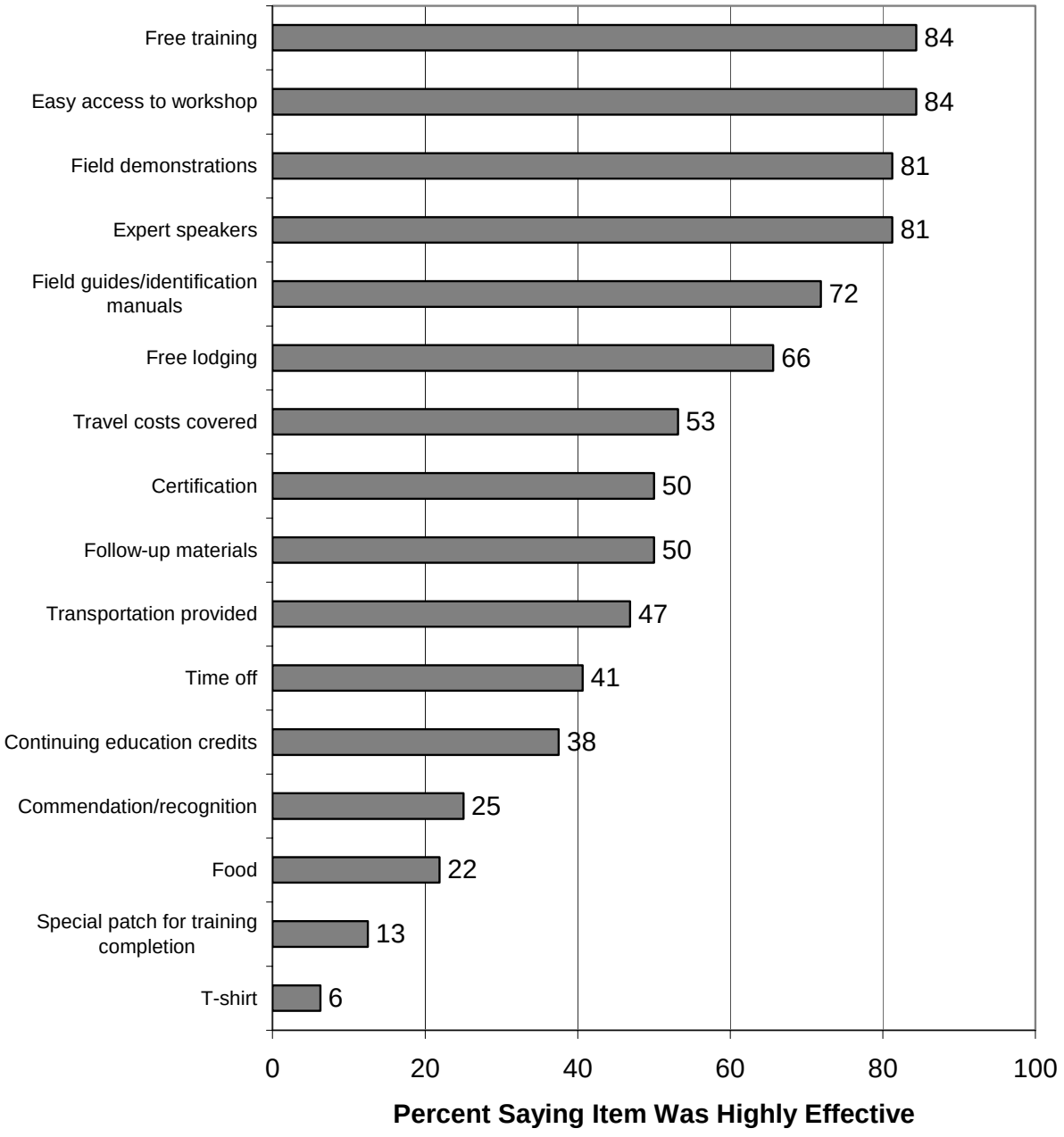
Q157-172. Most Effective Means to Encourage Attendance at a Training/Education/Outreach Session for K-12 Educators.



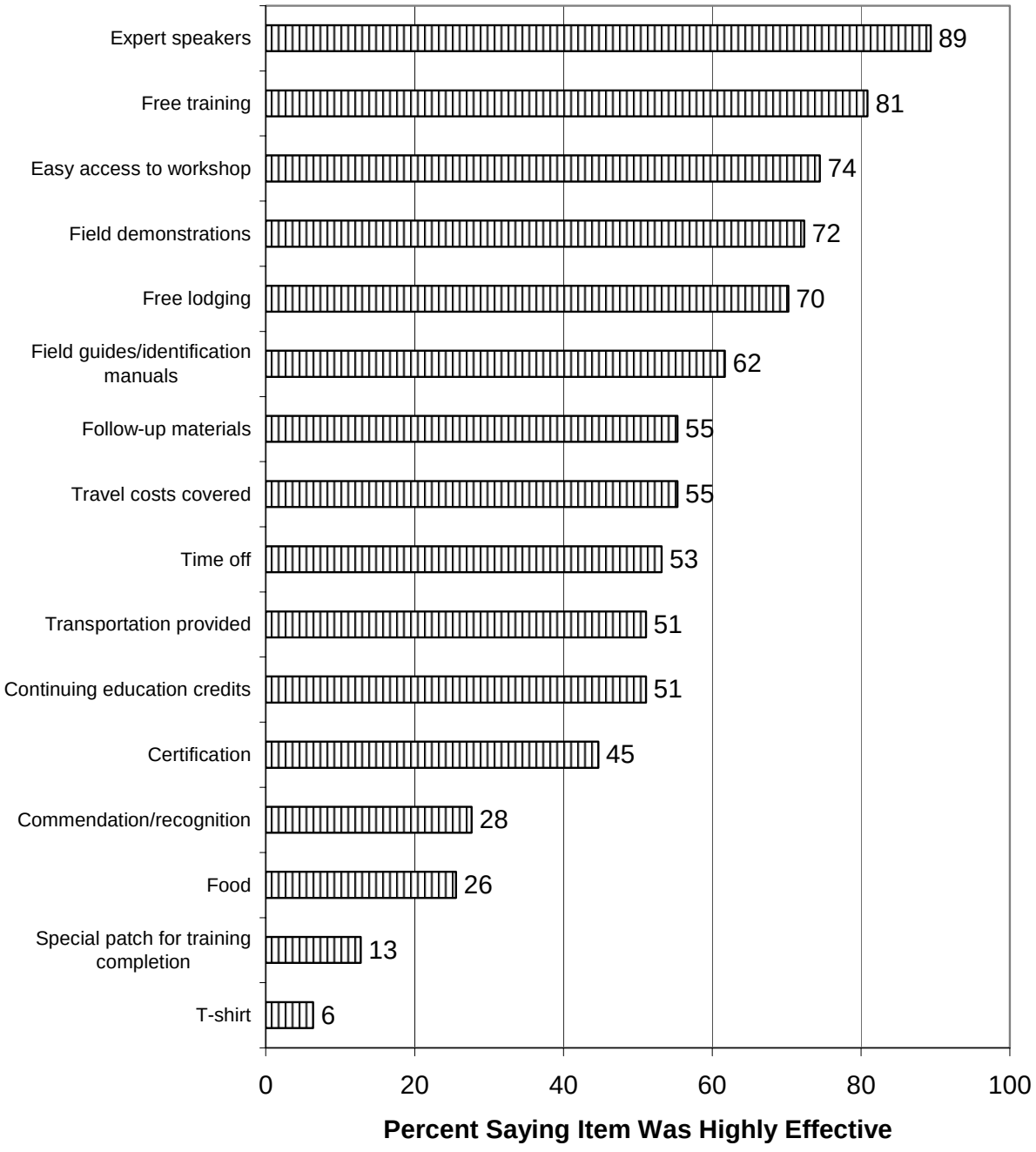
Q157-172. Most Effective Means to Encourage Attendance at a Training/Education/Outreach Session for Local Government Officials.



Q157-172. Most Effective Means to Encourage Attendance at a Training/Education/Outreach Session for State Employees and Professional Association Members.



Q157-172. Most Effective Means to Encourage Attendance at a Training/Education/Outreach Session for Volunteer Organization Members.



Best Dates, Times, and Registration Structure to Encourage Participation in Coastal Resource Professional Development Programs

- No season stood out as much better than other seasons for coastal resource professional development programs, although spring is the least desired season among all groups except local government officials.
  - Winter is the top season among business organization representatives (33%), although "any season" was the next most popular answer (29%).
  - Summer is the top season among K-12 educators, with "any season" being the next most important answer (23%).
  - Among local government officials, fall was the top answer (35%), followed by spring (26%) and winter (23%). Summer is the least desirable season for local government officials: 0% said summer is the best season of the year.
  - Summer is the top season among state employees and professional association members (35%).
  - Winter is the top season among volunteer organization members (26%).

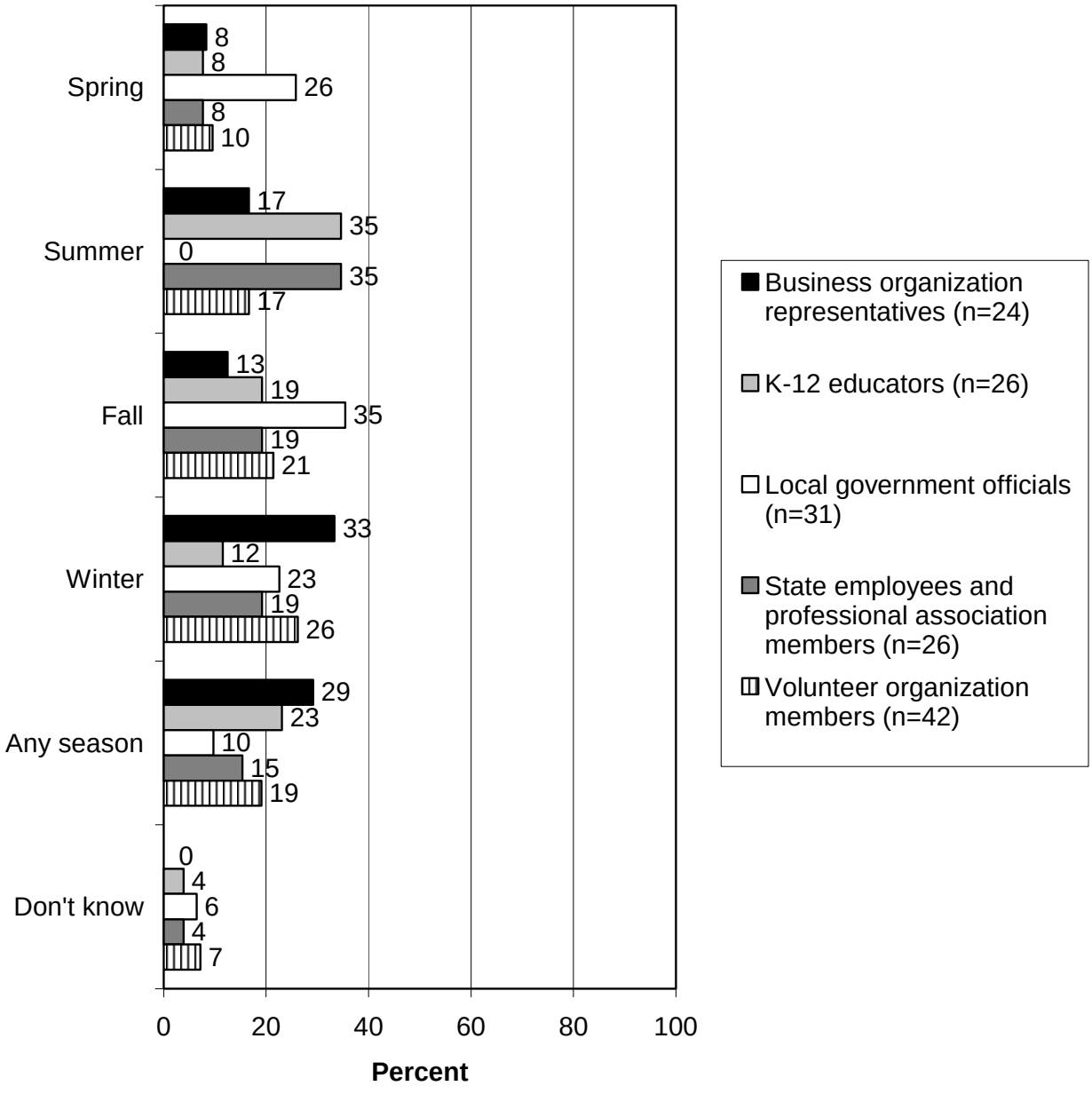
- By far, weekdays are preferred over weekends for coastal resource professional development programs.

- Morning is the preferred time of day for coastal resource professional development programs; evening is the least preferred time of day.

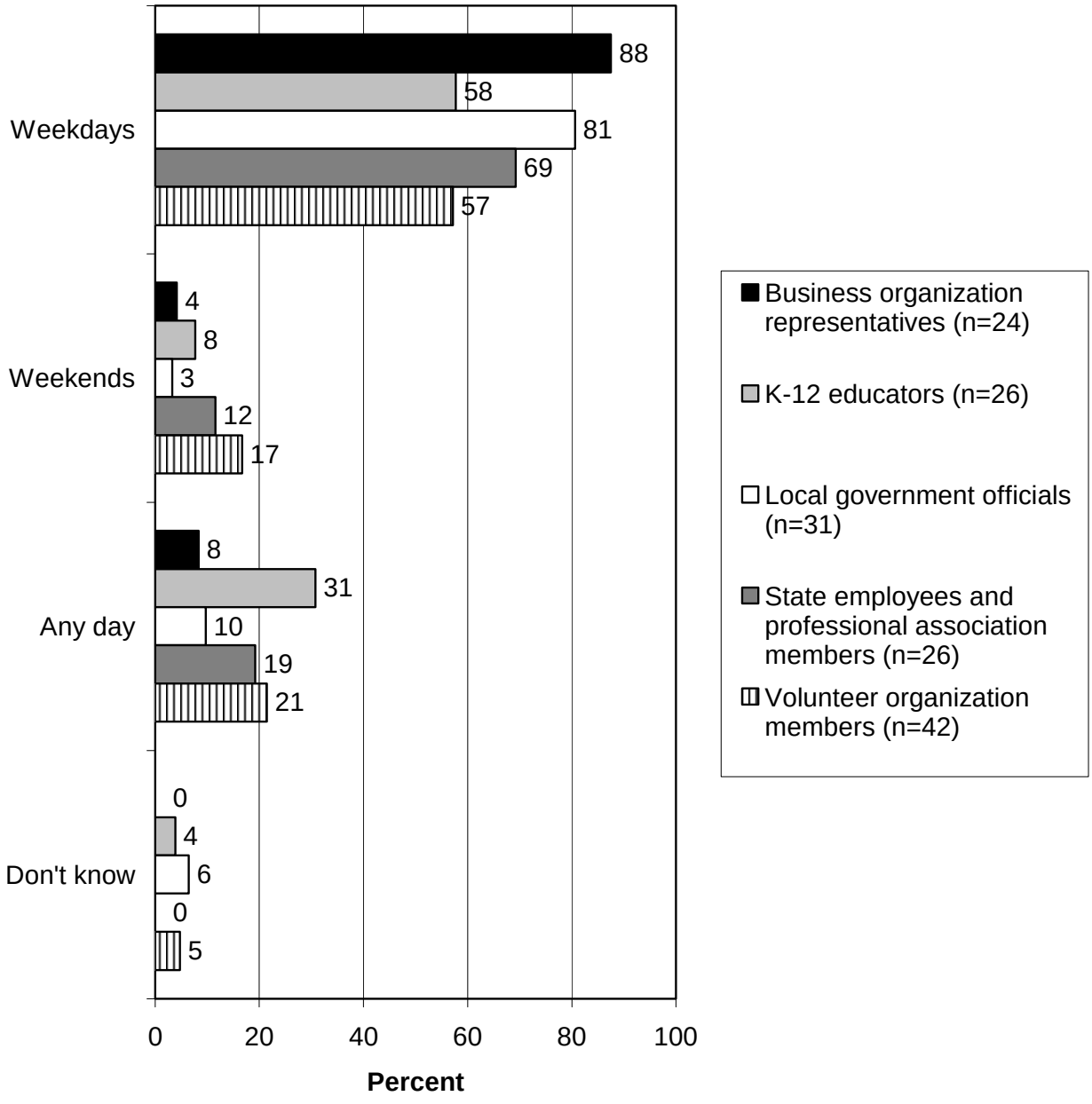
- Half-day sessions or day-long sessions are the most preferred length of time for coastal resource professional development programs.

- On-line registration is the most popular format for registering for coastal resource professional development programs among all groups. The next most popular format for registering is mail-in registration.

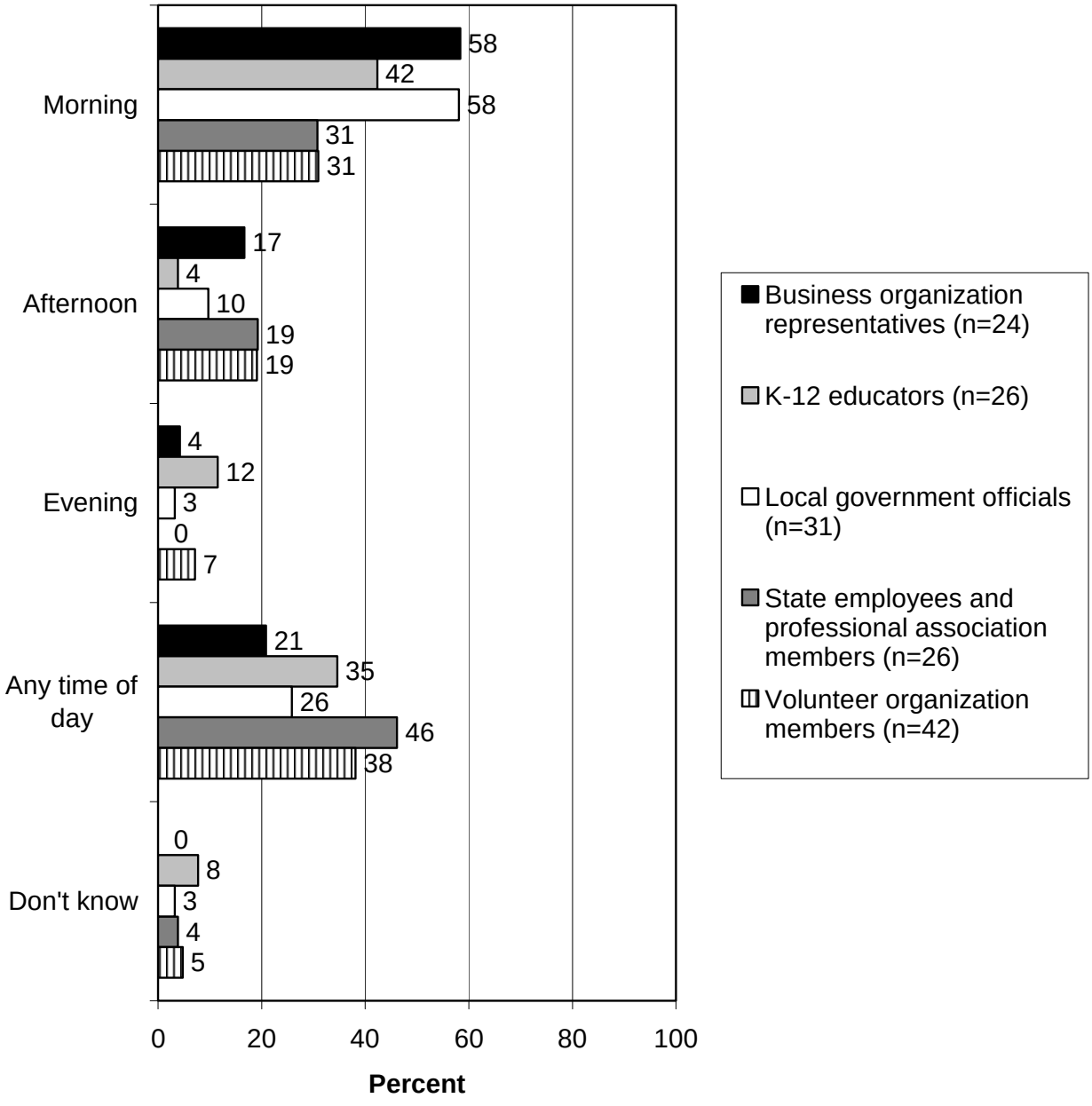
Q182. Which season is the best time of year for you to attend coastal resource professional development? (Asked of those who expressed interest in participating in coastal resource professional development programs in the future.)



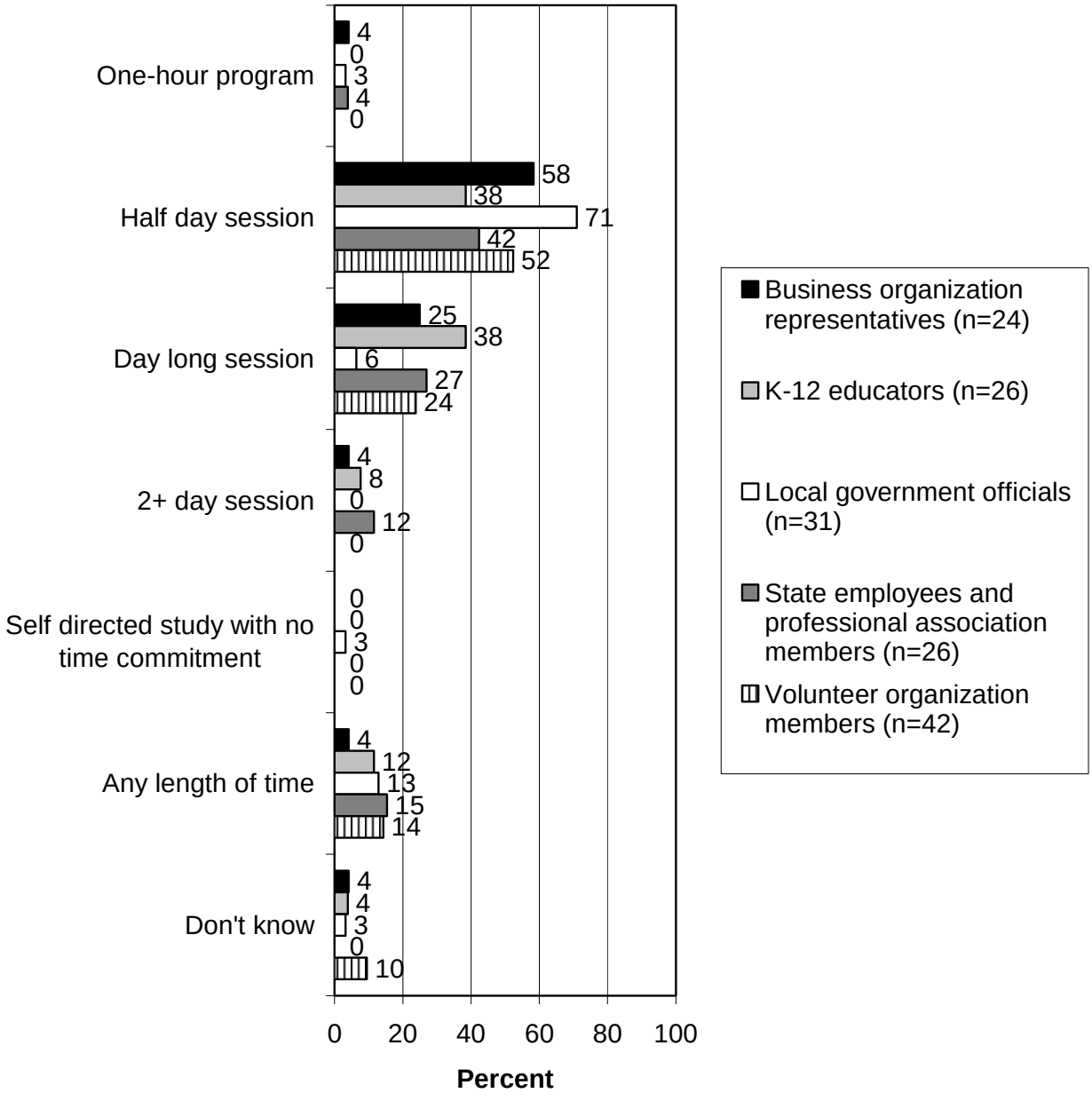
Q183. Which days are the best time of week for you to attend coastal resource professional development? (Asked of those who expressed interest in participating in coastal resource professional development programs in the future.)



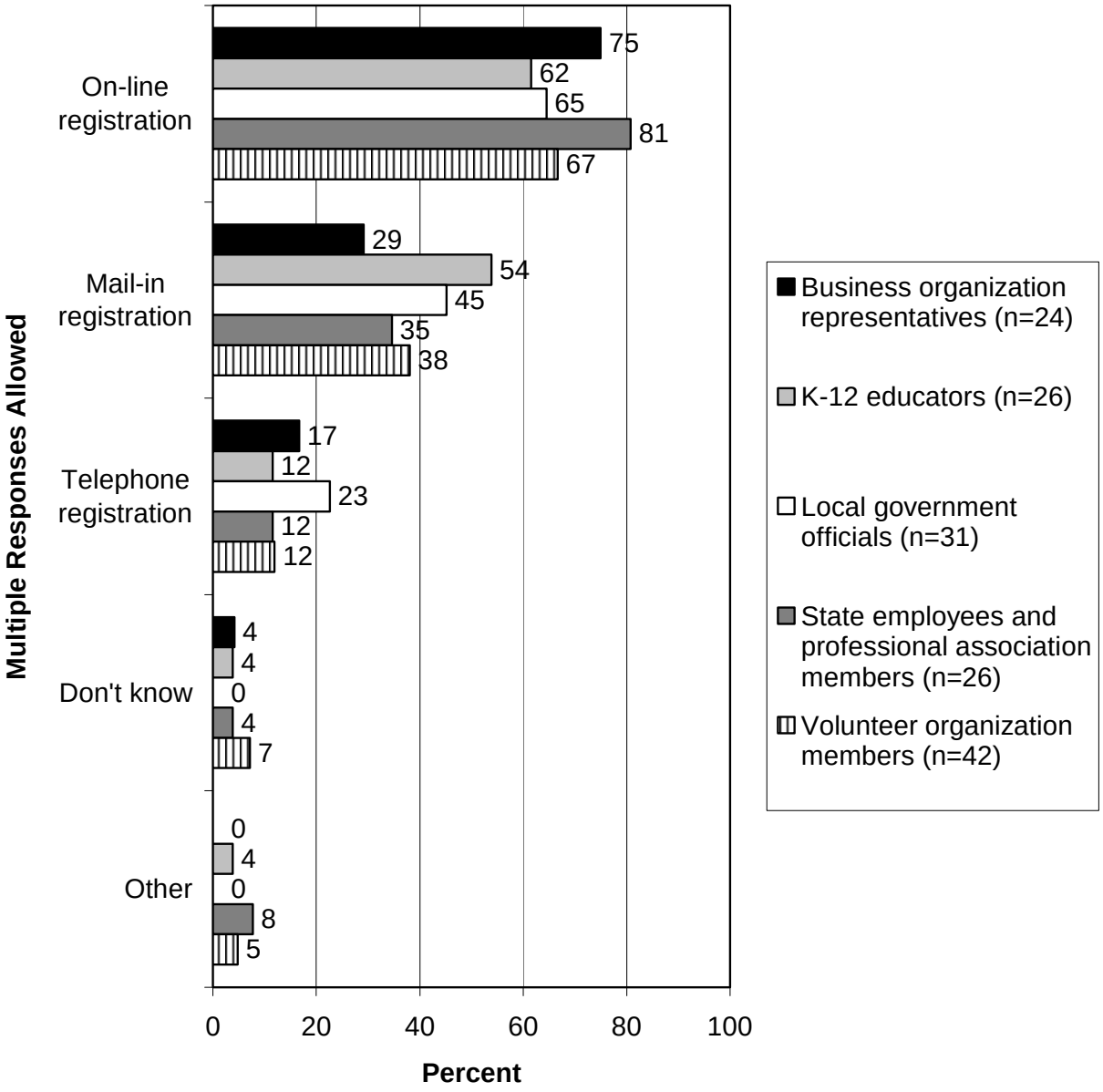
Q184. Which times are the best times of day for you to attend coastal resource professional development? (Asked of those who expressed interest in participating in coastal resource professional development programs in the future.)



Q185. Which of the following session lengths do you prefer for coastal resource professional development? (Asked of those who expressed interest in participating in coastal resource professional development programs in the future.)



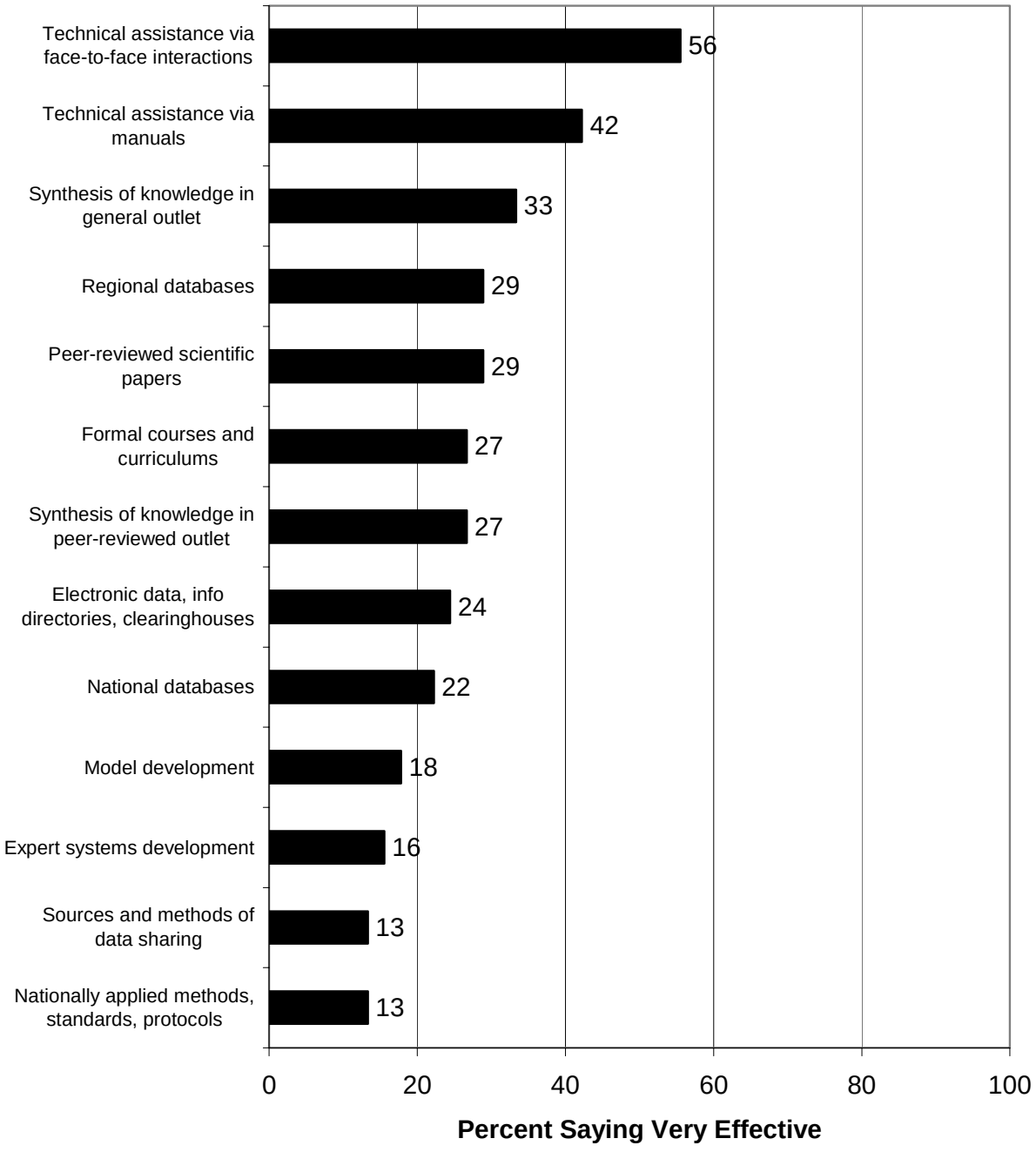
Q203. How do you prefer to register for a coastal resource professional development session? (Asked of those who expressed interest in participating in coastal resource professional development programs in the future.)



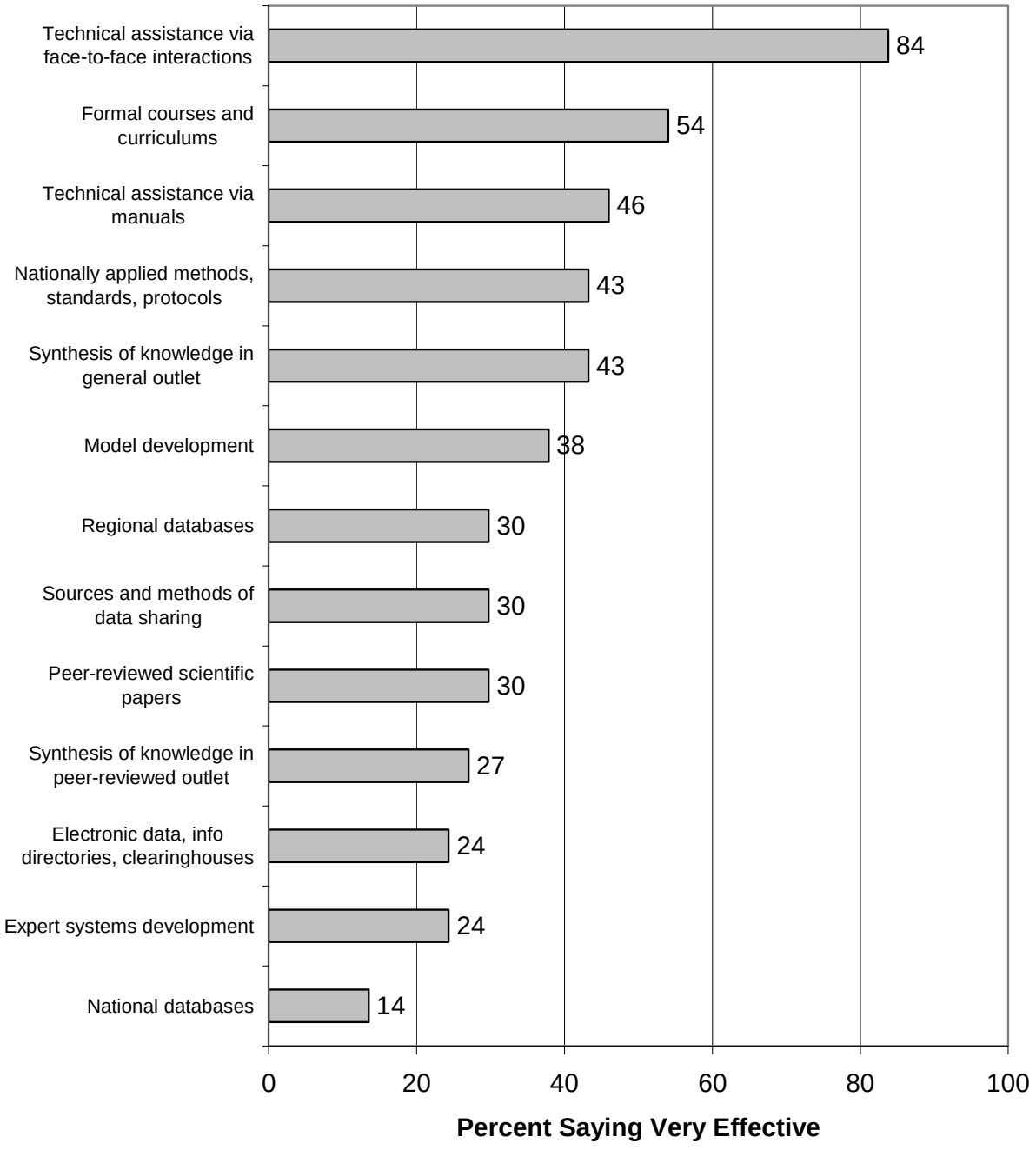
EFFECTIVENESS OF VARIOUS MODES OF TRANSMITTING INFORMATION ABOUT COASTAL RESOURCE ISSUES

- Technical assistance via face-to-face interactions is the most popular source of information of all groups. Other important source are technical assistance via manuals, synthesis of knowledge in a general outlet, formal courses and curriculums, synthesis of knowledge in a peer-reviewed outlet, and peer-reviewed scientific papers.
  - For business organization representatives, technical assistance via face-to-face interactions (56%), technical assistance via manuals (42%), and synthesis of knowledge in a general outlet (33%) are the top sources.
  - For K-12 educators, technical assistance via face-to-face interactions (84%), formal courses and curriculums (54%), and technical assistance via manuals (46%) are the top sources.
  - For local government officials, technical assistance via face-to-face interactions (60%), technical assistance via manuals (44%), and formal courses and curriculums (38%) are the top sources.
  - For state employees and professional association members, technical assistance via face-to-face interactions (81%), synthesis of knowledge in a peer-reviewed outlet (63%), peer-reviewed scientific papers (63%), and technical assistance via manuals (59%) are the top sources.
  - For volunteer organization members, technical assistance via face-to-face interactions (64%), technical assistance via manuals (53%), and synthesis of knowledge in a general outlet (47%) are the top sources.

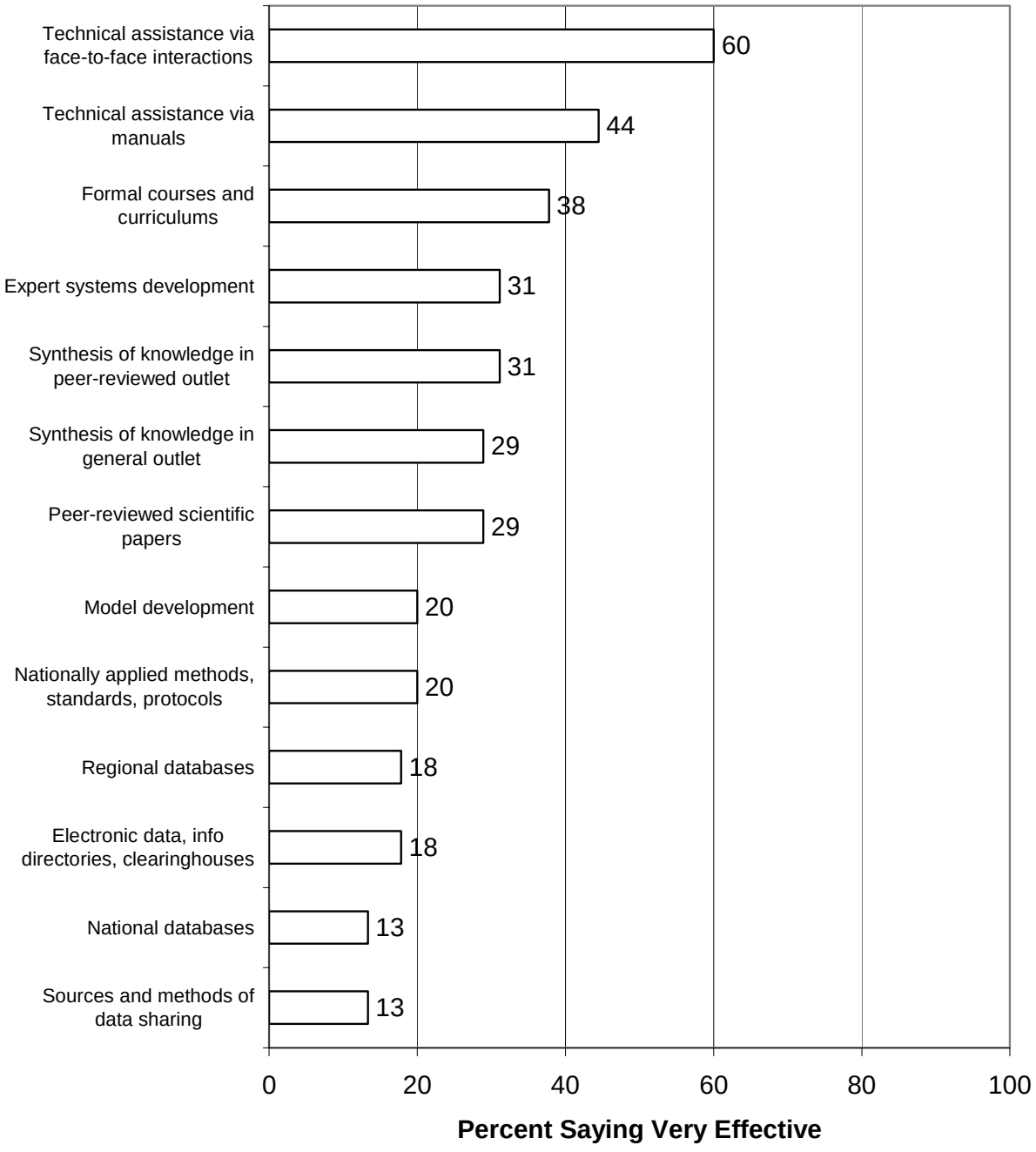
Q189-201. Most Effective Ways for Business Organization Representatives to Receive Information About Coastal Resource Issues.



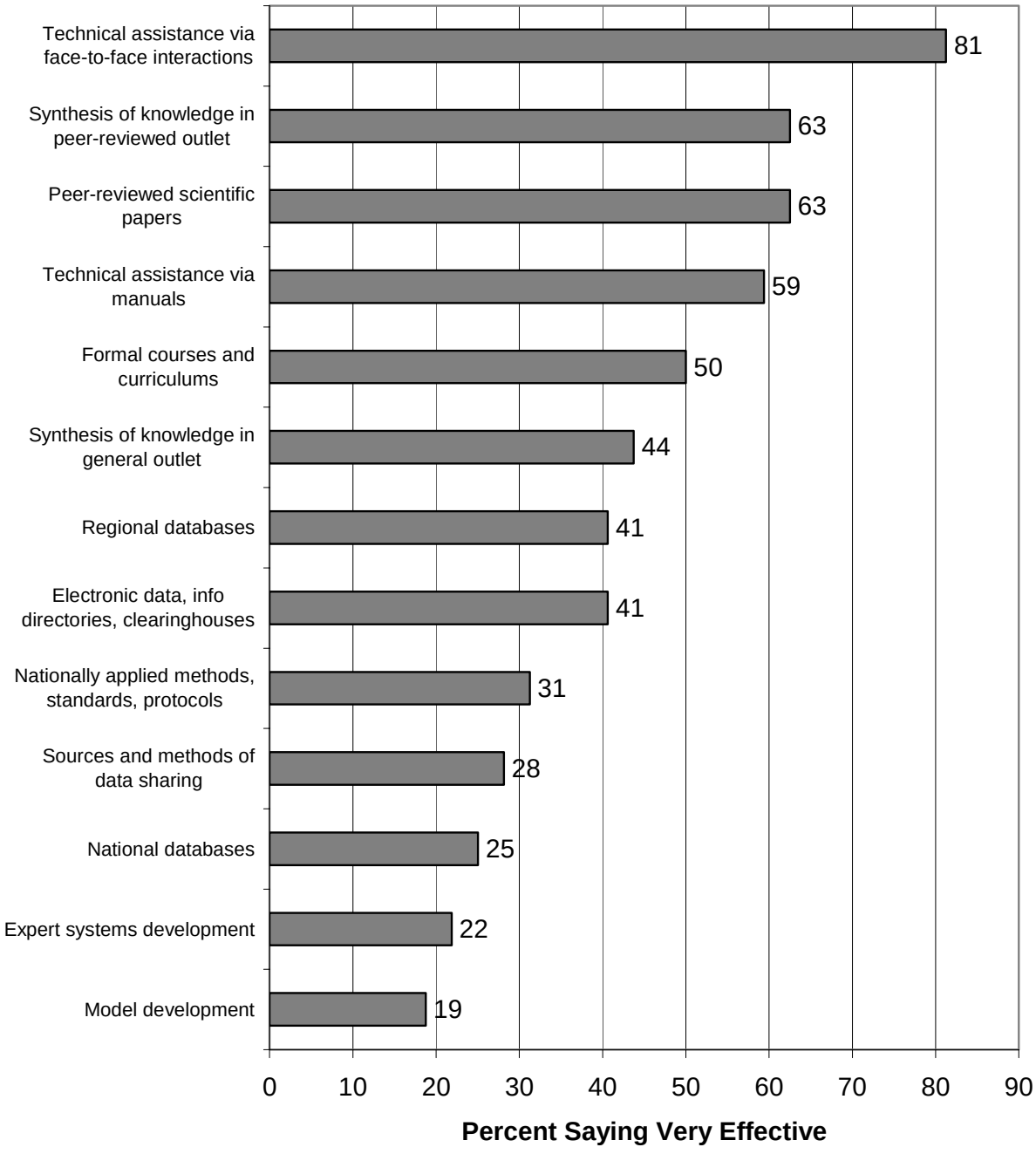
Q189-201. Most Effective Ways for K-12 Educators to Receive Information About Coastal Resource Issues.



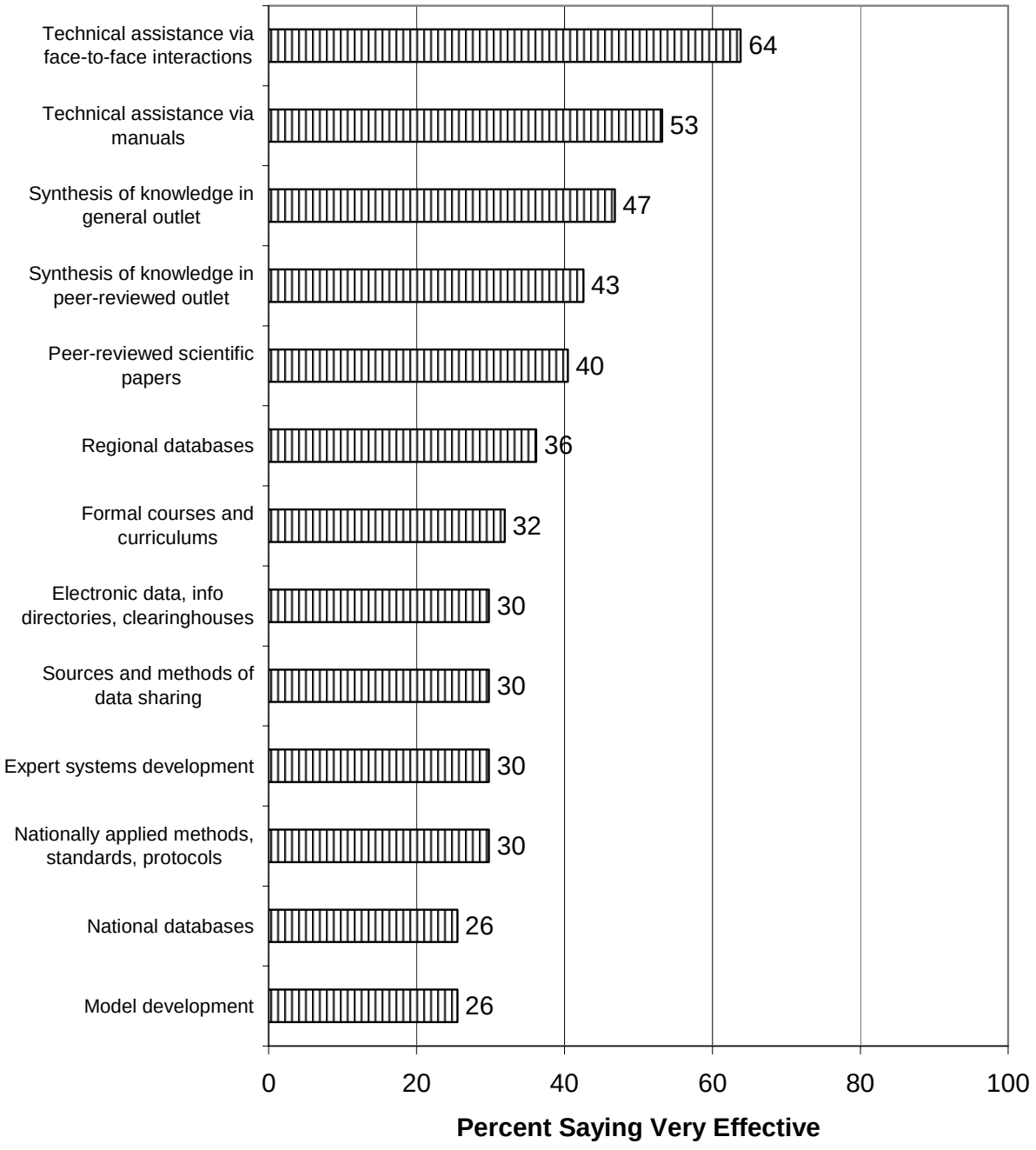
Q189-201. Most Effective Ways for Local Government Officials to Receive Information About Coastal Resource Issues.



Q189-201. Most Effective Ways for State Employees and Professional Association Members to Receive Information About Coastal Resource Issues.



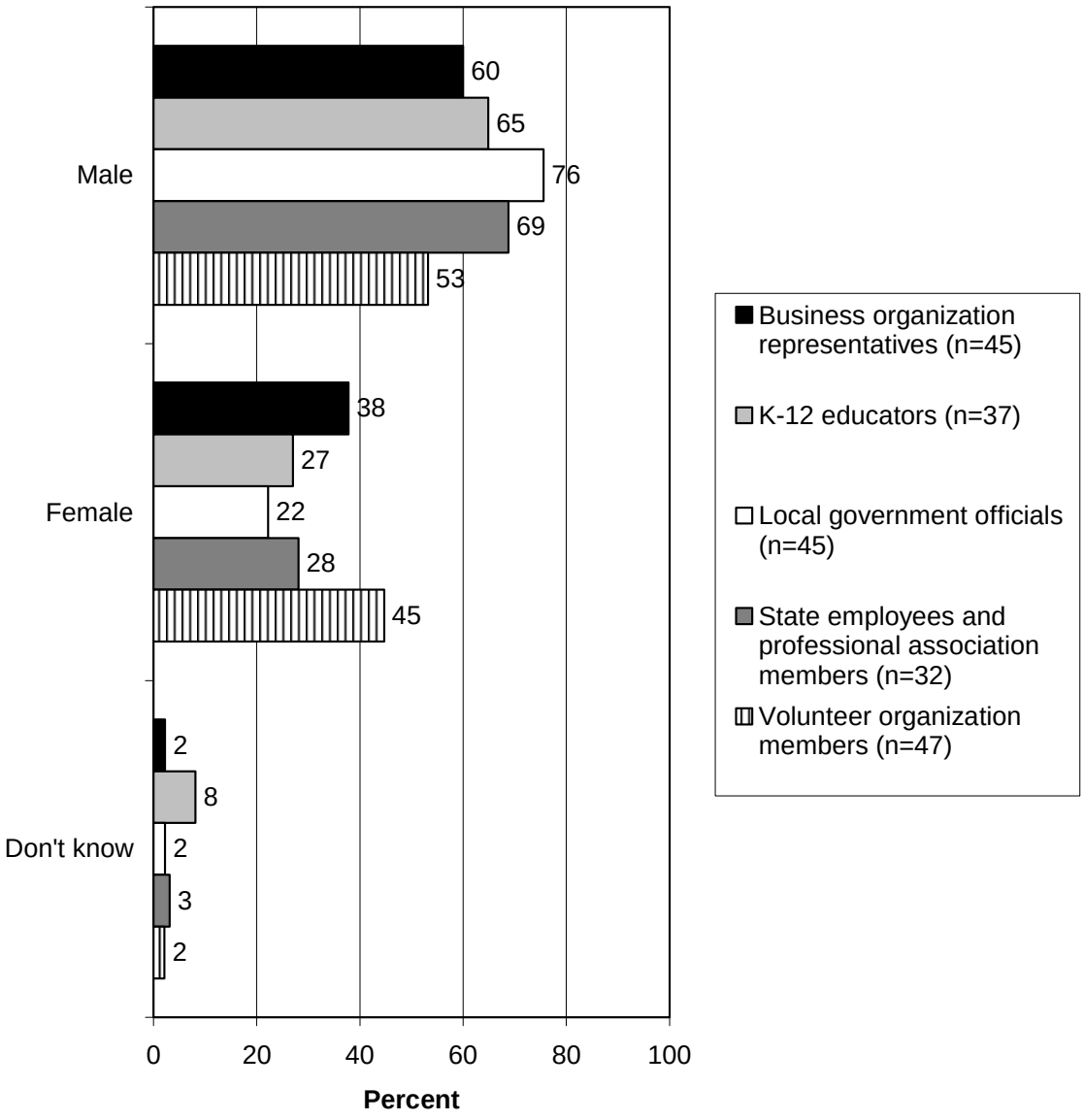
Q189-201. Most Effective Ways for Volunteer Organization Members to Receive Information About Coastal Resource Issues.



GENDER OF RESPONDENTS TO NEEDS ASSESSMENT

- Most respondents to the needs assessment survey were male, with local government officials being the group that had the highest percentage of males.

Q245. Respondent's gender (not asked, but observed by interviewer).



MARKET INVENTORY

SUMMARY OF FINDINGS OF MARKET INVENTORY

This study entailed a market inventory of coastal resource professional development providers in New Jersey conducted by Responsive Management for the Jacques Cousteau National Estuarine Research Reserve. Various agencies/organizations were identified as potential providers and were surveyed for the purpose of creating a statewide inventory of current coastal training programs, to identify gaps and overlaps in training services, and to identify potential partnerships for Coastal Training efforts in New Jersey. A summary of findings for this market inventory is presented below.

COASTAL RESOURCES OUTREACH/EDUCATION PROGRAMS PROVIDED/OFFERED

Programs Provided/Offered

- The most often provided formats/types of coastal training are educational materials (52% said their agency/organization provided these), science-based information (50%), outreach, such as Web pages, newsletters, etc. (48%), and classes, tours, or field trips (46%).

- The top topics/skills that the respondents' divisions offer relating to *habitat issues* are habitat protection and restoration (71% said their agency/organization offers training about this topic/skill), wetlands and waterways protection (66%), biodiversity (57%), and native plants (54%). These are the only habitat issues for which a majority said their agency/organization offers training.

- The top topics/skills that the respondents' divisions offer relating to *coastal issues* are coastal erosion and accretion (46%), dredging and filling (40%), and coastal processes/geology (40%). No coastal issue had a majority of respondents saying that their agency/organization offers training about it.

- The top topics/skills that the respondents' divisions offer relating to *water quality issues* are water quality (74%), nonpoint source pollution (74%), point source pollution (63%), and

water quantity (54%). These are the only water quality issues for which a majority said their agency/organization offers training.

- The top topics/skills that the respondents' divisions offer relating to *education, planning, and regulation issues* are environmental education for K-12 students (69%), environmental education for adults (63%), and land use planning (smart growth, watershed buildup) (54%). These are the only education, planning, and regulation issues for which a majority said their agency/organization offers training.

Formats and Delivery Methods of Coastal Training Provided

- The types of coastal resource education/outreach formats that were most often provided were informal education/outreach (60% of the divisions provided this type), special events excluding conferences (37%), and in-service education/outreach for educators (31%).

- By far, field-based courses were the most-provided type of coastal training.

- The most popular types of informal education/outreach were publications, such as brochures and newsletters (63%), Websites (54%), field trips (49%), and interpretive signs (31%).

- The most popular delivery methods for coastal resource education/outreach are presentations (66%), field trips and courses (57%), and lectures (46%).

- The most popular information dissemination methods that agencies/organizations use are technical assistance via face-to-face interactions (37%), technical assistance via manuals/materials for non-specialist (31%), synthesis of knowledge in the form of general, less technical outlets (29%), and partnerships (29%).

Characteristics of Outreach/Education Sessions

- The most common length of the typical coastal resources education/outreach session is one hour to a half-day, followed by a half-day to day-long session.

- Most often, respondents' organizations generally hold their coastal resources education/outreach sessions local to the organization providing the session (49%), followed closely by those that hold their sessions local to the participants (46%). Finally, 26% hold the sessions central to the providers and attendees.

Individuals and Organizations that Use Coastal Resources Outreach/Education Programs

- Of local government managers and other officials, city/town council members (34%), planning commission members (23%), and city/town engineers (23%) were the types of positions most in attendance at the coastal resources education/outreach programs offered by the respondent's organization.

- Of volunteer organization members, members of chapters of environmental organizations (34%), members of watershed associations (34%), and members of conservation commissions (26%) were the types of positions most in attendance at the coastal resources education/outreach programs offered by the respondent's organization.

- Of business organizations, environmental consultants (31%), members of chambers of commerce (17%), and members of tourist boards (17%) were the types of positions most in attendance at the coastal resources education/outreach programs offered by the respondent's organization.

- Of state agency employees, professional association members, and educators, K-12 educators (77%), the general population (51%), environmental educators (46%), and environmental protection agency employees (40%) were the types of positions most in attendance at the coastal resources education/outreach programs offered by the respondent's organization.

EVALUATION AND RATINGS OF COASTAL RESOURCES OUTREACH/EDUCATION PROGRAMS PROVIDED

- A majority of respondents (86%) said that the coastal resources education/outreach that their division conducts matches exactly or matches somewhat the objectives of the National Estuarine Research Reserve System Coastal Training Program.
  - 23% said it matches exactly.
  - 63% said it matches somewhat.

- A strong majority of respondents (97%) said that coastal resources education/outreach is very or somewhat important compared to other programs in their division.
  - 51% said it was very important.
  - 46% said it was somewhat important.

- A majority of respondents (57%) said that their division does *not* have an evaluation component as part of its coastal resources education/outreach services.
  - 29% said their division does have an evaluation component as part of its coastal resources education/outreach services.

- Most often, those divisions that have an evaluation component as part of their coastal resources education/outreach services conduct the evaluations more than twice a year (4 respondents out of 10 gave this answer).

PROVIDERS' PERCEPTION OF COASTAL TRAINING NEEDS

- Respondents' perceptions of needs for coastal resources education/outreach regarding *habitat issues* were highest for the following topics: habitat protection and restoration (89% said there was a high need for training about this topic), wetlands and waterways protection (80%), biodiversity (74%), and urban sprawl (74%).

- Respondents' perceptions of needs for coastal resources education/outreach regarding *coastal issues* were highest for the following topics: coastal community development (86%), coastal construction (86%), and coastal erosion (77%).

- Respondents' perceptions of needs for coastal resources education/outreach regarding *water quality issues* were highest for the following topics: water quality (77%), water quantity (74%), and nonpoint source pollution (74%).

- Respondents' perceptions of needs for coastal resources education/outreach regarding *education, planning, and regulation issues* were highest for the following topics: land use planning (smart growth, watershed buildup) (74%), environmental education for K-12 students (74%), professional development for K-12 educators (71%), and environmental education for adults (69%).

- Respondents' perceptions of needs for coastal resources education/outreach regarding *resource management and other issues* were highest for the following topics: endangered species (69%), invasive species (66%), estuarine ecology (63%), ecological landscaping (60%), and erosion control (60%).

- Respondents' perceptions of needs for coastal resources education/outreach regarding *ocean sciences topics* was highest for ocean surface properties (9%).

- Coastal resources education/outreach providers perceived that the highest needs for coastal resources education/outreach were among planning commission members, city/town planners, city/town engineers, property owner associations, and building/development associations (all with 75% saying there was a high need for training among these groups).

- A majority of respondents (53%) disagreed that there is enough coastal resources education/outreach in New Jersey.
  - 2% strongly agreed and 13% moderately agreed.
  - 15% strongly disagreed and 38% moderately disagreed.

- More respondents disagreed than agreed that there are enough coastal resources education/outreach providers that offer education/outreach for coastal decision-makers in New Jersey.

INTRODUCTION AND METHODOLOGY FOR MARKET INVENTORY

This chapter summarizes the findings of a market analysis of coastal training programs in New Jersey conducted by Responsive Management on behalf of the Jacques Cousteau National Estuarine Research Reserve. The goal of this study was to inventory the current availability of coastal training programs in New Jersey to assist the Coastal Training Program (CTP) in its goal to provide comprehensive, science-based training to coastal decision-makers. The research objectives of this study were to create a statewide inventory of current training programs, to identify gaps and overlaps in available training services, and to identify potential partnerships for CTP efforts in New Jersey.

The data gathered from this study will assist the CTP in its efforts to "provide the best available science-based information, tools and techniques to those individuals and groups that are making important decisions regarding resources within coastal watersheds, estuaries and nearshore waters; increase networking and collaboration across sectors and disciplines related to coastal management issues in local and biogeographic areas; and increase understanding of the environmental, social and economic consequences of human activity within the coastal landscape."

The study entailed a survey via telephone, e-mail, and mail of coastal decision-makers in New Jersey. The survey instruments are included with this report. For the purpose of this market analysis, coastal decision-maker was defined as "a person who, in a professional or volunteer capacity, makes decisions affecting the health of coastal resources."

Using information gathered from independent research conducted by Responsive Management, an inventory of coastal training providers was developed. An extensive Internet search was performed to identify potential coastal training providers, as well as to determine background information about the providers before each organization was contacted. A total of 140 individual New Jersey-based coastal training providers were identified and contacted. It is important to keep in mind that several of the 140 identified providers are in fact subcomponents of a larger organization. For example, the Adopt a Beach program is part of the New Jersey Department of Environmental Protection. However, for the purposes of this study, each

subcomponent was treated as a discrete entity. In addition, if one individual could answer the survey on behalf of the entire organization (including the subcomponents), that individual was allowed to do so.

All of the organizations were initially contacted to identify the individual(s) who were most knowledgeable about the organization's coastal training services, to establish credibility of the study, and to alert respondents (once identified) that they would be receiving a survey questionnaire. This initial contact was also used to discover other organizations that were not yet identified as potential coastal training providers. A high degree of care was taken in tracking whether individuals were answering for their entire organization or a specific division within their respective organization to avoid the potential problem of double-counting coastal training programs.

Although the individuals were provided the choice of taking the survey by telephone, e-mail, or in hard copy format, only one respondent requested to take the survey by telephone. The survey instrument was either e-mailed or mailed to the respondent, and respondent was asked to either e-mail, mail, or fax the completed survey to the Responsive Management office within a 2-week time window. Follow-up e-mails and telephone calls were conducted for non-respondents once the initial deadline had passed.

Certain limitations were imposed by the scope and focus of this study. Every attempt was made to research and collect information on potential coastal training providers in New Jersey. However, although this project was designed to create a "landscape" of the organizations offering coastal training services in New Jersey, it is possible that other organizations that were not identified provide some type of coastal training. Also, it may be that a higher number of coastal training programs exist in the State of New Jersey than is reported in this study because all providers did not respond to the survey.

In addition, although every attempt was made to clarify the definition of "coastal," it is possible that some organizations (that said they do not conduct coastal training) used a very narrow definition of the word and may, in fact, conduct coastal training according to the definition used

by the Jacques Cousteau National Estuarine Research Reserve. The definition for coastal training can be perceived in many ways. It is possible that this definition "selected for" organizations with formal training programs and did not fully account for organizations that predominantly offer informal training or training that is not conducted on a regular basis, even though one of the survey questions addressed this issue.

When initially contacted, numerous organizations had to be convinced that the survey was "relevant to them" because they were thinking of "coastal" in the literal sense (e.g., beach erosion or coastal construction as opposed to water quality or habitat protection). Also, there appeared to be a relatively limited knowledge base of coastal training outside of one's own organization, especially familiarity with other coastal training services provided in New Jersey. This resulted in a low response rate for several questions, especially those questions that asked respondents to rate the need for more or less training in certain topic areas, as well as questions that asked respondents to rate the audiences that potentially need more or less training.

NAME, TYPE, AND STRUCTURE OF ORGANIZATION

- The first graph shows the types of agencies and organizations with which the respondents were affiliated. The second graph shows the agencies and organizations categorized by those that provide training and those that do not. As seen in the second graph, the majority of coastal training providers are either not-for-profit organizations (31%) or state agencies (29%).

- The agencies and organizations were fairly evenly divided between the resource management community and the education community. Indeed, nearly half (46%) of the agencies/organizations were classified as being part of both communities.

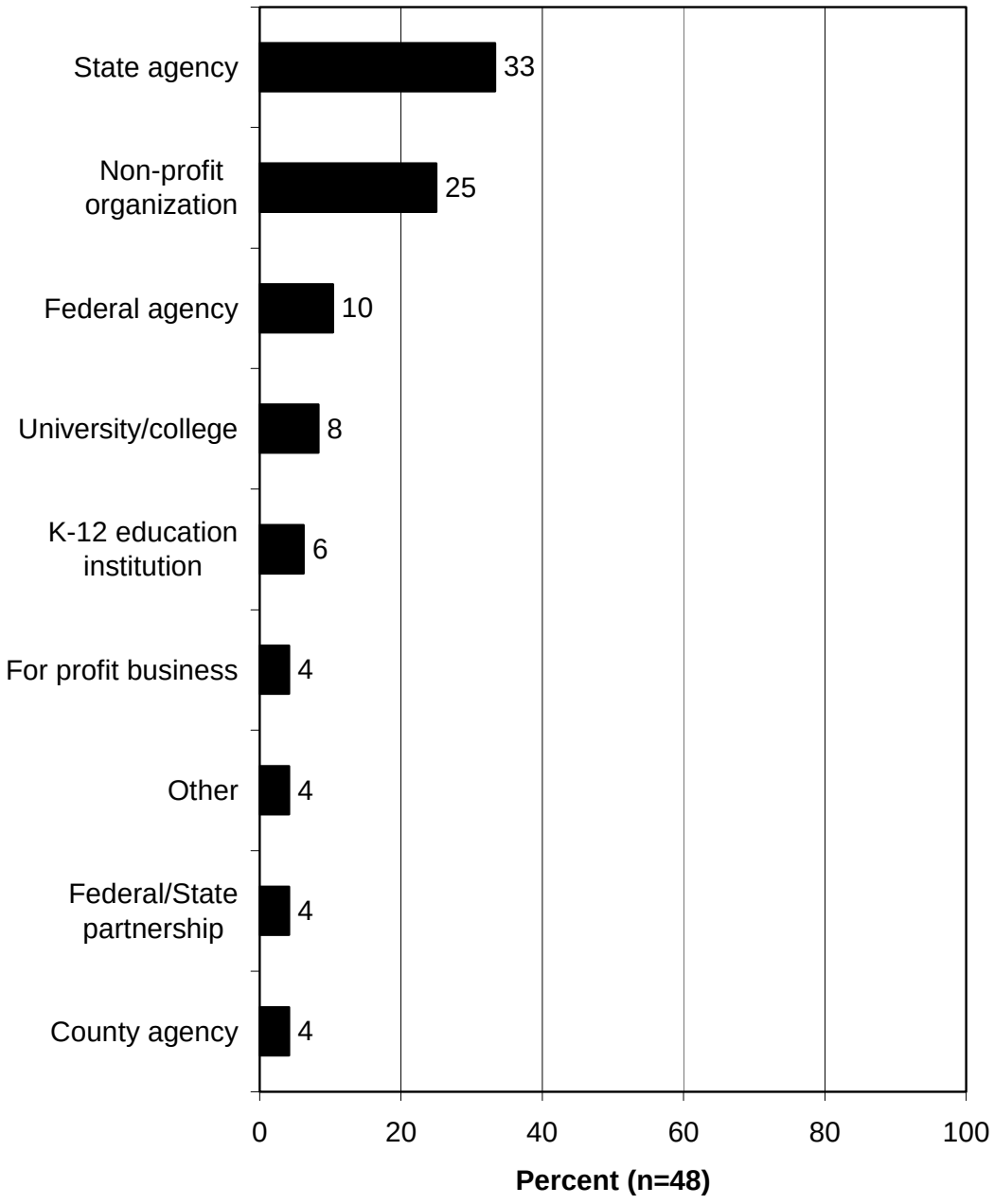
- The mean staff size of the agencies and organizations was 23.9. Of those agencies and organizations that provided training, the mean number of full-time staff positions dedicated specifically for coastal resources education/outreach was 1.3. Of those agencies and organizations that provided training, the mean number of other full-time staff positions that are involved in, but not specifically dedicated to coastal resources education/outreach was 2.1.

- The coastal training providers were asked to describe the percentage of their total coastal training that was administered by organization staff, consultants, academics, volunteers, or others. Means were calculated to describe the manner in which the agencies and organizations administered their training. Overall, agencies and organizations administered, on average, 63% of their coastal training by organization staff, 9.4% by volunteers, 9.2% by academics, 5.5% by consultants, and less than 1% by "others" (students and project partners.)

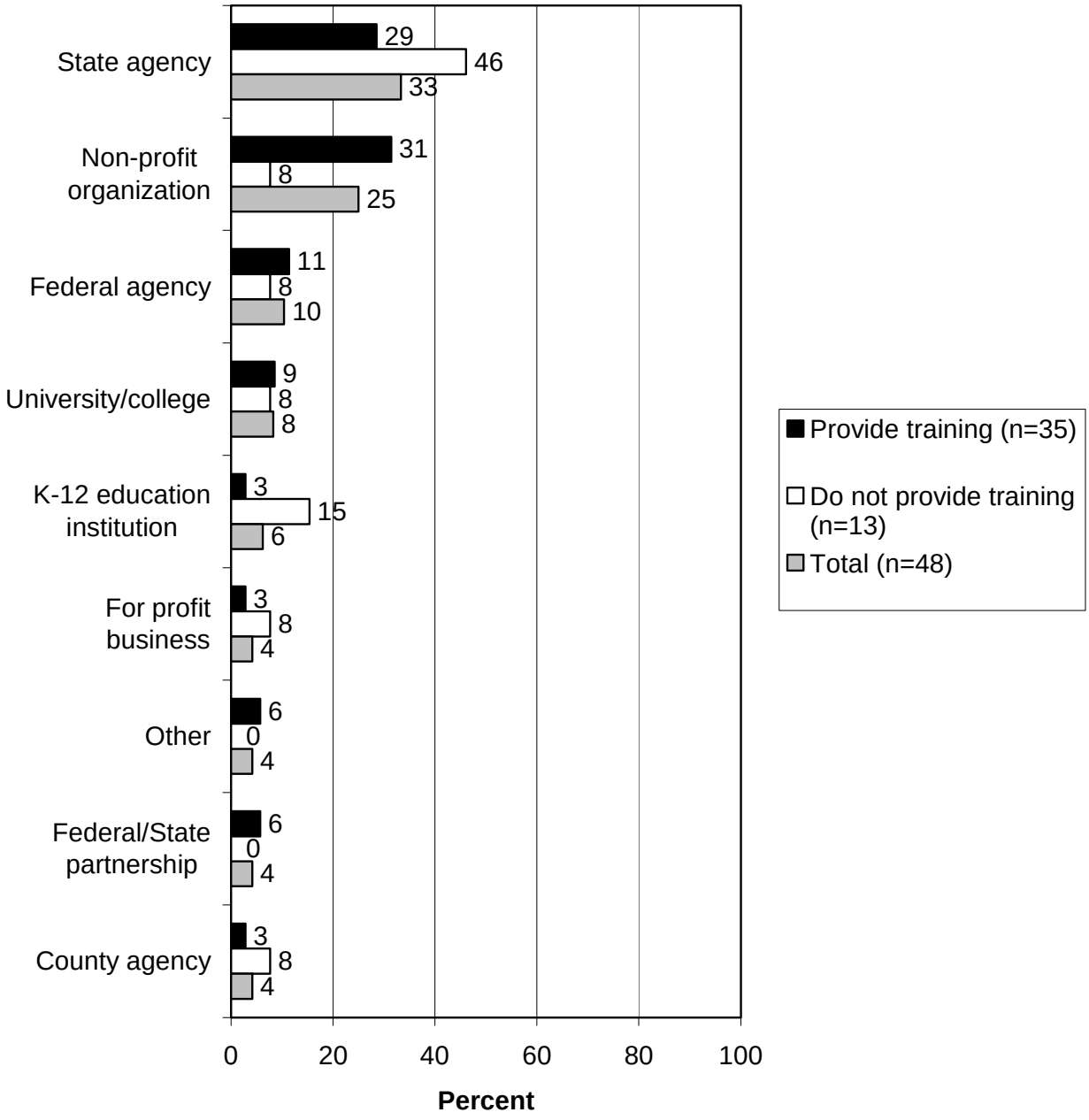
- Coastal training providers were asked about the distribution of sources of funding for their agency or organization's coastal training services. The operational budget accounts for the highest source of funds for coastal training (35.9%).

- All the agencies and organizations discussed in the survey are shown in the tabulation that follows the graphs in this subchapter, along with their mission statements.

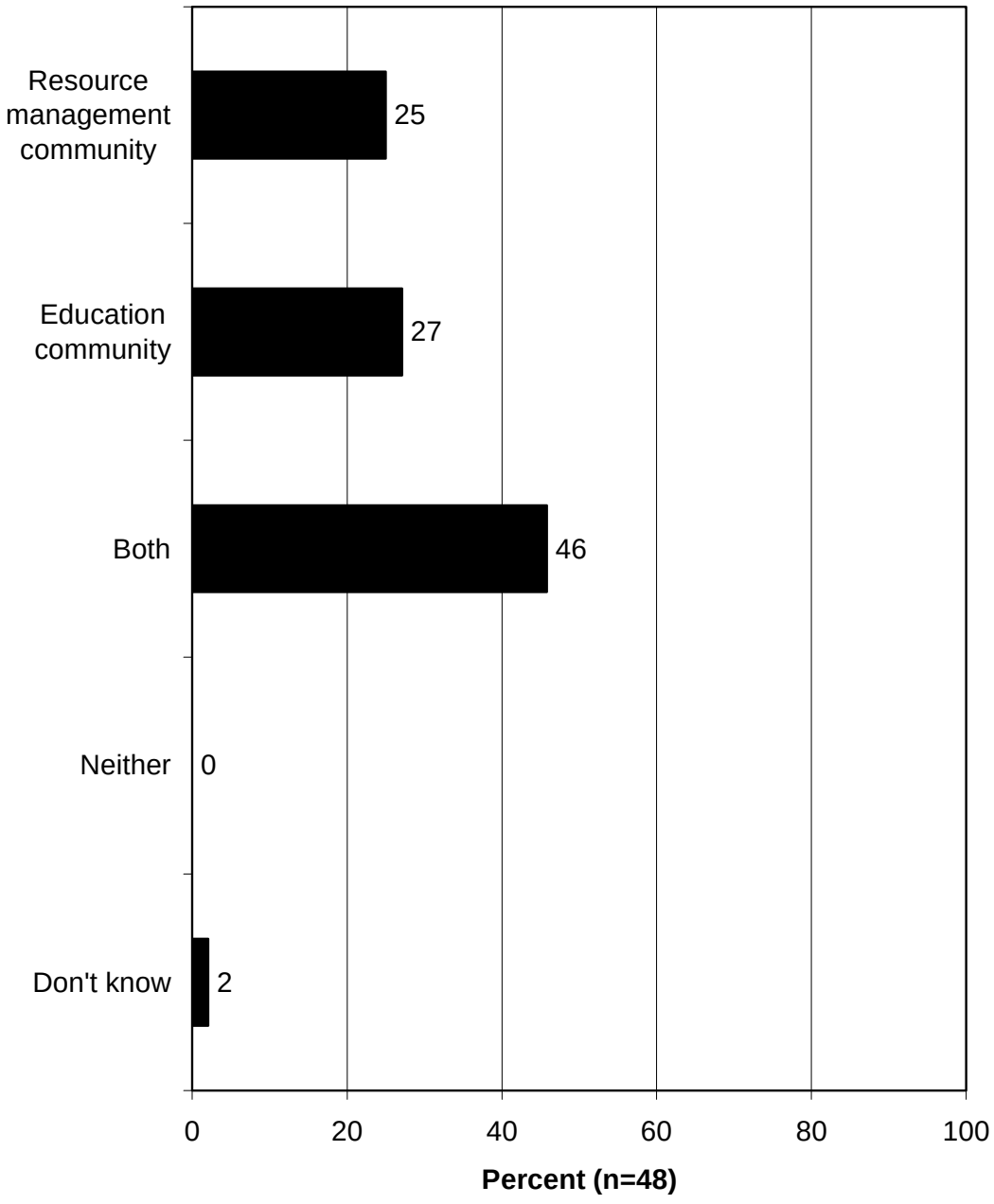
Q4. Which of the following best describes your agency/organization?



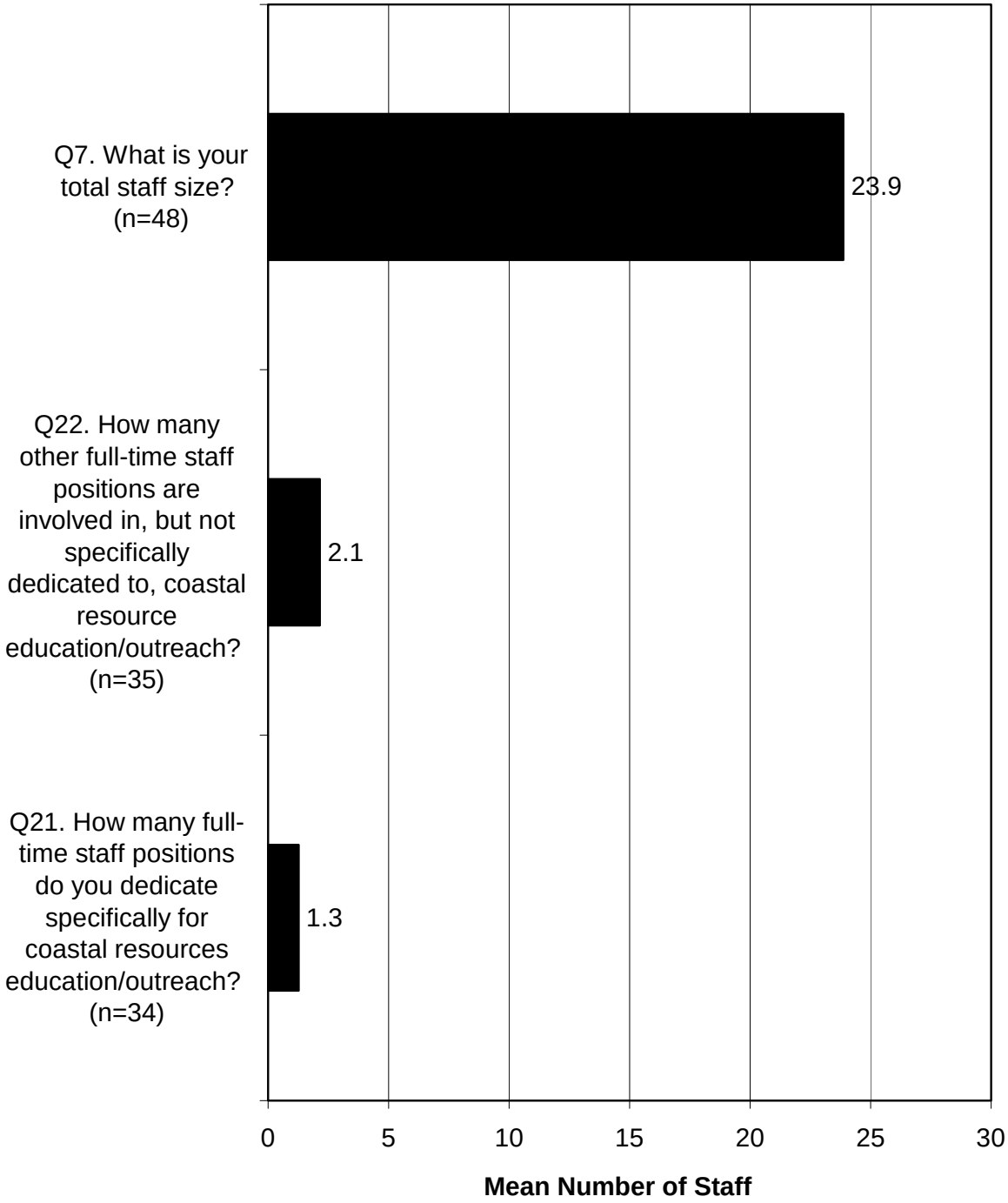
Q4. Which of the following best describes your agency/organization? (Check only one answer.)



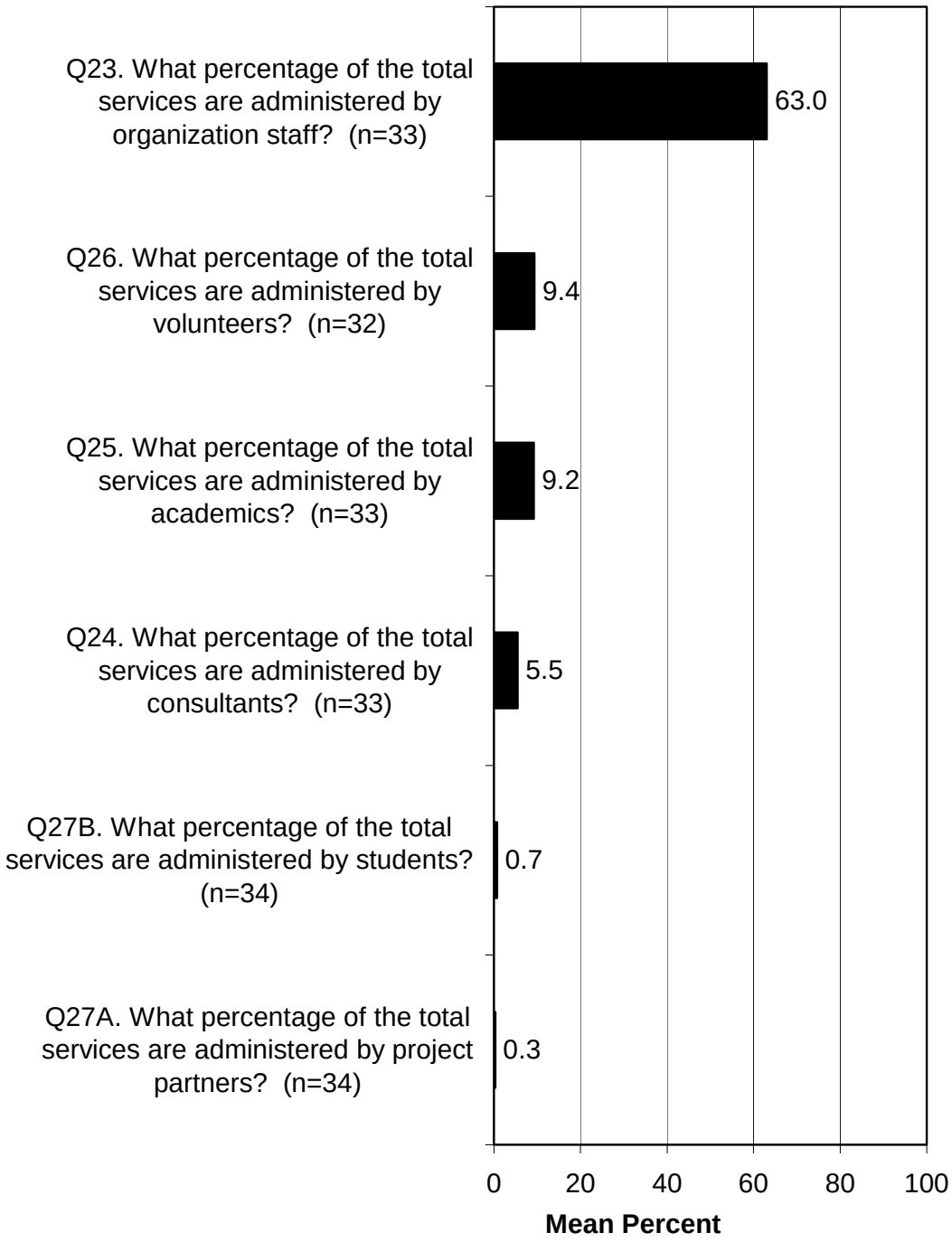
Q9. Would you classify your agency/organization as part of the management community, education community, both, neither, or do you not know?



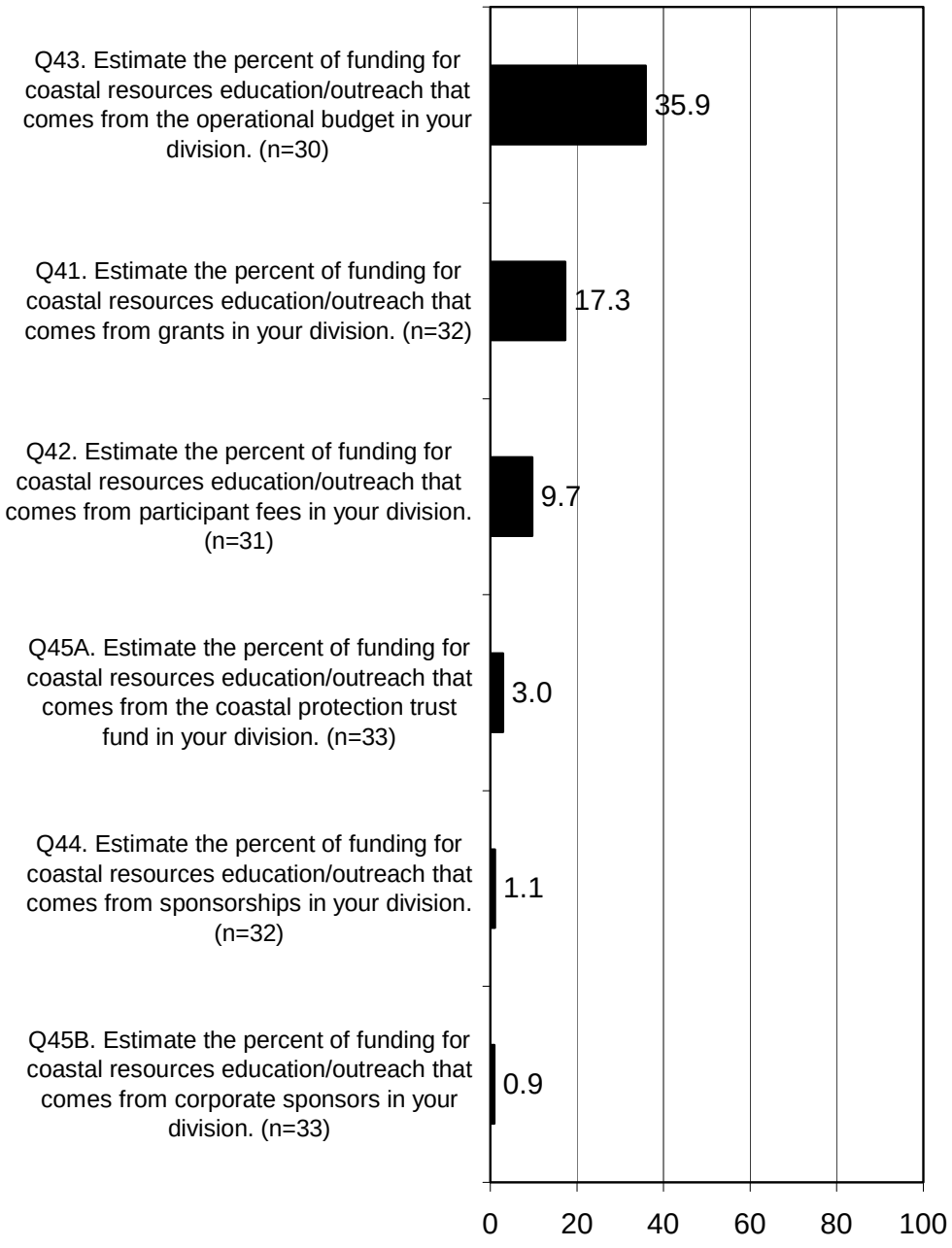
Q7. Q21, & Q22. Staffing.



Q23.-Q27. Percentages of services.



Q41.-Q45. Percentage distribution of funding sources.



Q3. What is the name of your agency/organization?	**Q8. What is your mission statement?**
American Littoral Society	To promote the conservation and understanding of the coastal environment.
Aquatic Discoveries, Inc	To educate children about marine environments in a fun, interactive, hands on way. With a strong emphasis on understanding, appreciating and protecting oceans, we hope to inspire our future generations to take an active role in respecting and conserving our valuable natural resources.
Bergen County Soil Conservation District	We provide soil information and conservation education to the public. We also implement the Soil Erosion and Sediment Control Act. Through this state law we regulate the control of soil erosion and sedimentation from construction sites.
Burlington County Soil Conservation District	Provide assistance for the purpose of soil conservation, the control and prevention of soil erosion, prevention of damage to soil and soil resources by floodwaters and uncontrolled construction and the furtherance of the conservation of water for agricultural purposes.
Camden City Board of Education's Environmental Center	Provide each student an opportunity to contribute to society by offering academic, intellectual and environmental experiences through instruction. Instruction will advance awareness, knowledge and skills to better understand the earth they live on.
Camden County Environmental Studies Center (division of the Camden County Dept. of Parks)	To make a substantial contribution to the awareness of and concern for, the need to preserve open spaces and parkland, to protect our fragile watersheds, and other environmental issues of importance to Camden County, by creating and conducting environmental education and outdoor recreation programs, and providing environmental information and referral services to diverse segments of the county population.
Camden County Soil Conservation District	To take available technical, financial and educational resources, whatever their source, and focus or coordinate them so that they meet the needs of the local land user for the conservation of soil, water and related resources.
Cape May Point State Park	Stewardship of natural and historic resources, public recreation and education.
Citizens United to Protect the Maurice River and its Tributaries	To preserve and protect the Maurice River and its tributaries, to preserve and protect natural and cultural resources from degradation for enjoyment by this and future generations. To foster an awareness of these resources.
Clean Ocean Action	To improve the degraded water quality off the New Jersey/New York coast and identify and attack the sources of pollution through research and public education; to convince public officials to enact and enforce measures to clean and protect our ocean.

Q3. What is the name of your agency/organization?	**Q8. What is your mission statement?**
Department of Environmental Science and Geography William Paterson University	In summary we are primarily a teaching institution with mostly undergraduate students. We do have a graduate program and plan to expand it somewhat. All of the faculty have active research programs. We are especially strong in aquatic (mostly freshwater) systems – environmental, ecology and geochemistry.
Essex County Educational Technology Training Center ETTC	To provide ongoing, high quality professional development that is responsive to the educational technology training and curriculum needs of educators from all grade levels (K-12) aligned with New Jersey's core curriculum content standards.
Freehold Soil Conservation District	To provide leadership and administer programs to help people conserve, improve and sustain our natural resources and environment.
Gloucester County Soil Conservation District	To provide leadership and to administer programs to help people conserve, improve, and sustain our natural resources and environment.
Great Swamp Outdoor Education Center	To provide the community with the opportunity to attain an understanding of, and delight in, the unique environment and history of the Great Swamp.
Greater Newark Conservancy	To educate, train, and support communities in creating environmentally safe neighborhoods through grassroots education and training, community organizing, preservation and improvement of open space, revitalization and beautification, job training and economic development.
Hackensack Riverkeeper, Inc.	Mission of HRI is to provide representation for the natural living resources of the Hackensack River. This representation is manifested in environmental advocacy, education and conservation programs. The focus of HRI is to protect and defend the environmental quality of the ecosystem of the estuary, river and watershed and the quality of life for the people and other creatures that inhabit the Hackensack River Watershed.
Hudson-Essex-Passaic Soil conservation District	The prevention of damage to soil & soil resources by floodwater or sediment and the furtherance of the conservation of water for agricultural purposes.
Hunterdon County Soil Conservation District	The Hunterdon County Soil Conservation District does not have an official mission statement.
Island Beach State Park	The NJ DPF is dedicated to the excellent stewardship of the state's rich and diverse historic, cultural, recreational and natural resources for the benefit of present and future generations.
Jacques Cousteau National Estuarine Research Reserve	To promote research, stewardship and education of NJ's coastal resources.
Liberty State Park Interpretive Center	To provide the public with access to the harbor's resources, a sense of its history, and the charge of responsibility for its continued improvement.

Q3. What is the name of your agency/organization?	**Q8. What is your mission statement?**
Middlesex ETTC	To provide ongoing technology staff development to meet the needs of New Jerseys Core Curriculum Content Standards.
Monmouth University	To provide students with a basic diversified background in the life sciences and prepare them for graduate work, professional school, lab work in government and industry and careers in teaching.
Morris County Soil Conservation District	The use of natural resources in such a way as to assure the needs of the present without compromising the ability of future generations to meet their own needs.
New Jersey Chapter of The Sierra Club	To explore, enjoy, and protect the wild places of the earth; To practice and promote the responsible use of the earth's ecosystems and resources; To educate and enlist humanity and restore the quality of the natural and human environments.
New Jersey Department of Education	None given.
New Jersey Marine Sciences Consortium	To foster stewardship and the wise management of the region's coastal resources.
New Jersey Pinelands Commission	To preserve, protect, and enhance the natural and cultural resources of the Pinelands National Reserve, and to encourage compatible economic and other human activities consistent with that purpose.
New Jersey Agricultural Society	To educate the non-farm public about the importance of agriculture to New Jersey's economy and quality of life.
New Jersey Department of Environmental Protection; Adopt A Beach program	Does not have one
New Jersey Division of Fish & Wildlife	None given.
New Jersey DOT Office of Maritime Resources	None given.
NY/ NJ Harbor Estuary Program (HEP)	HEP is a partnership of federal, state, and local environmental agencies, scientists, and citizens working together to protect and restore the natural resources of NY-NJ Harbor Estuary, its tributaries, and the NY Bight.
Ocean County Soil Conservation District	None given.
Rider University- Department of Geological and Marine Sciences	None given.
South Branch Watershed Association	To protect the water resources of the South Branch Rariton River and its tributaries.
Stevens Institute of Technology	To develop its graduates as leaders who possess the skills and insight needed to renew American innovation, commitment to academic excellence and education rooted in Technogenesis where students, faculty and industry work closely together.

Q3. What is the name of your agency/organization?	**Q8. What is your mission statement?**
Supawna Meadows National Wildlife Refuge	To administer the lands and waters of Supawna Meadows NWR for the conservation, management, and where appropriate, restoration of the fish, wildlife, and plant resources and their habitats for the benefit of present and future generations of Americans.
The Nature Conservancy of New Jersey Pine Barrens Program	To protect the plant, animal, and natural communities that represent the diversity of life on Earth by protecting the lands and waters they need to survive.
The Richard Stockton Coastal Research Center	To provide regional information on coastal zone changes and long-term trends, at enough sites to be statistically meaningful to State and local coastal zone managers.
United States Geological Survey New Jersey District	USGA provides reliable scientific information to describe and understand the earth, minimize loss of life and property from natural disasters; manage and watch, biological, energy and mineral resources; enhance and protect our quality of life.
US Army Corps of Engineers, Philadelphia District	We are the nation's engineers with a rich legacy predating the Declaration of Independence. We plan, design and manage a wide variety of projects for national, economic and environmental security.
USDA Natural Resources Conservation Service	The NRCS provides leadership in a partnership effort to help people conserve, maintain, and improve our natural resources and environment.
Warren Country Soil Conservation District	To enhance, protect, and conserve the vital natural resources of Warren County through federal, state, regional, county and local cooperation.
Warren County Technical School	To support continuous education improvement for students of Warren County by providing educators with professional development, experience, and technical assistance related to New Jersey Core Curriculum Standards, especially in technology.
Wetlands Institute	To promote appreciation and understanding of the vital role wetlands and coastal ecosystems play in the survival of life on this planet.

COASTAL RESOURCES OUTREACH/EDUCATION PROGRAMS PROVIDED/OFFERED

Programs Provided/Offered

- The survey results indicated that there are 95 formal coastal training programs in Delaware (although this is likely a conservative estimate, as some respondents did not list all of their programs). The first list shown on the following pages includes the names of all of the formal coastal training programs provided by the agencies and organizations that conduct coastal training.

- The most often provided formats/types of coastal training are educational materials (52% said their agency/organization provided these), science-based information (50%), outreach, such as Web pages, newsletters, etc. (48%), and classes, tours, or field trips (46%).

- The mean numbers of products related to coastal resource education/outreach that were produced by coastal training providers were: brochures (19.1), documents (1.6), Web-based materials (1.3), and training materials (0.2)

- The top topics/skills that the respondents' divisions offer relating to *habitat issues* are habitat protection and restoration (71% said their agency/organization offers training about this topic/skill), wetlands and waterways protection (66%), biodiversity (57%), and native plants (54%). These are the only habitat issues for which a majority said their agency/organization offers training.

- The top topics/skills that the respondents' divisions offer relating to *coastal issues* are coastal erosion and accretion (46%), dredging and filling (40%), and coastal processes/geology (40%). No coastal issue had a majority of respondents saying that their agency/organization offers training about it.

- The top topics/skills that the respondents' divisions offer relating to *water quality issues* are water quality (74%), nonpoint source pollution (74%), point source pollution (63%), and

water quantity (54%). These are the only water quality issues for which a majority said their agency/organization offers training.

- The top topics/skills that the respondents' divisions offer relating to *education, planning, and regulation issues* are environmental education for K-12 students (69%), environmental education for adults (63%), and land use planning (smart growth, watershed buildup) (54%). These are the only education, planning, and regulation issues for which a majority said their agency/organization offers training.

- The top topics/skills that the respondents' divisions offer relating to *resource management and other issues* are invasive species (63%), endangered species (60%), and erosion control (60%). These are the only resource management and other issues for which a majority said their agency/organization offers training.

- The top topic/skill that the respondents' divisions offer relating to *ocean sciences topics* is ocean surface optical properties (9%). These topics/skills were the least offered of all the categories of issues.

- The largest barriers to offering coastal resources education and outreach are funding (85% said this was a barrier), time (75%), and lack of personnel in general (58%).

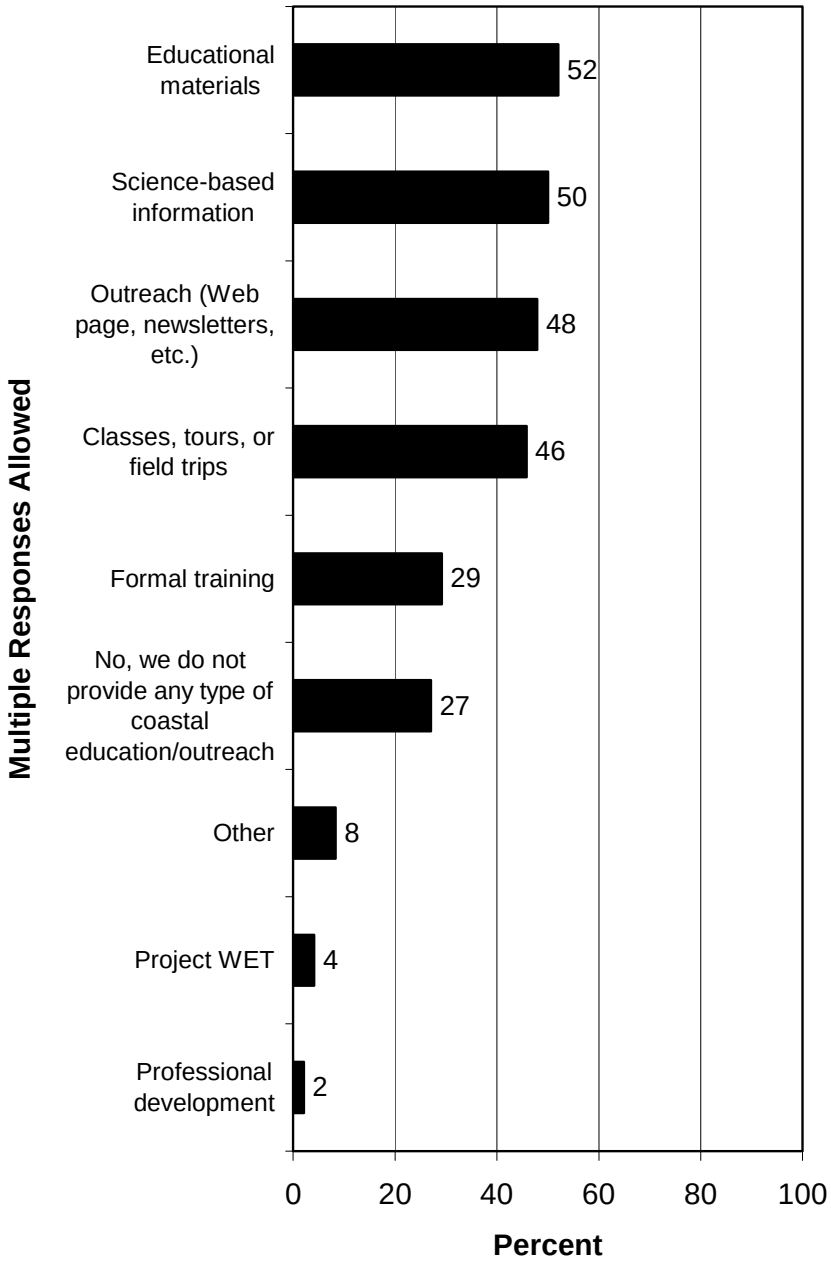
Coastal Resource Training Programs Provided by Coastal Resource Training Providers (Listed Alphabetically)

- "Bring the Ocean into Your Classroom" teacher training programs
- 10 Tips Series on Non-Point Source Pollution
- Advanced Degrees in Coastal and Ocean Engineering (Masters/Ph. D.)
- All Hands on Deck w/NJ Marine Sciences Consortium
- Annual Watershed Awareness Day (festival-type event for students, pertains to watershed awareness, water cycles, aquatic life, pollution, groundwater, drinking water etc.)
- B.S. in Liberal Studies: Marine Ecological Emphasis (for education majors)
- B.S. in Marine Science
- Barnegat Bay Estuary Program
- Barrier Island Ecology
- Beach Scavenger Hunt

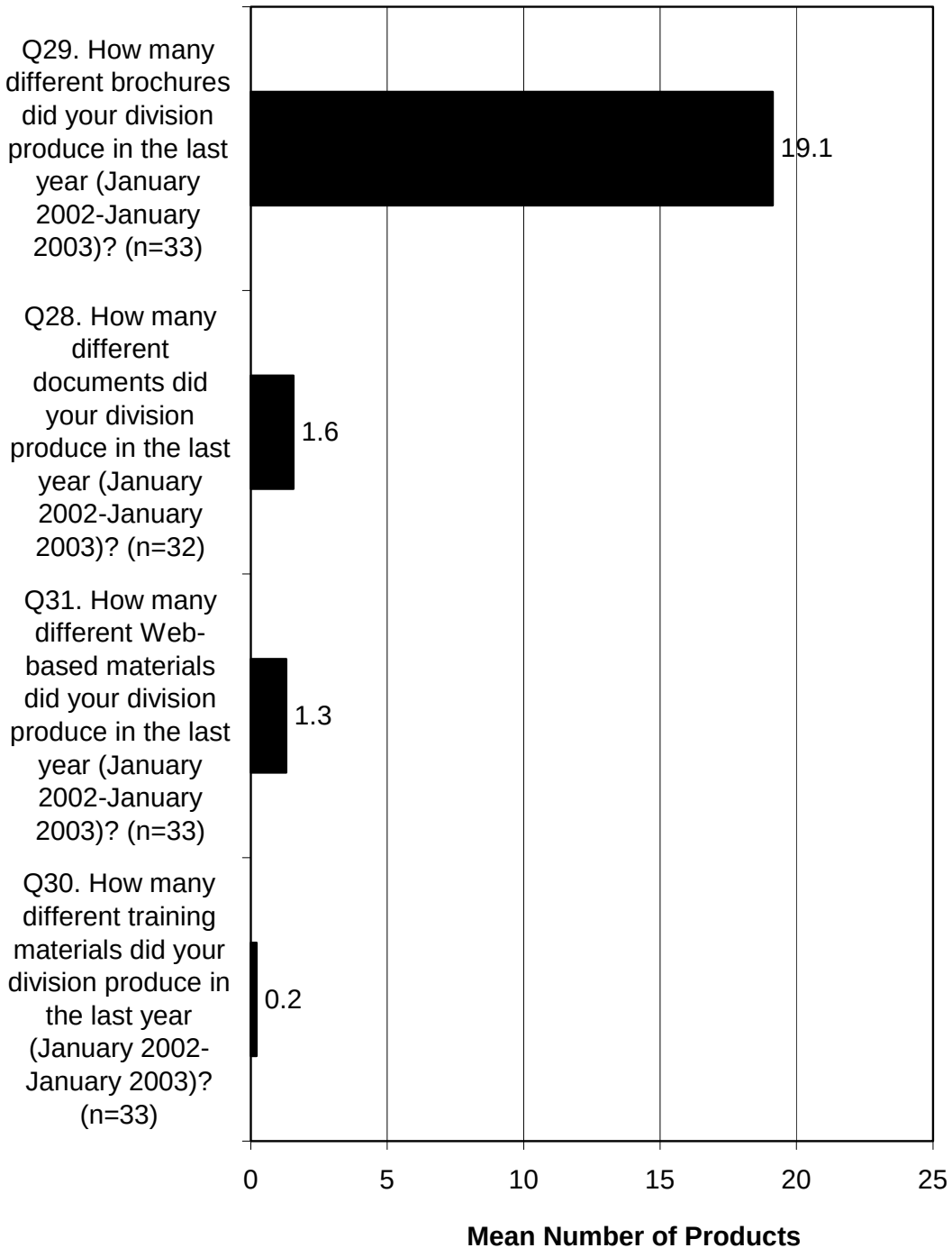
- Beach Slide Show
- Beach Sweeps
- Biological Monitoring Program
- Blue Claw Crab Consumption Advisory
- Building Blocks of Rocks
- Canoe Project
- Cape May Plant Materials Center
- Children's Educational Web page
- Classroom presentations using Enviroscape to demonstrate nonpoint source pollution
- Clean Marina Program
- Coast Day NJ
- Coastal Teachers Workshop
- Coles Brook Restoration Project
- CTP Coastal Training Program
- Delaware Bay Safari
- Did this come from a tree?
- Down Jersey Celebrating Our Sense of Place: A Teacher's Curriculum Maurice River Watershed Awareness
- Dredging 101
- Eco Walks
- Eco-Cruises
- Eco-History Detectives
- Ecosystems Analysis
- Environmental Biology
- Environmental Educators Roundtable
- Estuary Explorers
- Family Education/Field Programs
- Family Science Programs
- FISH (Families Investigate Science Hands-on) Family Education Programs
- Fish Tank Feeding Frenzy
- Geographically
- Green Egg & Sand
- Hackensack Tidelines
- High School Water Quality Monitoring
- History of Newark Bay for Teachers
- Hooked on Fishing, Not on Drugs
- Horseshoe Crab Outreach
- Hunterdon Green Table
- K-12 Professional Development for Teachers
- Kayaking-Sedge Islands
- Mini-grant
- Newsletter
- NJ Coastal Protection Technical Assistance Service (CPTAS)
- NJ Envirothon
- NJ Marine Trades Program

- NJ Sea Grant Extension in Coastal Processes (NJSG)
- NJ Soil Erosion & Sediment Control Program
- NJ Stormwater Discharge Program
- NJ Waters, Wonders of Wetlands
- NJSSI Specialty Site
- Non-Point Source Pollution Teacher Curriculum
- NY Harbor Sediment Project
- Pond studies (at park locations, aquatic organisms, effects of people on watersheds)
- Poster-brochure for the Monmouth Coastal Watershed Partnership.
- Principles of Biology
- Principles of Marine Biology
- Progressive Development Programs
- Project Aquatic Wild
- Project WET
- Public Speakers
- River Clean-ups
- Rocks and Fossils of Sunset Beach
- Save the Bay
- School Programs for K-12
- Science Education at Sea Field Trips
- Seashore Treasures (in class or library, hands on specimens with discussion)
- Sedge Island Workshops
- Soil Investigations
- Spring and Fall Beach Cleanups
- Storm Drain Stenciling Kit & Instructions
- The Coastal Experience (K-12 field trip programs)
- The Coastal Express (after-school programs for schools and informal groups, e.g., scouts, 4-H, town recreation programs)
- Third Grade Field Trip
- Touch Tank
- Tour the Beach
- Tourists programs
- Tours off site
- Urban Films video series
- Urban Scientists
- Videos (“Painting the Town Blue,” “Clean Beaches Naturally,” “Local Legacies”)
- Watershed Ambassador
- Watershed Property Management Guide
- Watershed walks and bus tours (various streams, discovering you school’s watershed address)
- Waterways Stewardship Project (for students)
- What’s my Address
- Wonderful Worms

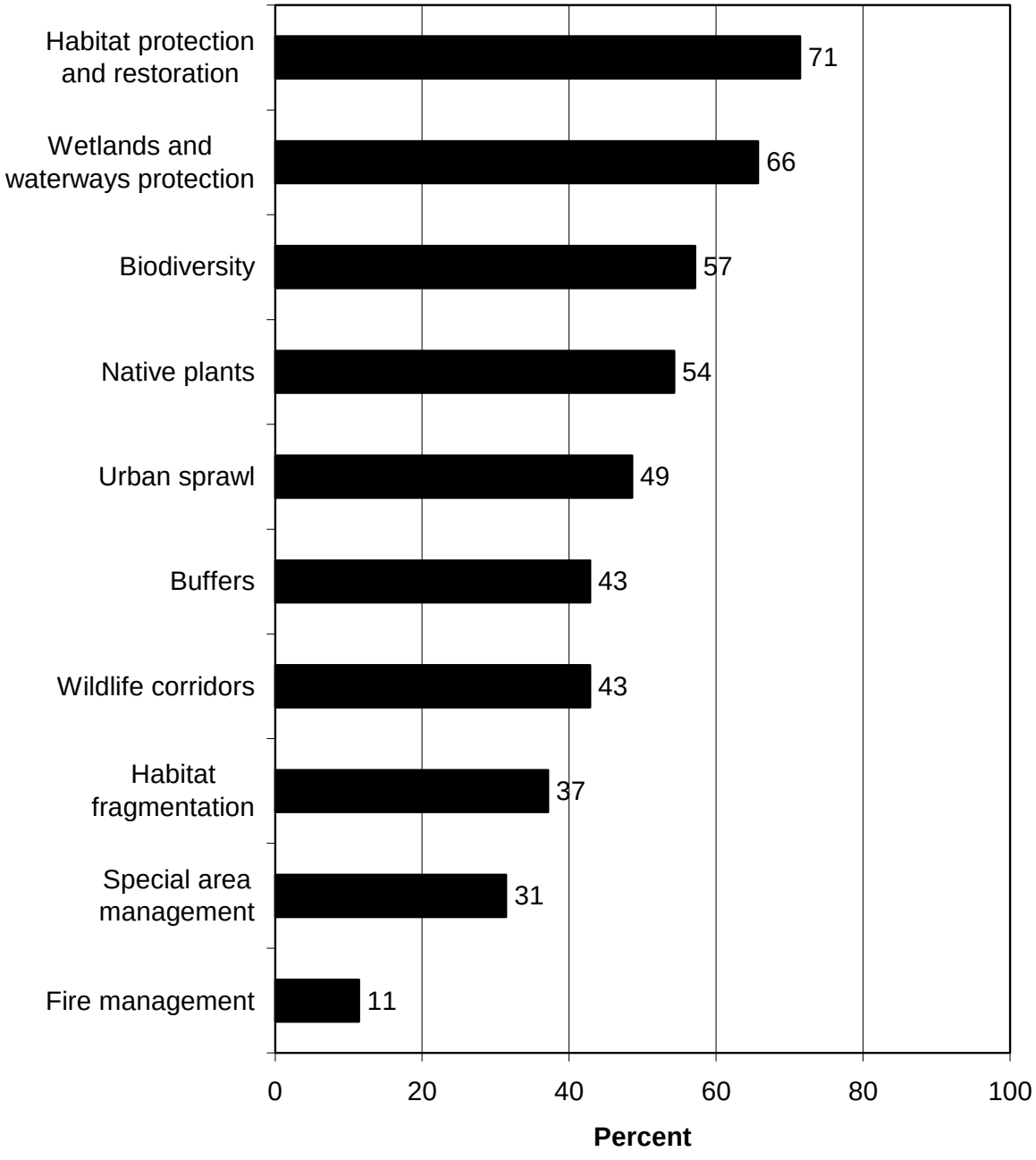
Q11. Does your division provide any of the following related to the coastal environment?



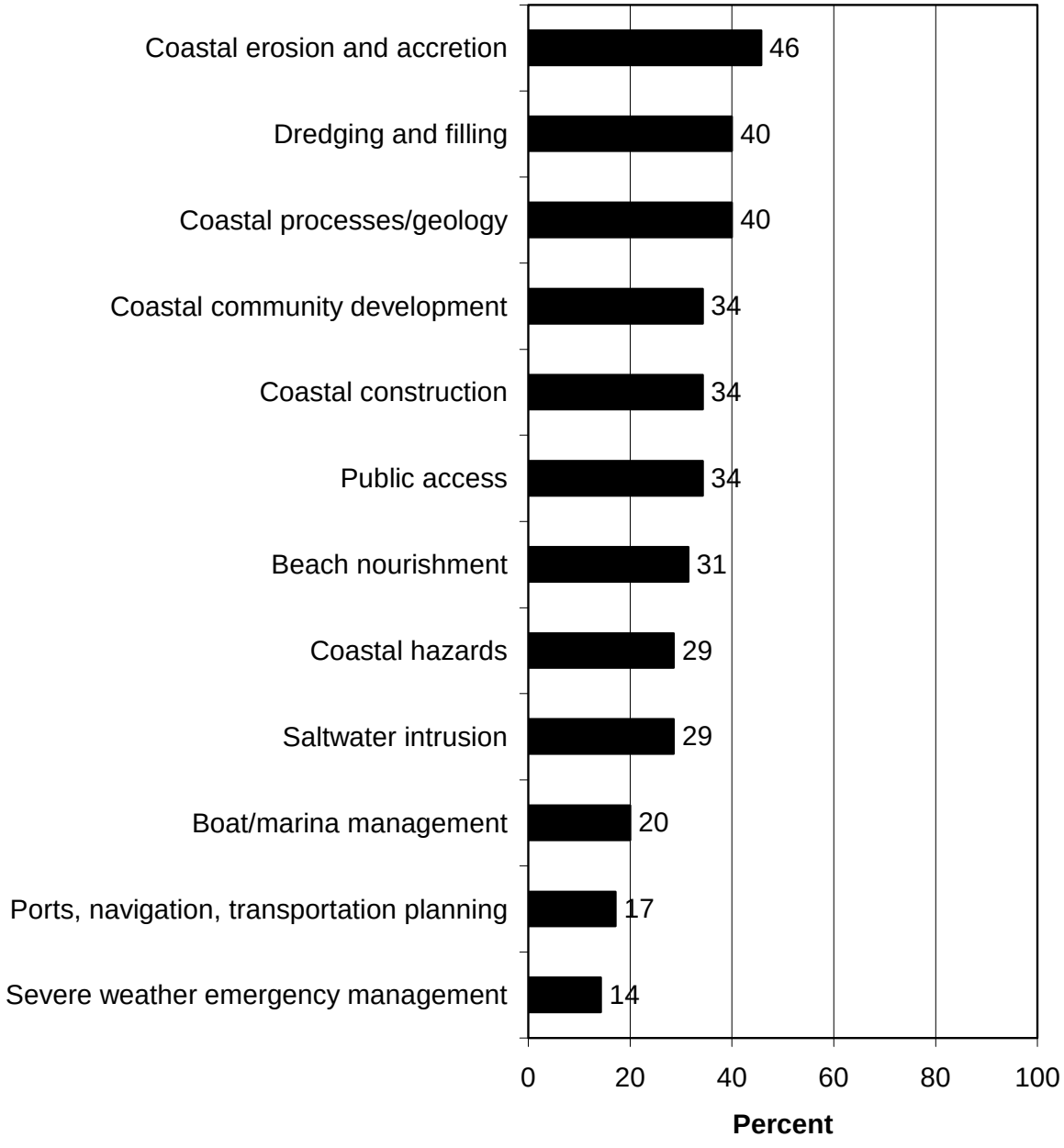
Q28.-Q32. Numbers of products produced.



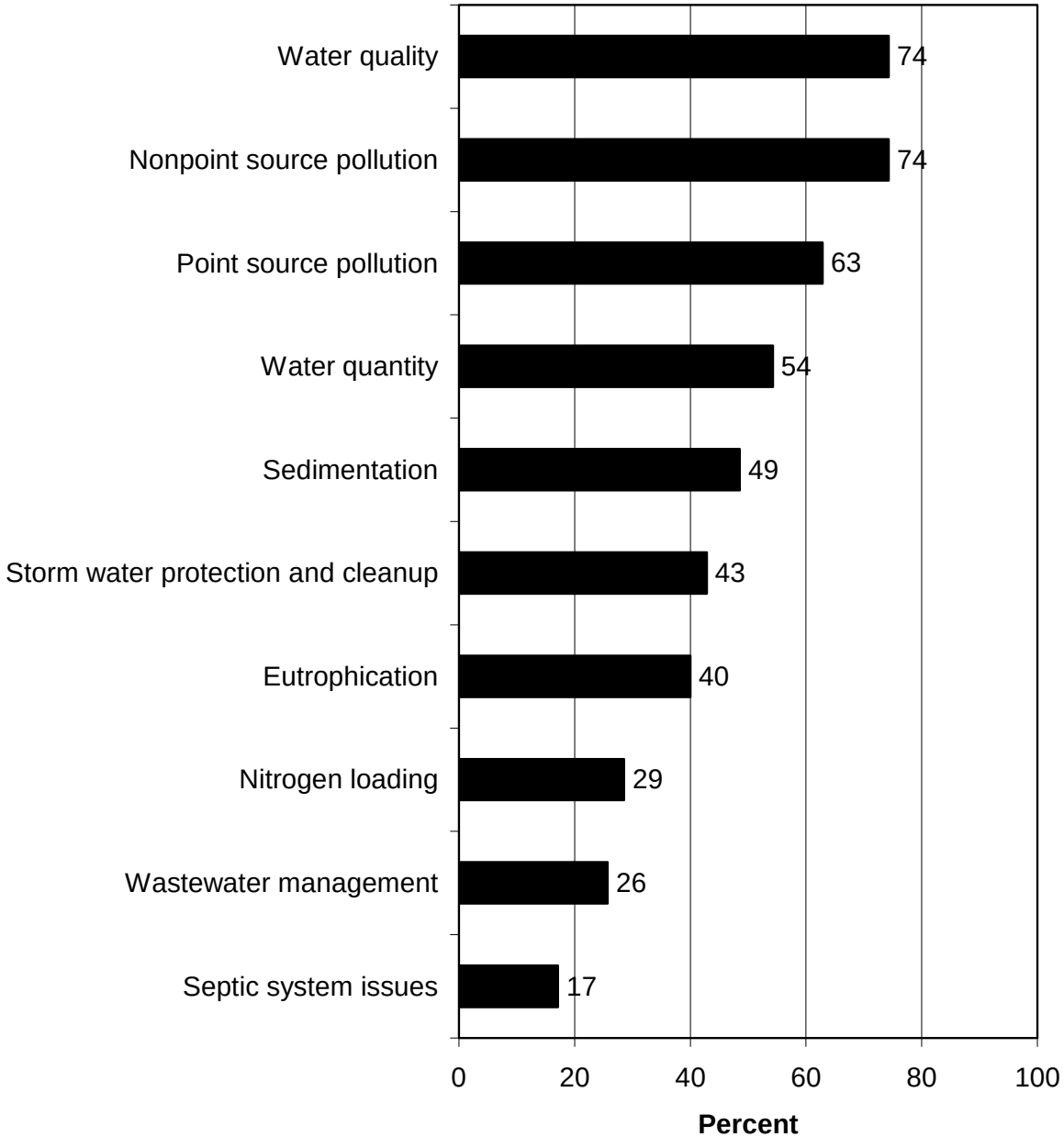
Q87-Q96. Topics/skills that your division offers in its coastal resource education/outreach efforts regarding habitat issues.



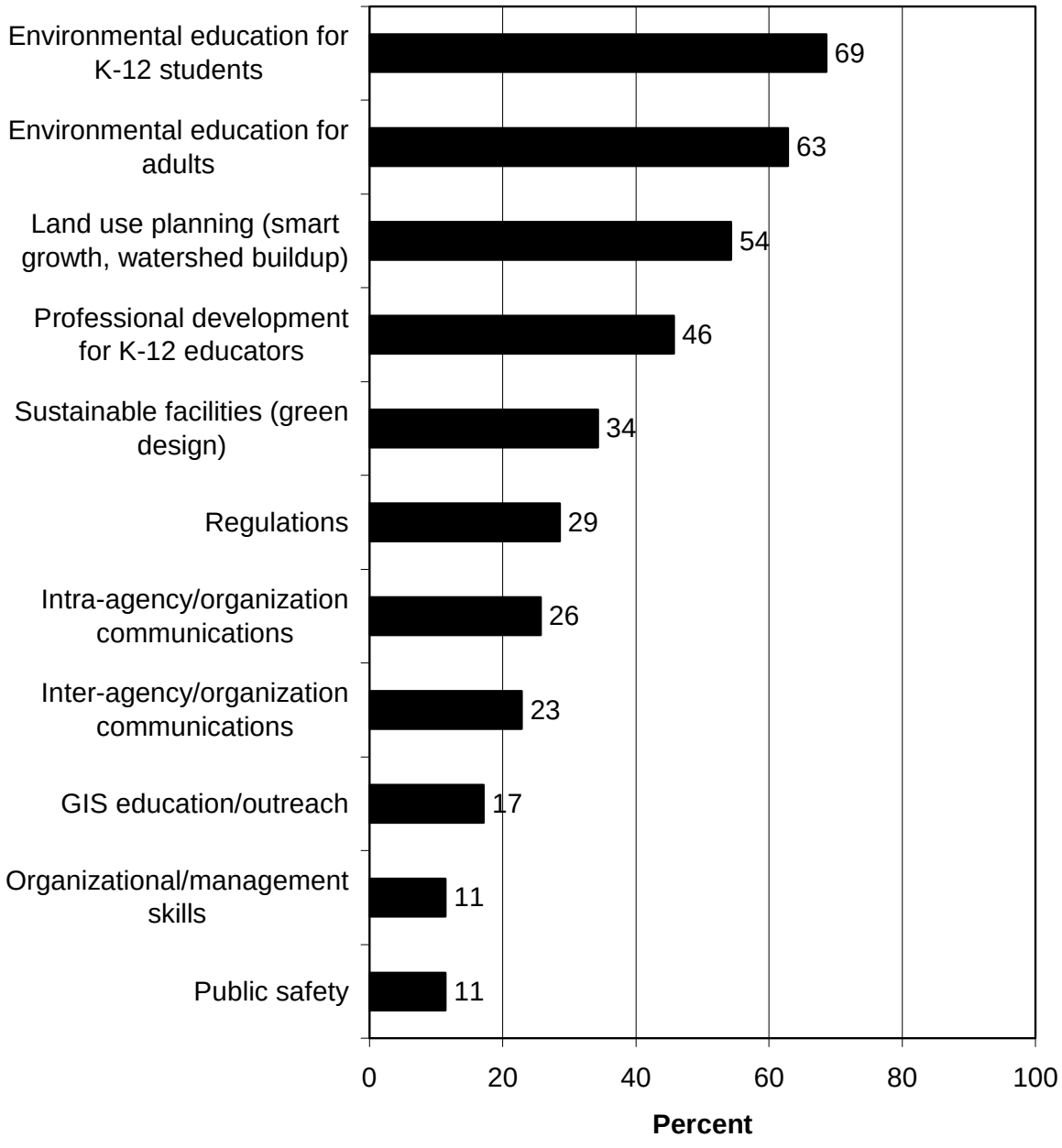
Q97-Q108. Topics/skills that your division offers in its coastal resource education/outreach efforts regarding coastal issues.



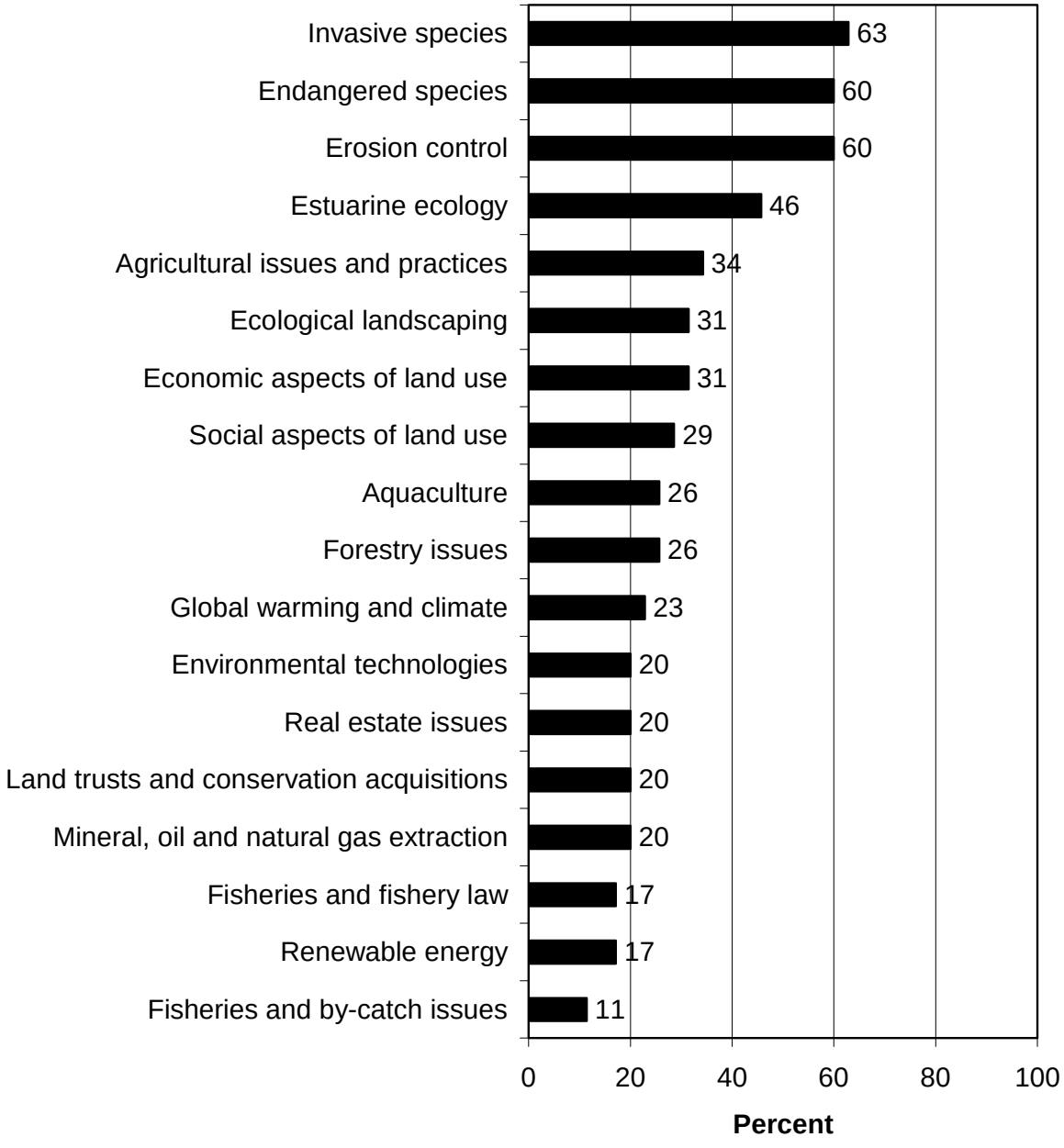
Q109-Q118. Topics/skills that your division offers in its coastal resource education/outreach efforts regarding water quality issues.



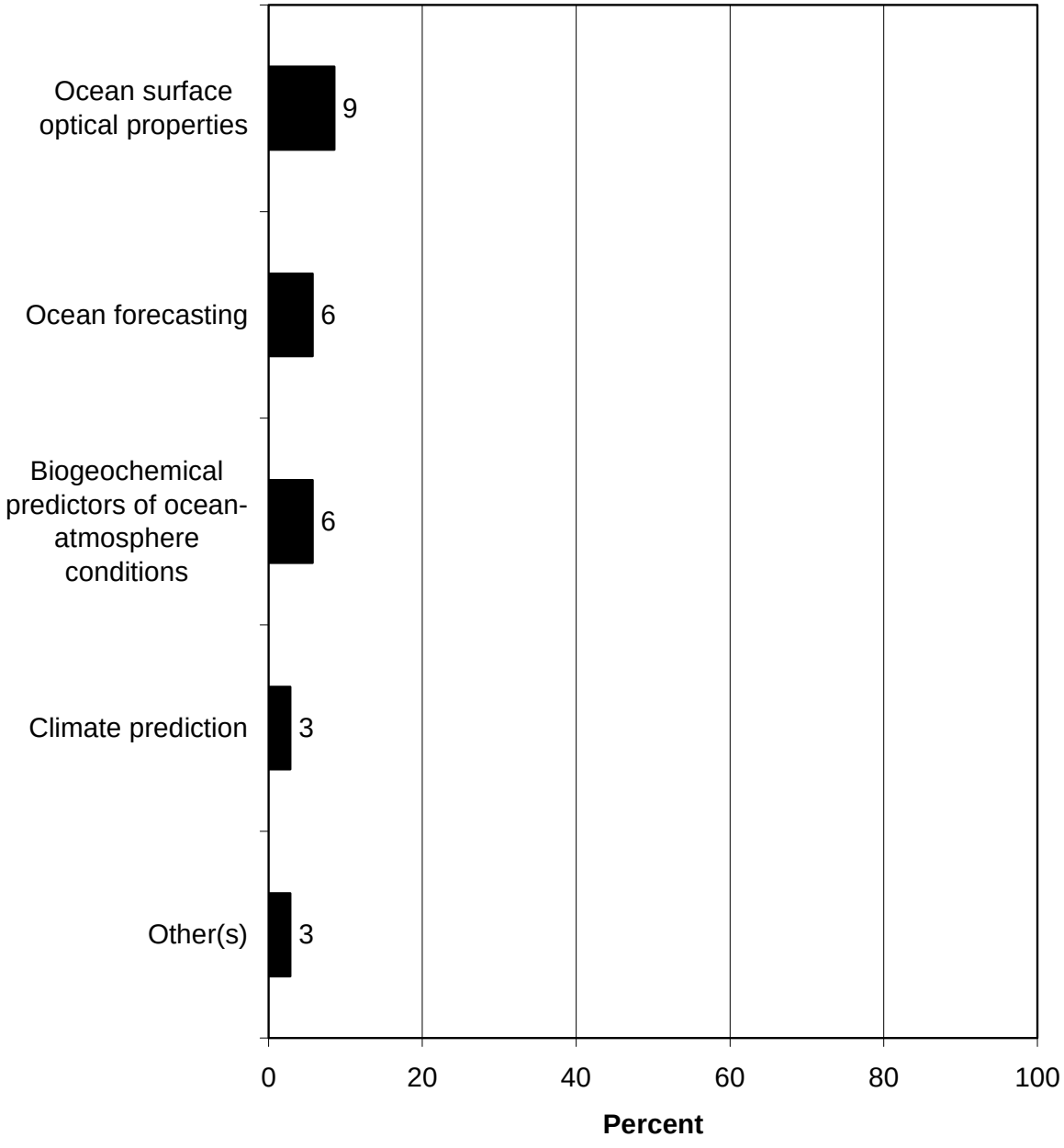
Q119-129. Topics/skills that your division offers in its coastal resource education/outreach efforts regarding education, planning, and regulation issues.



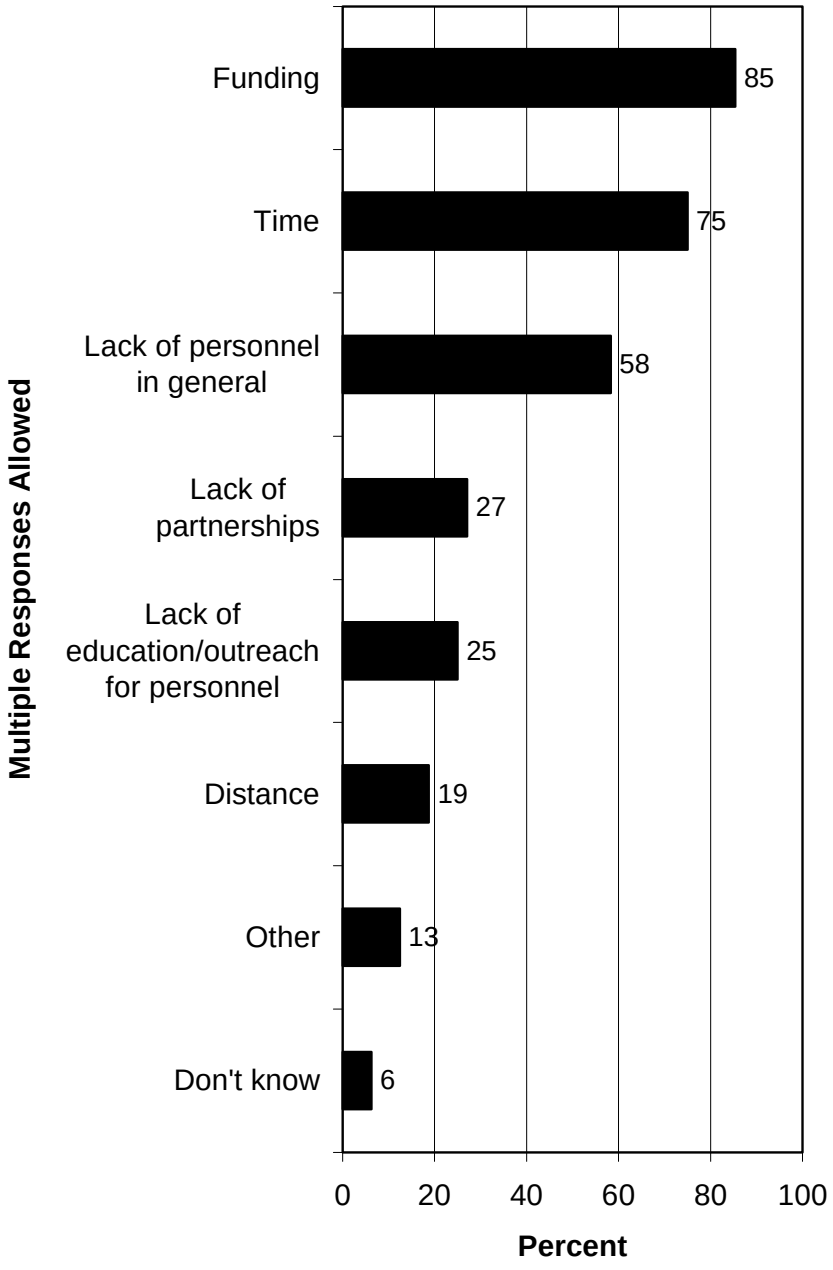
Q130-Q147. Topics/skills that your division offers in its coastal resource education/outreach efforts regarding resource management and other issues.



Q148-Q152. Topics/skills that your division offers in its coastal resource education/outreach efforts regarding ocean sciences topics.



Q255. What are the barriers, if any, that your division faces regarding coastal resources education/outreach?



Formats and Delivery Methods of Coastal Training Provided

- The types of coastal resource education/outreach formats that were most often provided were informal education/outreach (60% of the divisions provided this type), special events excluding conferences (37%), and in-service education/outreach for educators (31%).

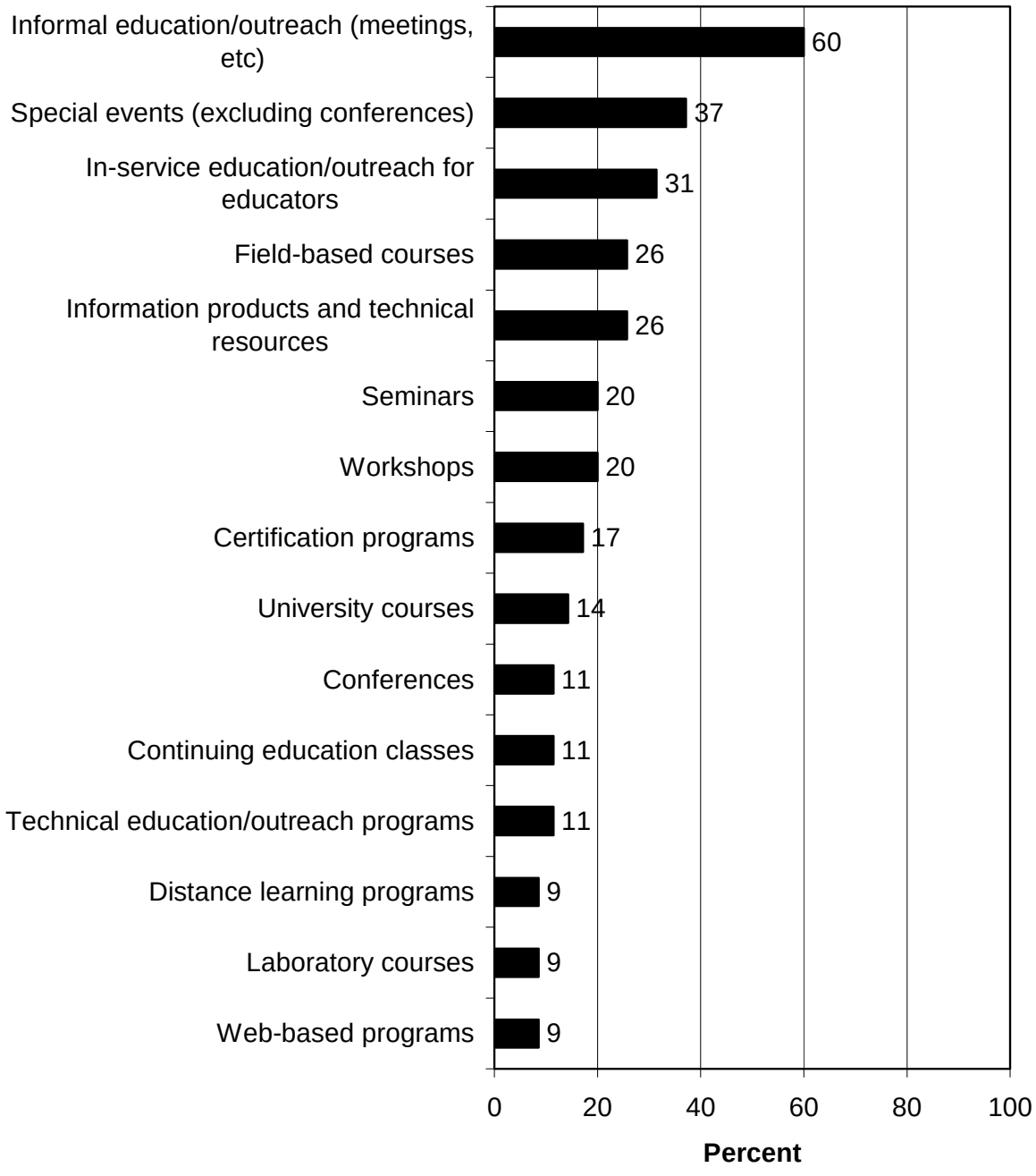
- By far, field-based courses were the most-provided type of coastal training.
  - The mean number of field-based courses (all agencies) provided in the past year was 99.2.
  - The next most provided types of coastal training were distance learning programs (mean of 17.7) and in-service education/outreach programs for educators (mean of 14.7).

- The most popular types of informal education/outreach were publications, such as brochures and newsletters (63%), Websites (54%), field trips (49%), and interpretive signs (31%).

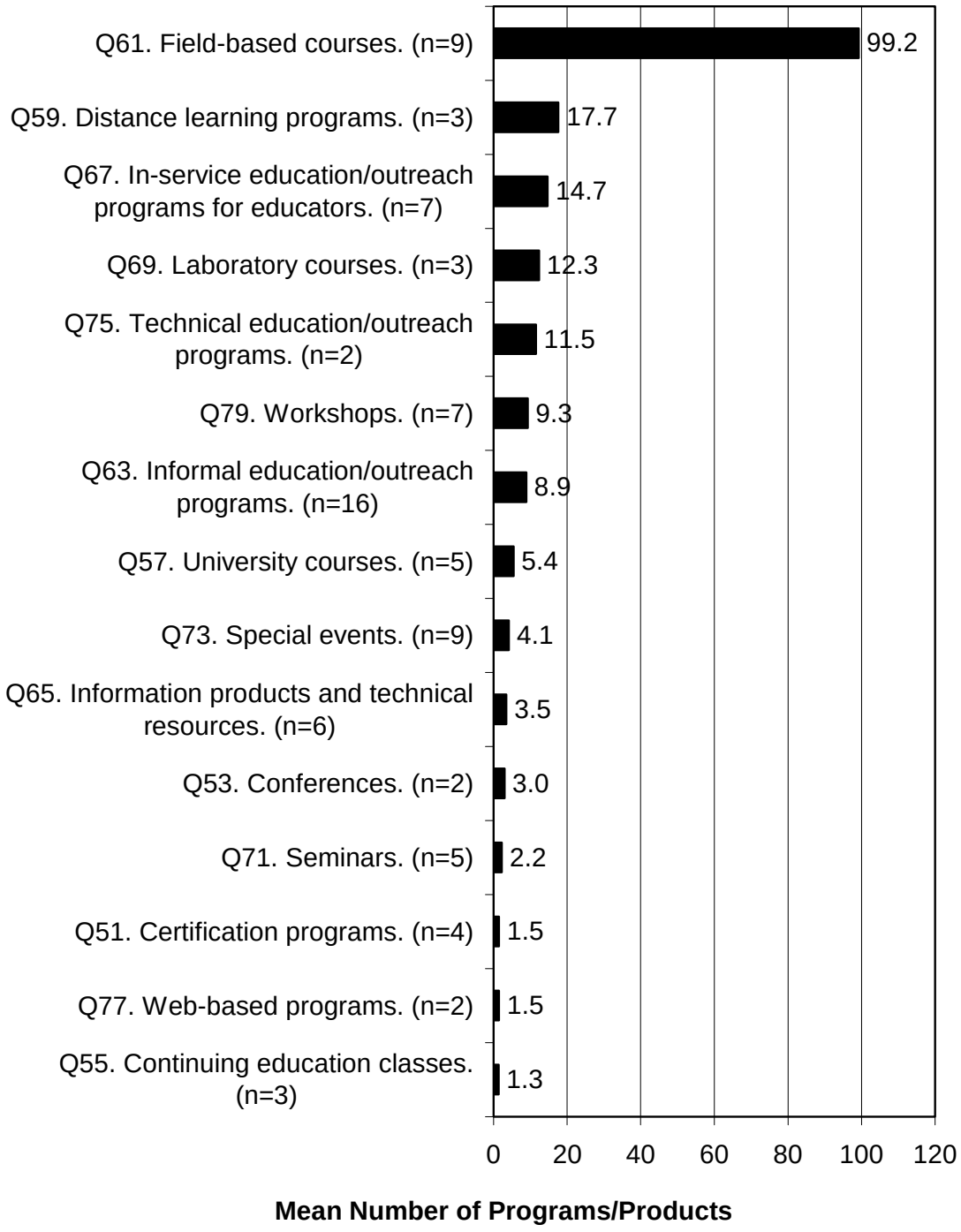
- The most popular delivery methods for coastal resource education/outreach are presentations (66%), field trips and courses (57%), and lectures (46%).

- The most popular information dissemination methods that agencies/organizations use are technical assistance via face-to-face interactions (37%), technical assistance via manuals/materials for non-specialist (31%), synthesis of knowledge in the form of general, less technical outlets (29%), and partnerships (29%).

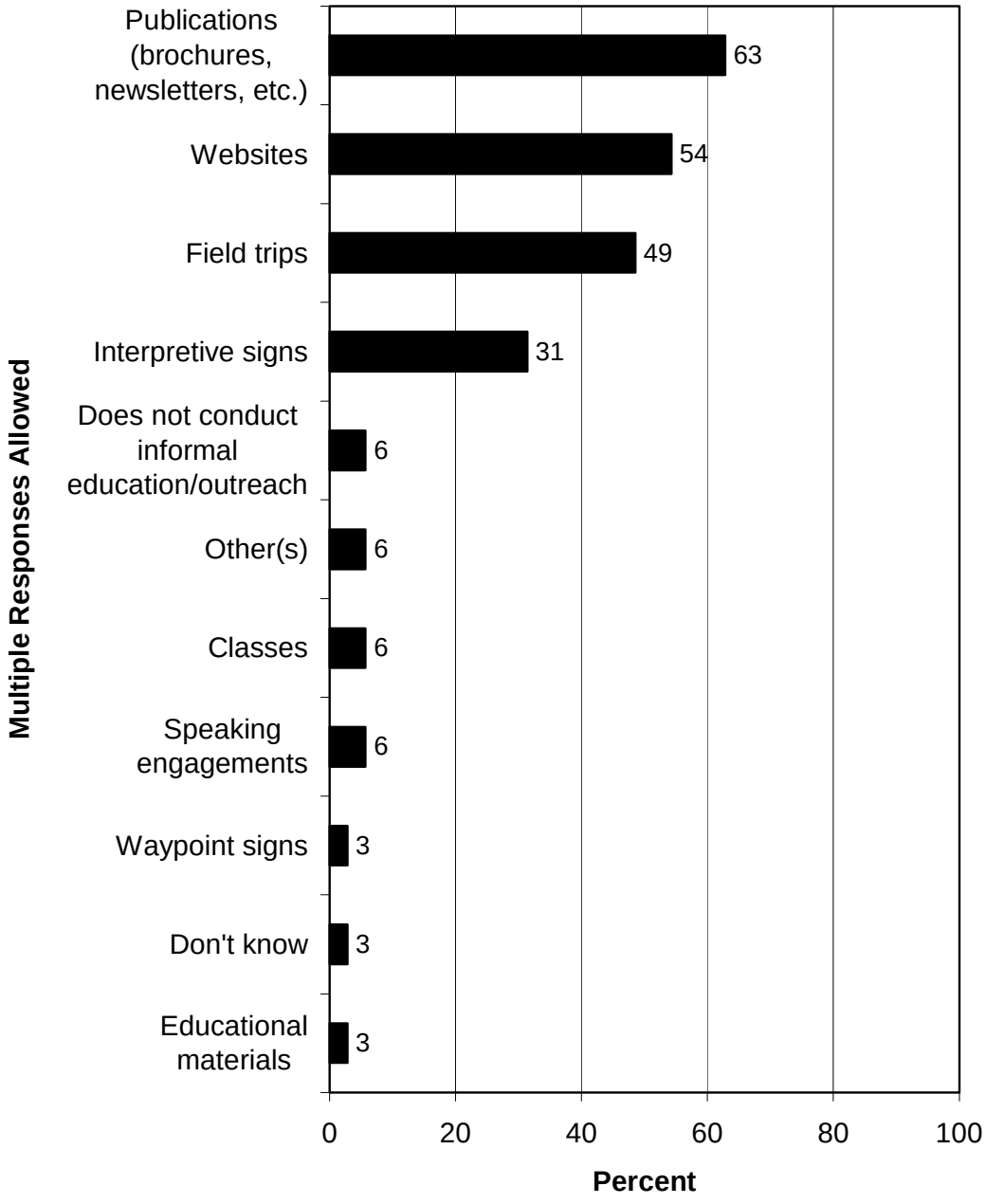
Percentage of divisions that provided the following coastal training education/outreach formats.



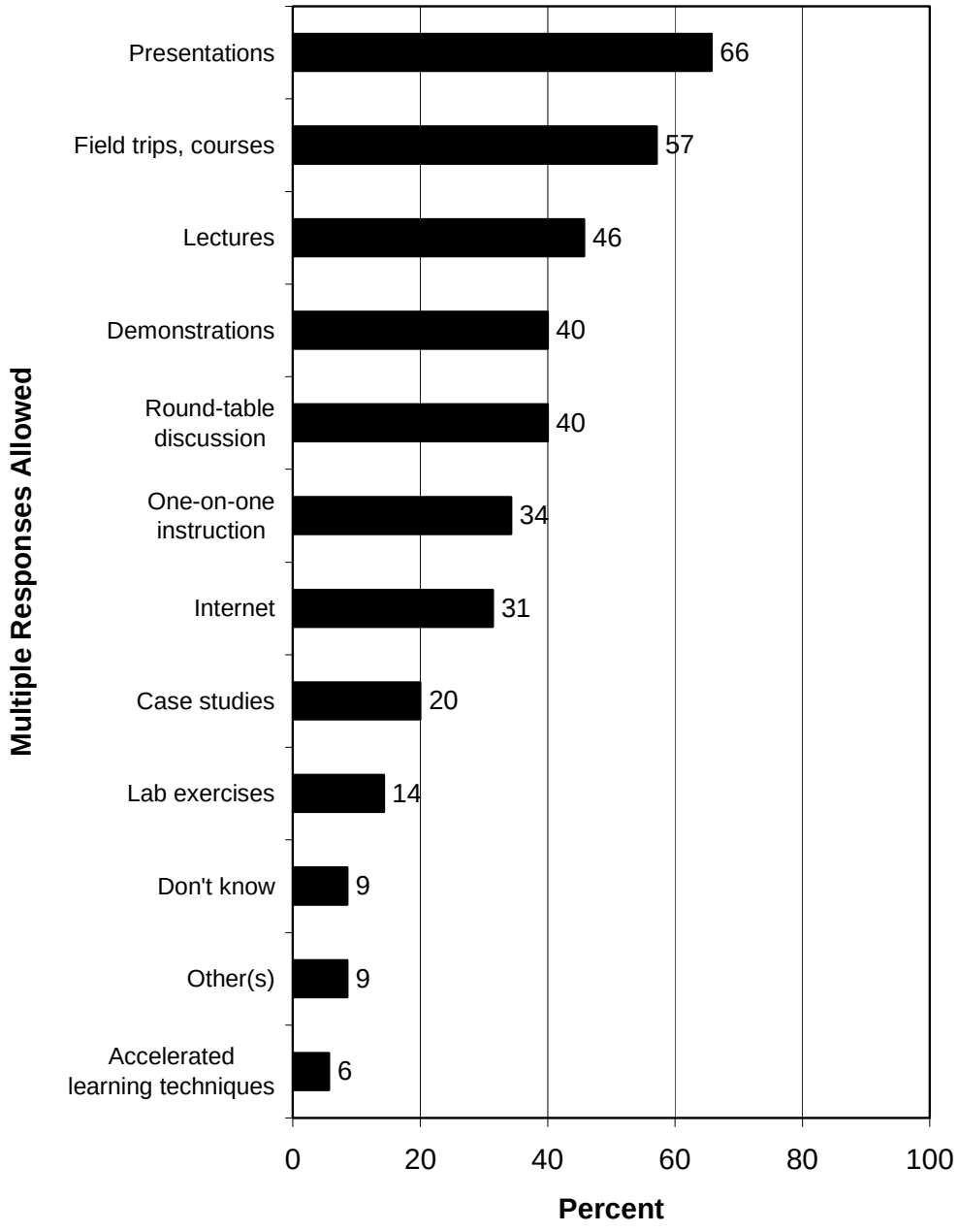
Number of programs/products offered.



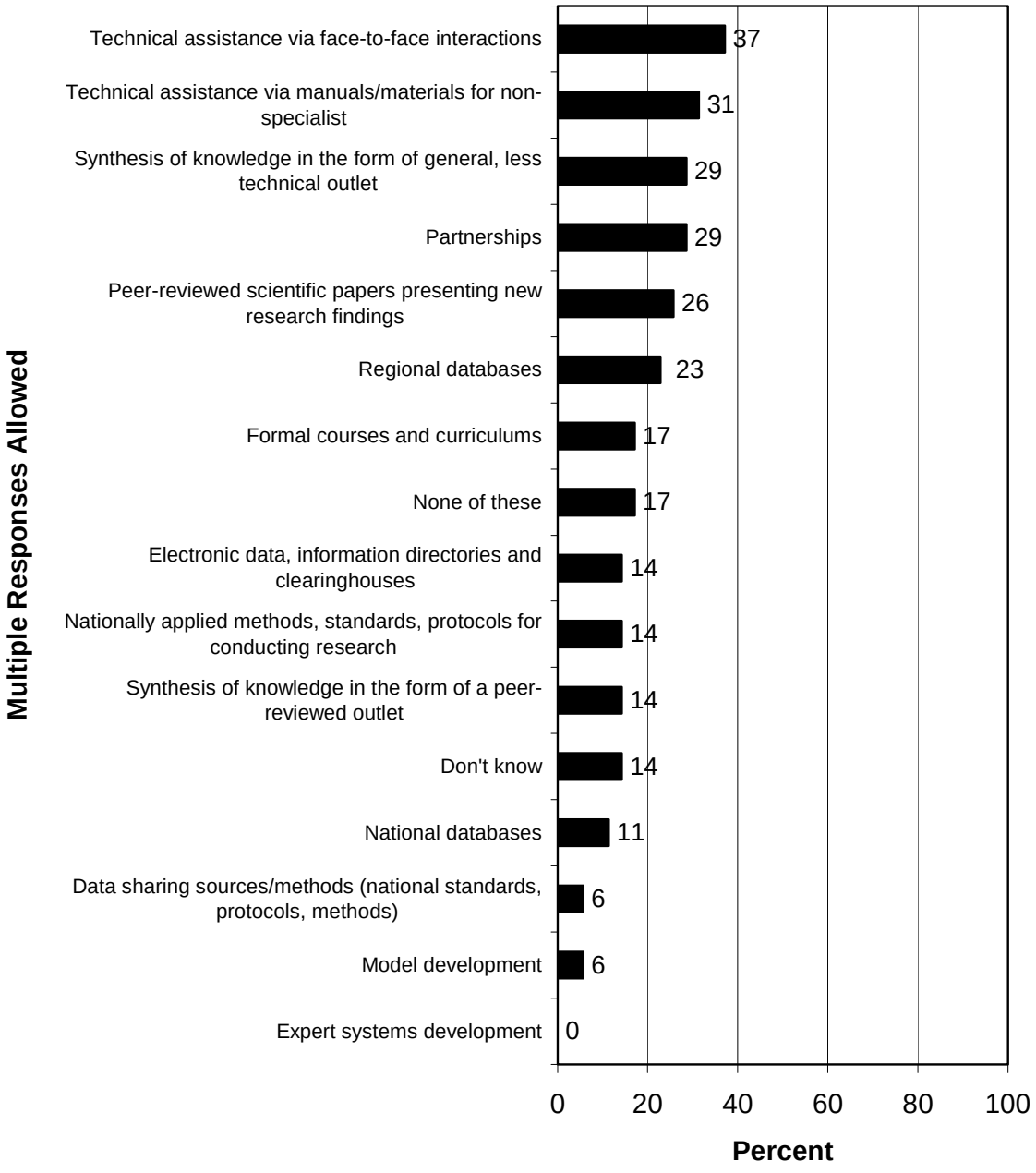
Q82. If your division conducts informal education/outreach, please indicate the specific type of informal education/outreach your division conducts.



Q85. What coastal resource education/outreach delivery methods does your division utilize?



Q239. Which of the following methods for information dissemination (regarding coastal resource issues) does your division utilize?



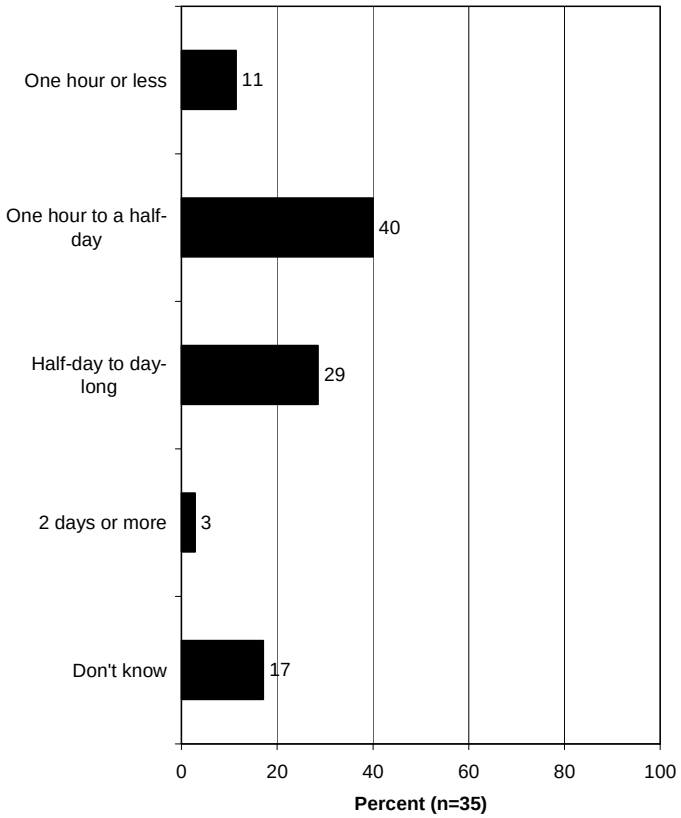
Characteristics of Outreach/Education Sessions

- The most common length of the typical coastal resources education/outreach session is one hour to a half-day, followed by a half-day to day-long session.

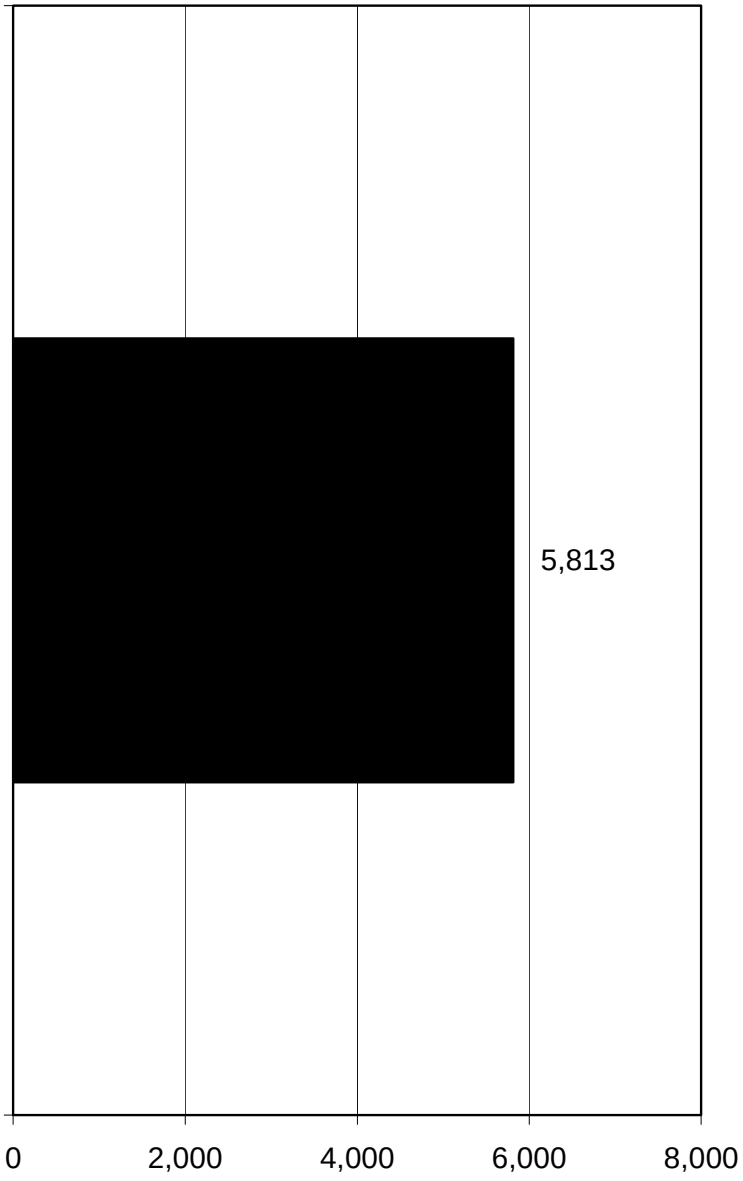
- The mean number of people that coastal training providers reached with their coastal resources education/outreach was 5813 people for each agency for the entire year.

- Most often, respondents' organizations generally hold their coastal resources education/outreach sessions local to the organization providing the session (49%), followed closely by those that hold their sessions local to the participants (46%). Finally, 26% hold the sessions central to the providers and attendees.

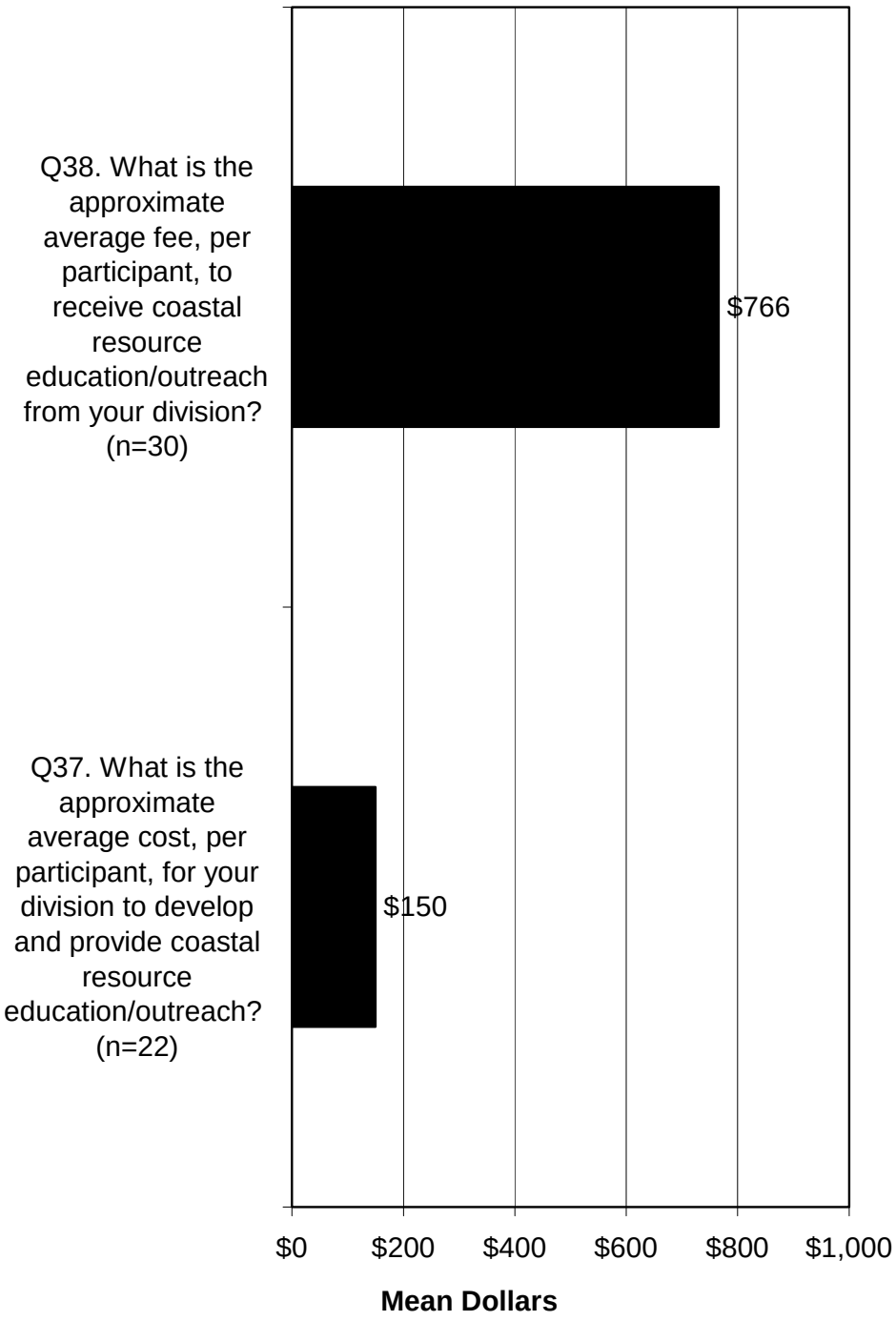
Q20. What is the average length of a typical coastal resources education/outreach session that your division/organization conducts?



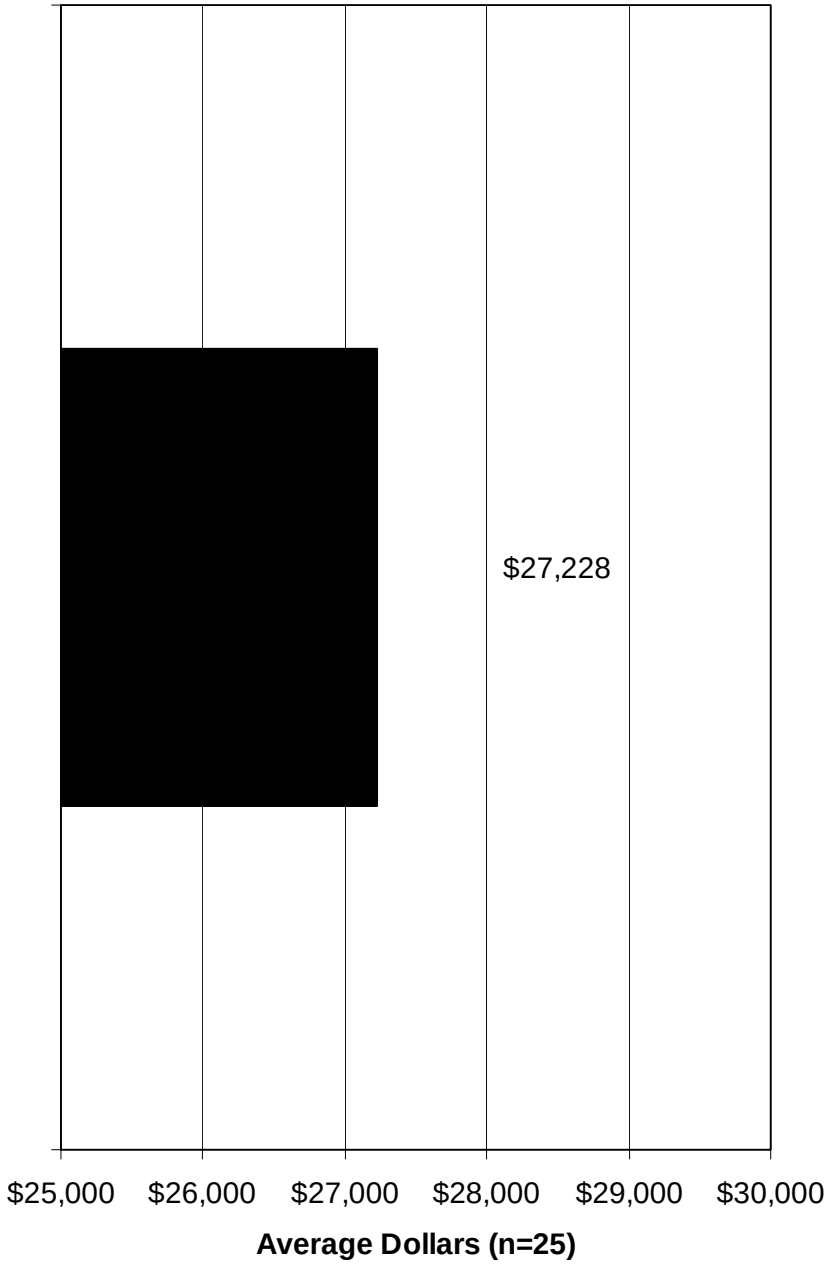
Q33. For approximately how many people did your division provide coastal resources education/outreach in the past year (January 2002-January 2003)?



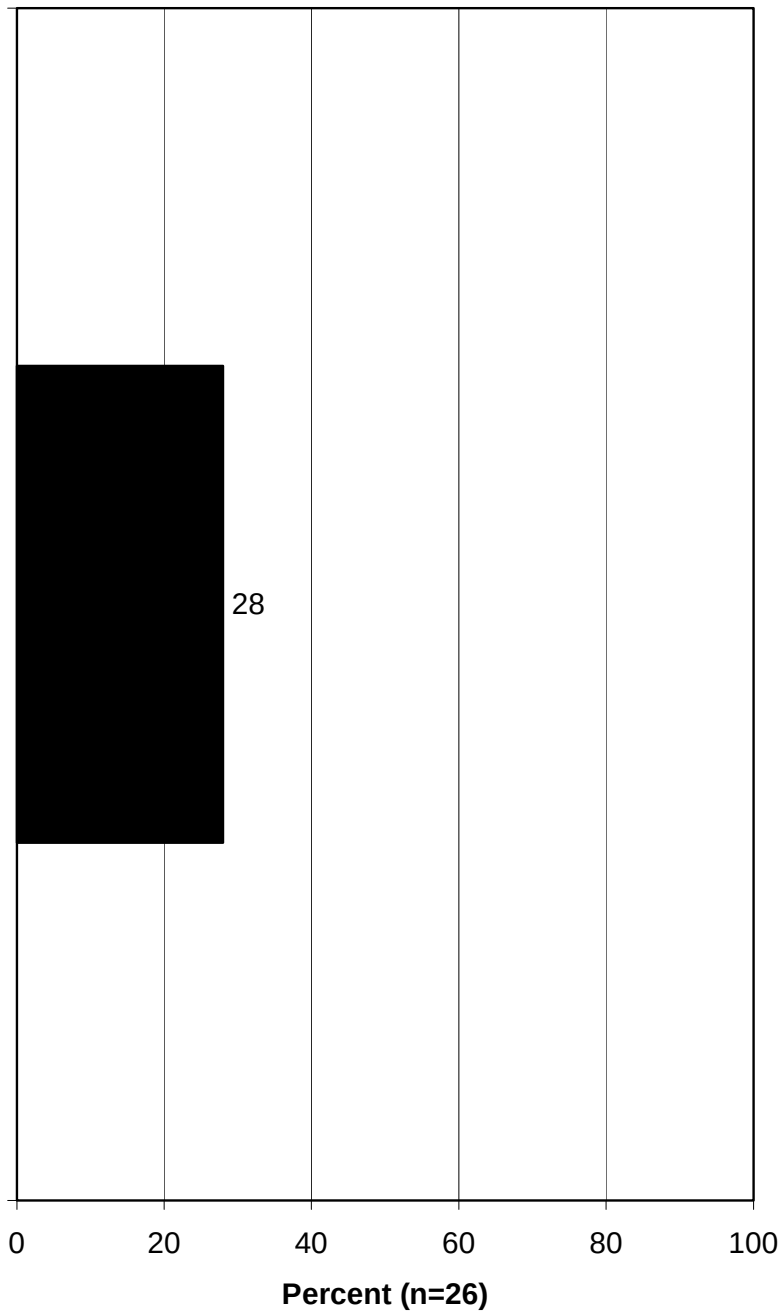
Q37.-Q38. Average fees and costs.



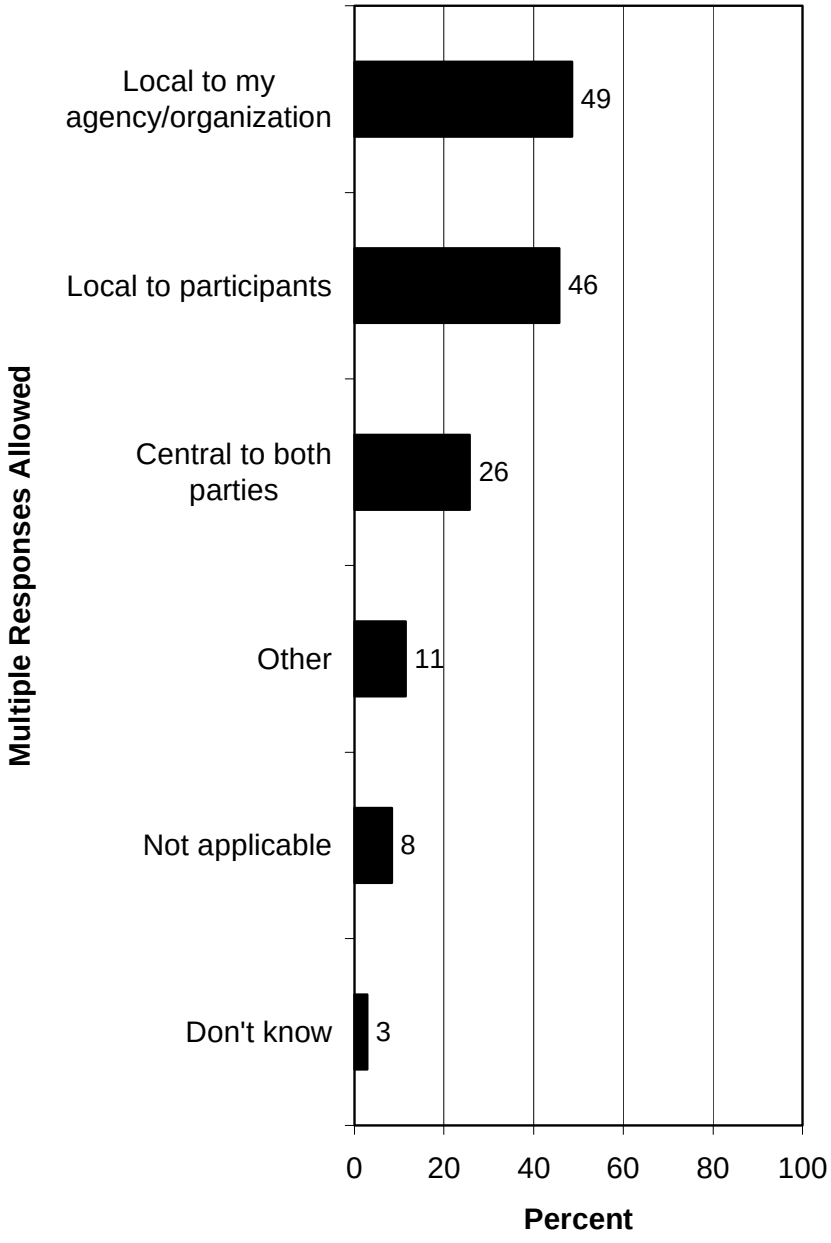
Q39. Overall, what is the approximate yearly dollar amount that is budgeted by your division specifically for coastal resource education/outreach?



Q40. What percentage of your division's overall budget does the figure in the previous question represent?



Q35. Are the sessions your division provides generally held local to your agency/organization, local to the participants being served, or are the education/outreach sessions held in an area central to both parties?



Individuals and Organizations that Use Coastal Resources Outreach/Education Programs

- Of local government managers and other officials, city/town council members (34%), planning commission members (23%), and city/town engineers (23%) were the types of positions most in attendance at the coastal resources education/outreach programs offered by the respondent's organization.

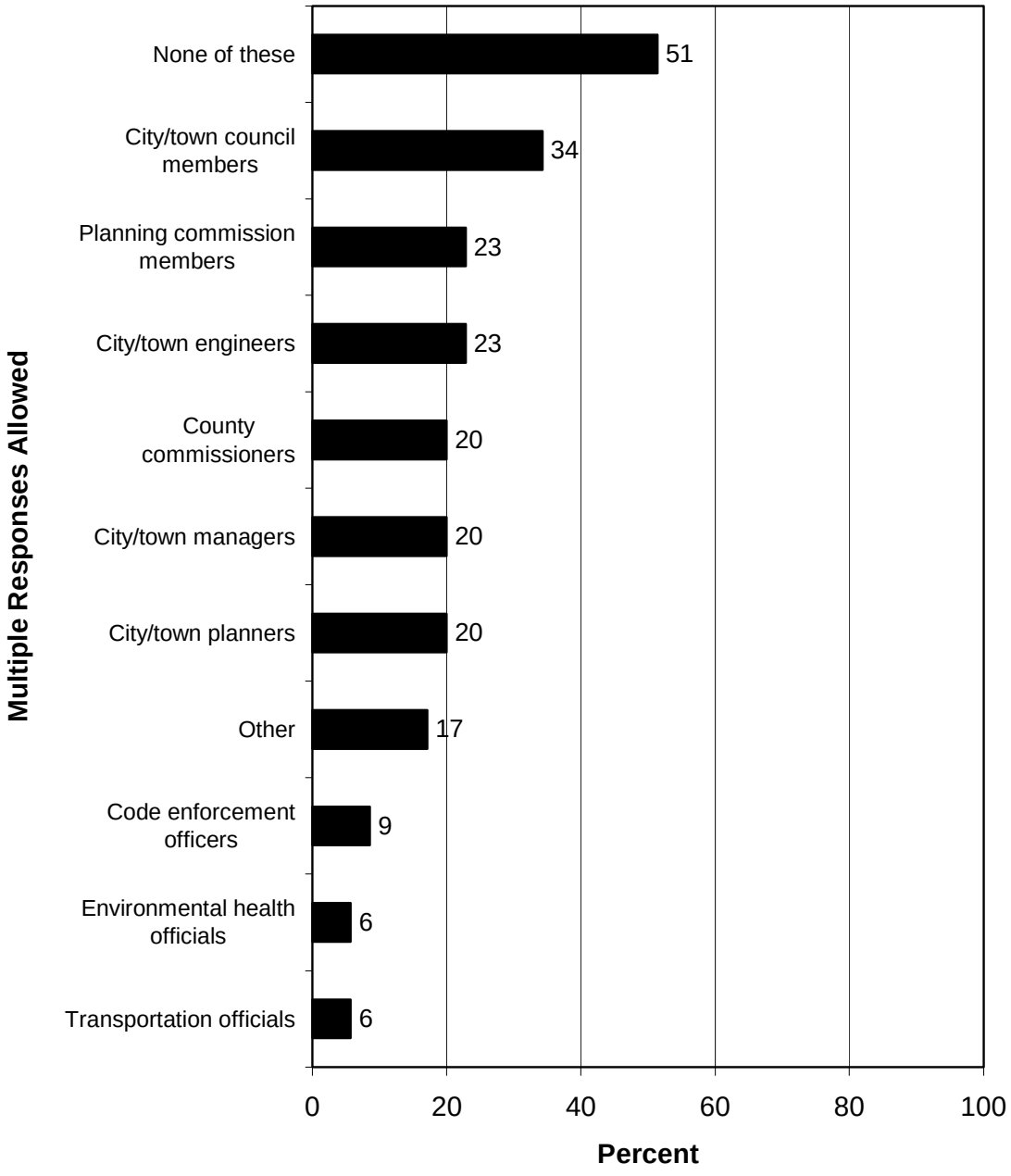
- Of volunteer organization members, members of chapters of environmental organizations (34%), members of watershed associations (34%), and members of conservation commissions (26%) were the types of positions most in attendance at the coastal resources education/outreach programs offered by the respondent's organization.

- Of business organizations, environmental consultants (31%), members of chambers of commerce (17%), and members of tourist boards (17%) were the types of positions most in attendance at the coastal resources education/outreach programs offered by the respondent's organization.

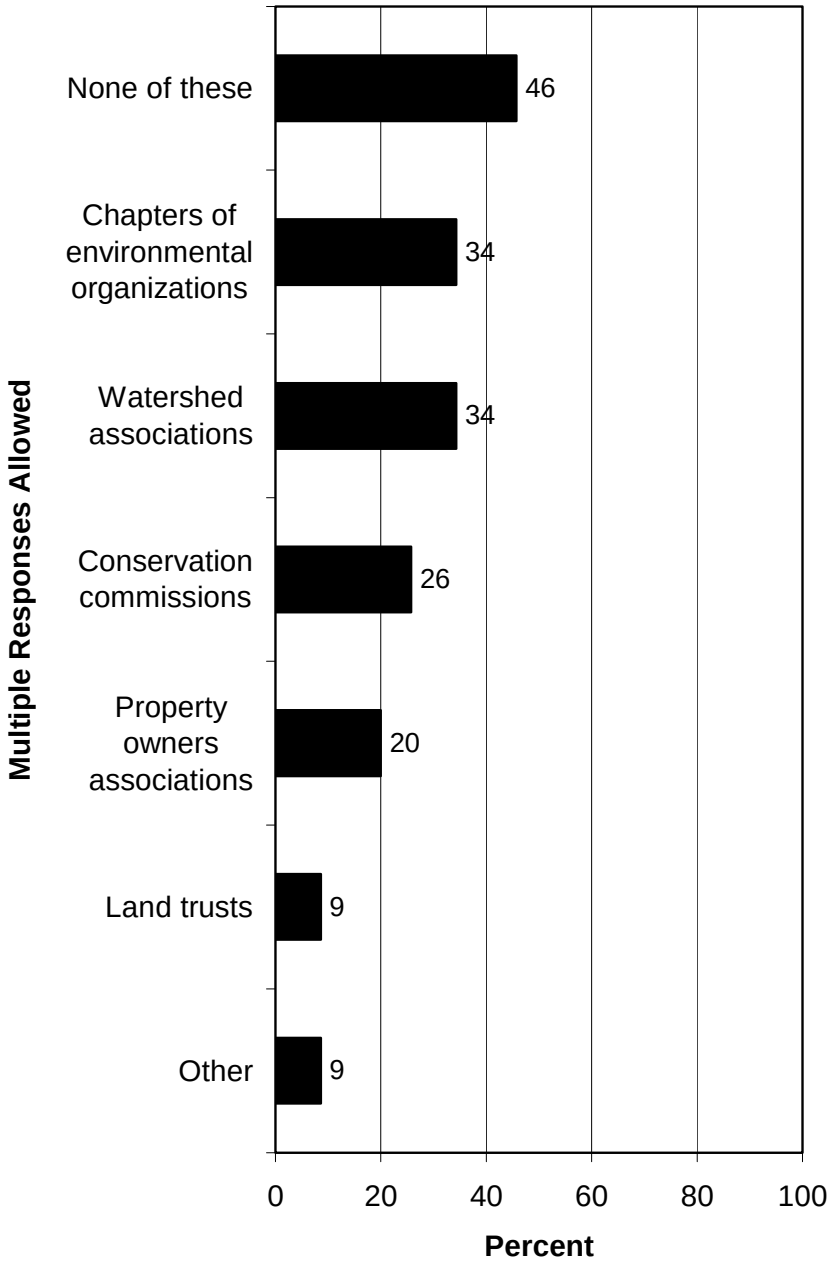
- Of state agency employees, professional association members, and educators, K-12 educators (77%), the general population (51%), environmental educators (46%), and environmental protection agency employees (40%) were the types of positions most in attendance at the coastal resources education/outreach programs offered by the respondent's organization.

- The promotional tools/methods that are most often used by organizations in advertising their education/outreach services are word-of-mouth (80%), Websites (74%), press releases (63%), and direct mail (60%).

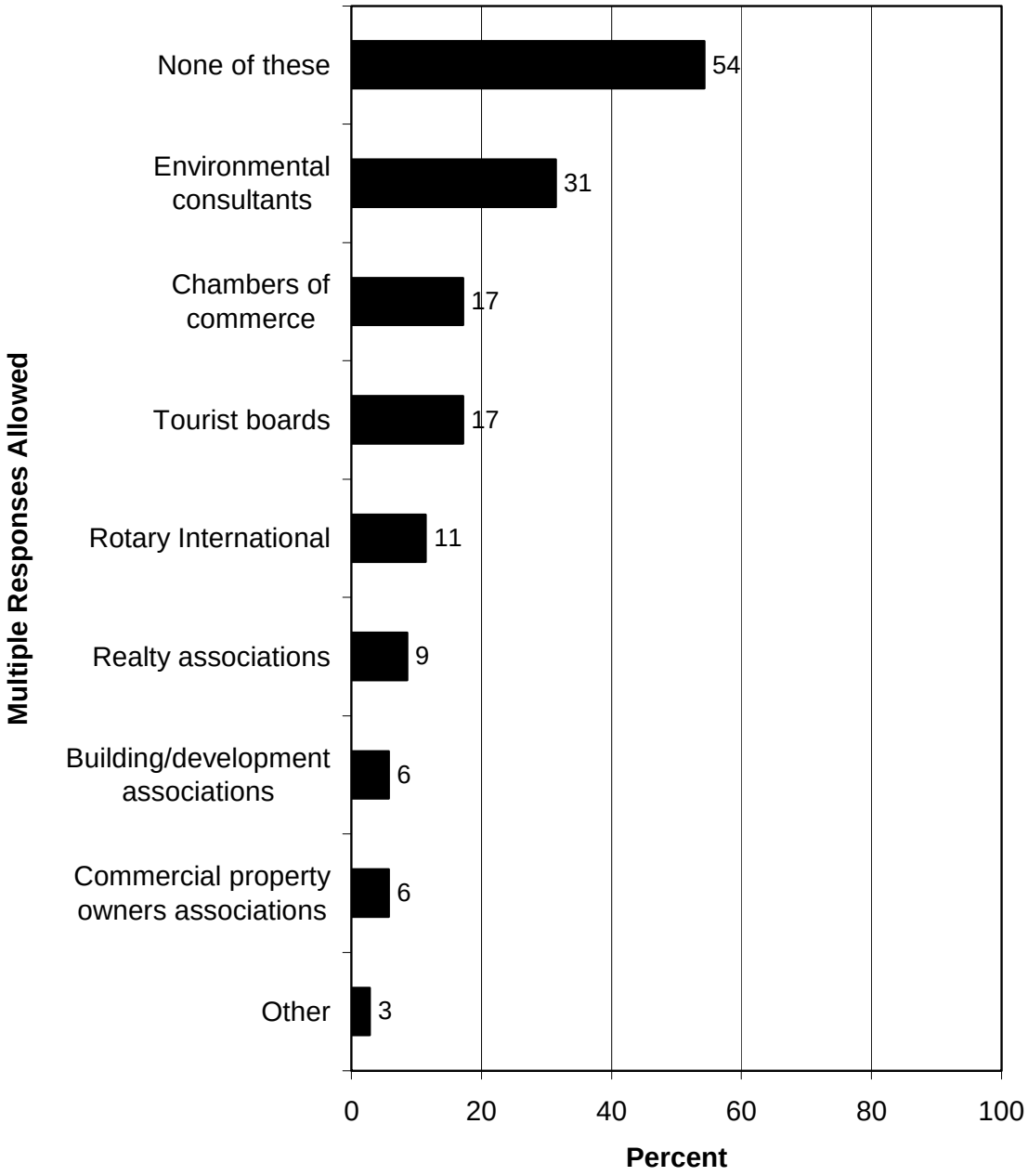
Q223. Which of the following best describes the positions of the local government managers and other officials who utilize your organization's coastal resources education/outreach?



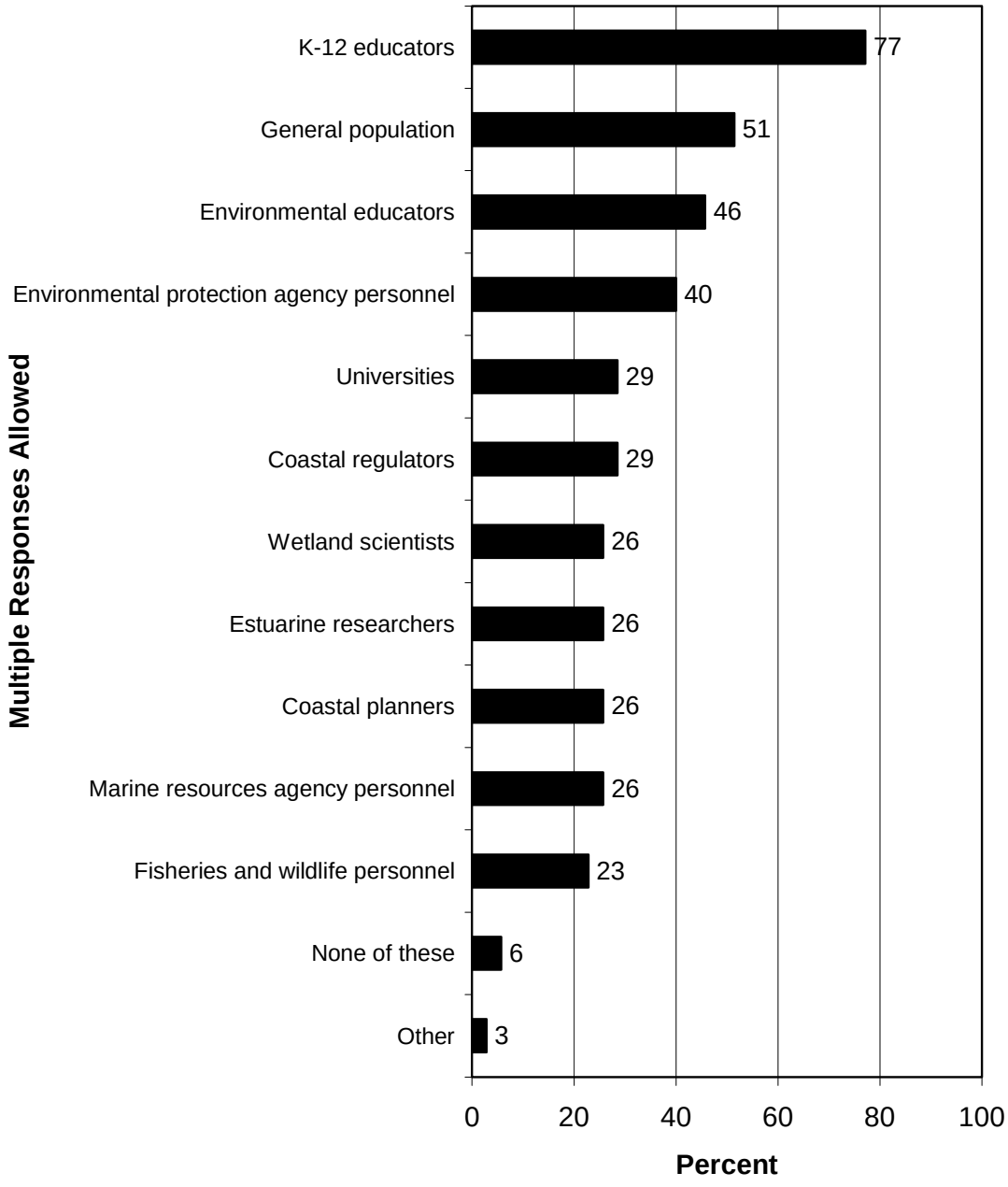
Q226. Which of the following best describes the positions of the volunteer organization members who utilize your organization's coastal resources education/outreach?



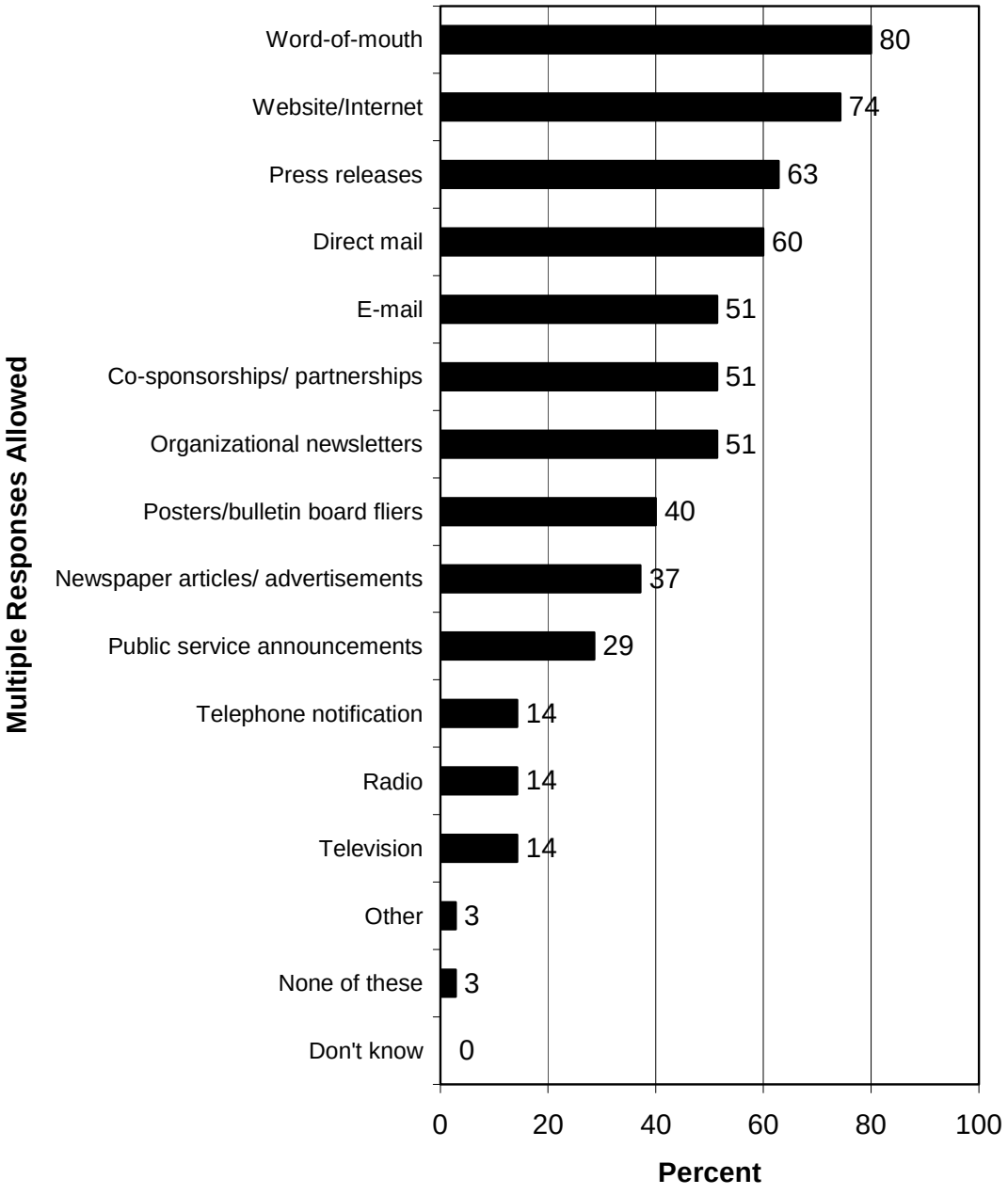
Q229. Which of the following best describes the positions of the business organizations who utilize your organization's coastal resources education/outreach?



Q232. Which of the following best describes the positions of the state agency employees, professional association members, and educators who utilize your organization's coastal resources education/outreach?



Q235. Which of the following promotional tools does your organization use to advertise your education/outreach services?

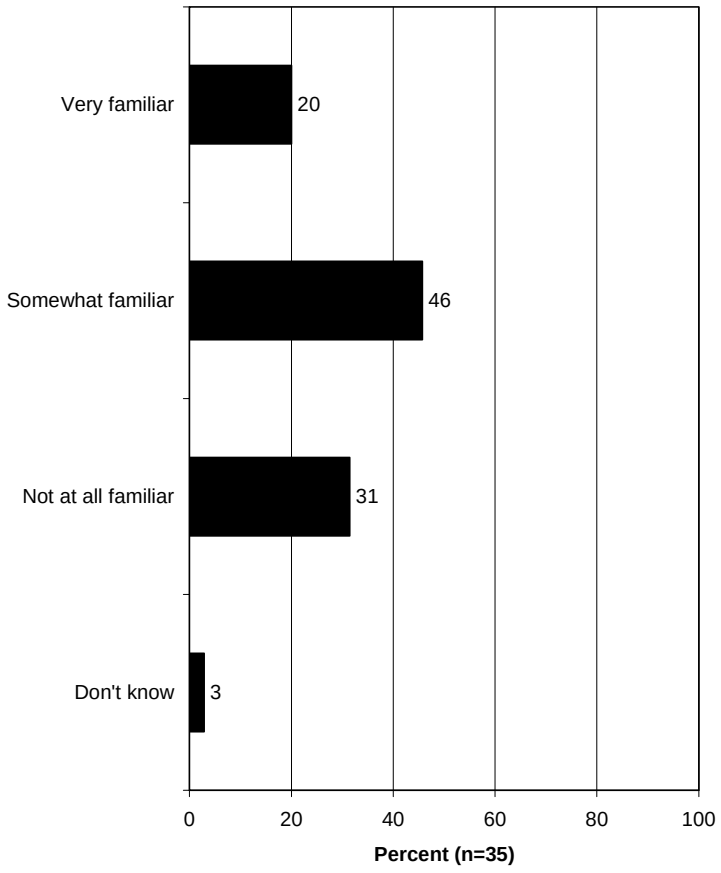


FAMILIARITY WITH COASTAL TRAINING AND RESEARCH

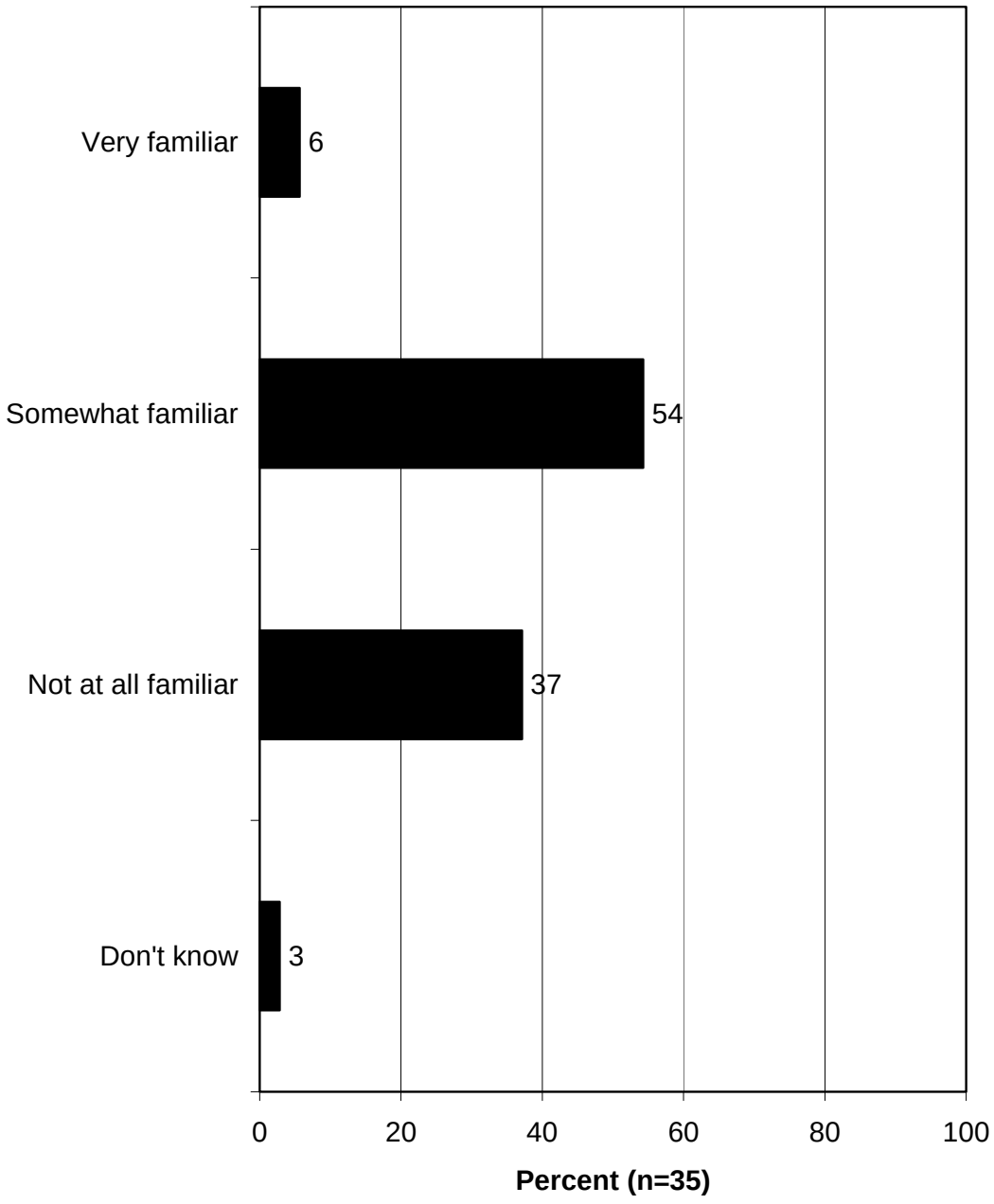
- Before the survey, 66% of respondents were very or somewhat familiar with the research conducted by Rutgers University in conjunction with the Jacques Cousteau National Estuarine Research Reserve on coastal resource issues.
  - 20% of respondents were very familiar.

- Before the survey, 60% of respondents were very or somewhat familiar with the goals of the National Estuarine Research Reserve System Coastal Training Program.
  - 54% were somewhat familiar, while only 6% were very familiar.

Q46. Before this survey, how familiar would you say you were with the research on coastal resource issues conducted by Rutgers University in conjunction with the Jacques Cousteau National Estuarine Research Reserve?



Q47. Before this survey, how familiar would you say you were with the goals of the National Estuarine Research Reserve System Coastal Training Program?



EVALUATION AND RATINGS OF COASTAL RESOURCES OUTREACH/EDUCATION PROGRAMS PROVIDED

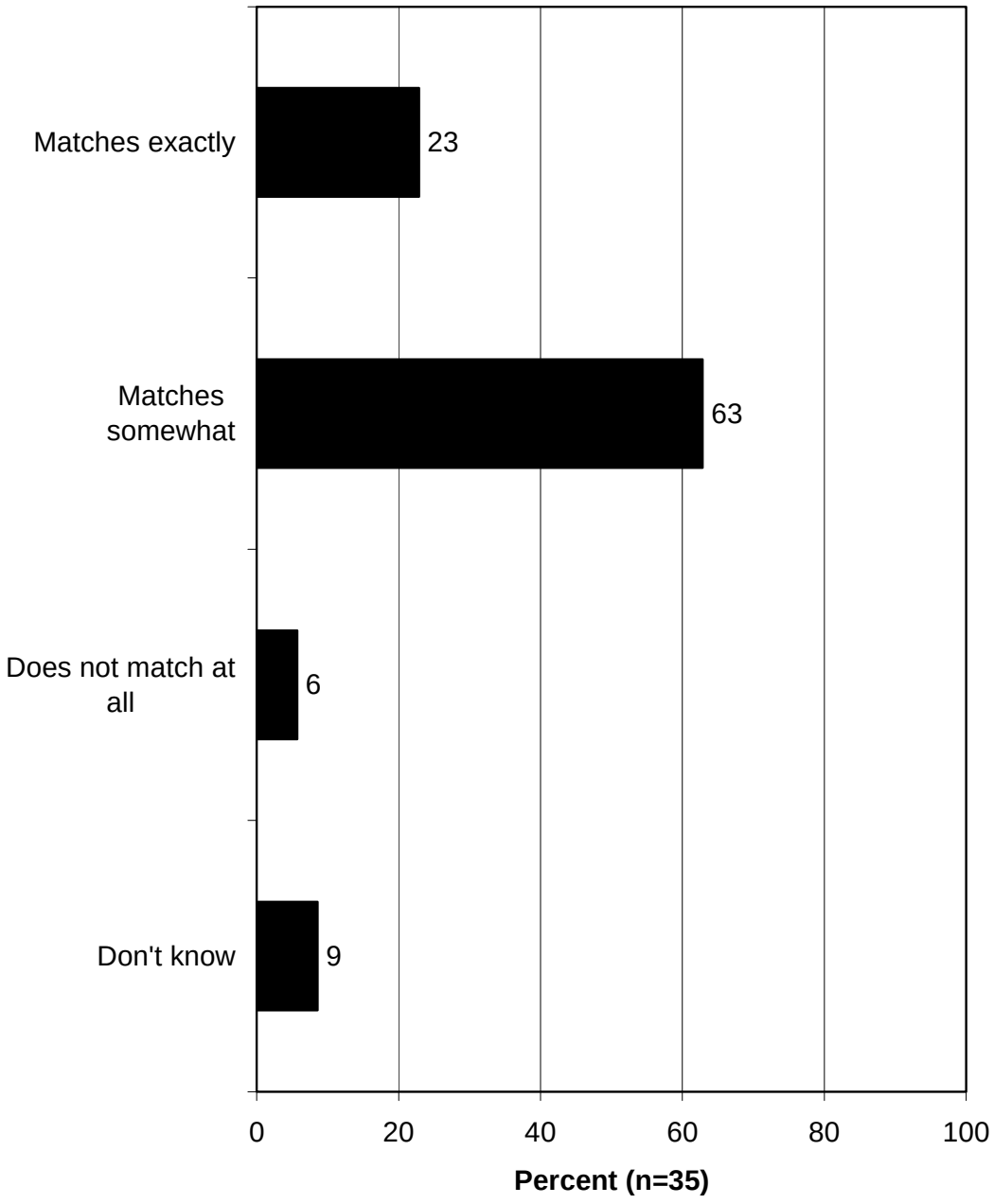
- A majority of respondents (86%) said that the coastal resources education/outreach that their division conducts matches exactly or matches somewhat the objectives of the National Estuarine Research Reserve System Coastal Training Program.
  - 23% said it matches exactly.
  - 63% said it matches somewhat.

- A strong majority of respondents (97%) said that coastal resources education/outreach is very or somewhat important compared to other programs in their division.
  - 51% said it was very important.
  - 46% said it was somewhat important.

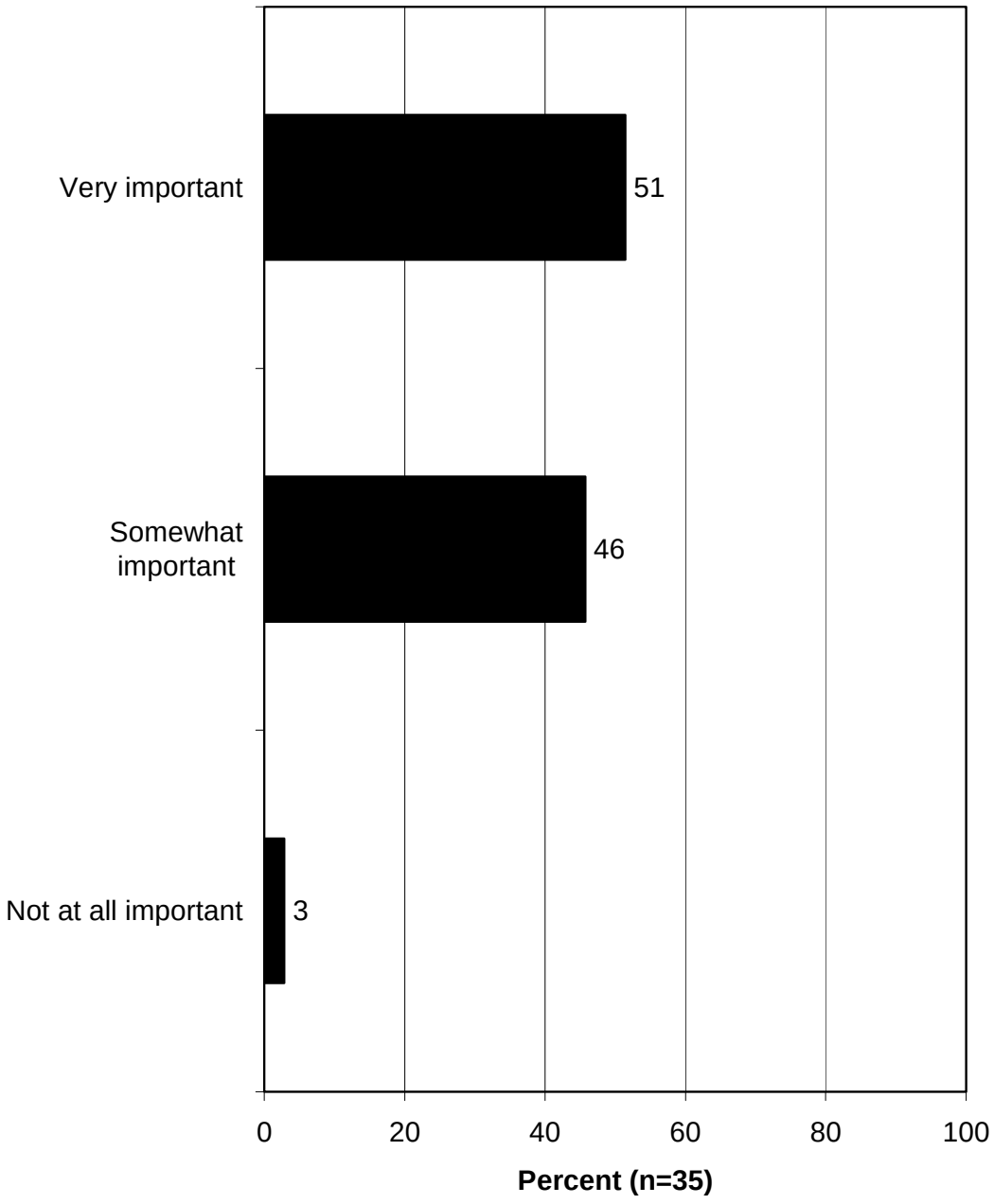
- A majority of respondents (57%) said that their division does *not* have an evaluation component as part of its coastal resources education/outreach services.
  - 29% said their division does have an evaluation component as part of its coastal resources education/outreach services.

- Most often, those divisions that have an evaluation component as part of their coastal resources education/outreach services conduct the evaluations more than twice a year (4 respondents out of 10 gave this answer).

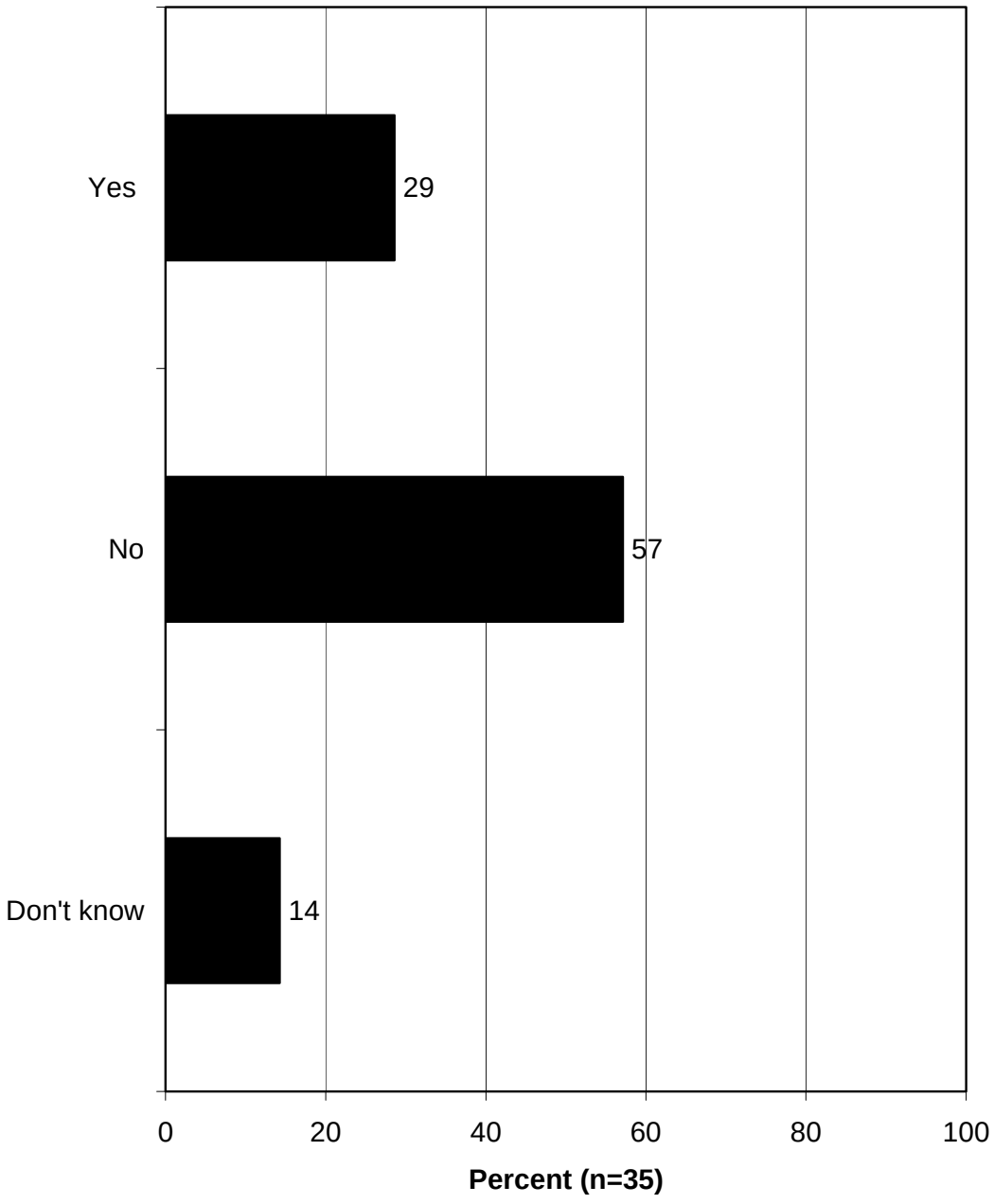
Q48. Overall, how well would you say the coastal resource education/outreach that your division conducts matches the objectives of the NERRS Coastal Training Program?



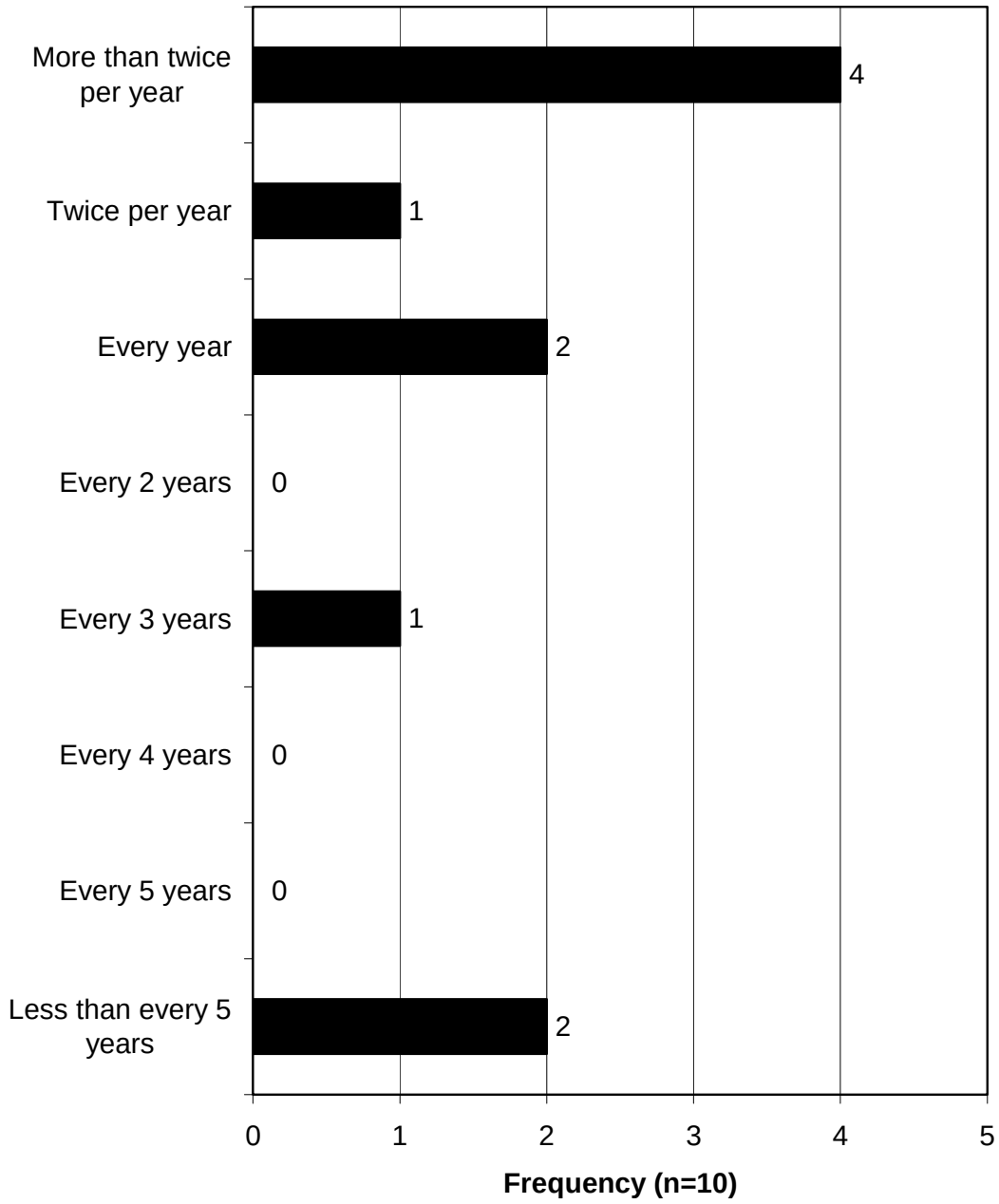
Q49. Compared to other programs in your division, how important would you say coastal resource education/outreach is?



Q220. Does your division have an evaluation component as part of its coastal resource education/outreach services?



Q221. How often are your coastal resource outreach/education services evaluated? (Asked of those whose division has an evaluation component as part of its coastal resource education/outreach services.)



PROVIDERS' PERCEPTION OF COASTAL TRAINING NEEDS

- Respondents' perceptions of needs for coastal resources education/outreach regarding *habitat issues* were highest for the following topics: habitat protection and restoration (89% said there was a high need for training about this topic), wetlands and waterways protection (80%), biodiversity (74%), and urban sprawl (74%).

- Respondents' perceptions of needs for coastal resources education/outreach regarding *coastal issues* were highest for the following topics: coastal community development (86%), coastal construction (86%), and coastal erosion (77%).

- Respondents' perceptions of needs for coastal resources education/outreach regarding *water quality issues* were highest for the following topics: water quality (77%), water quantity (74%), and nonpoint source pollution (74%).

- Respondents' perceptions of needs for coastal resources education/outreach regarding *education, planning, and regulation issues* were highest for the following topics: land use planning (smart growth, watershed buildup) (74%), environmental education for K-12 students (74%), professional development for K-12 educators (71%), and environmental education for adults (69%).

- Respondents' perceptions of needs for coastal resources education/outreach regarding *resource management and other issues* were highest for the following topics: endangered species (69%), invasive species (66%), estuarine ecology (63%), ecological landscaping (60%), and erosion control (60%).

- Respondents' perceptions of needs for coastal resources education/outreach regarding *ocean sciences topics* was highest for the following topic: ocean surface properties (9%).

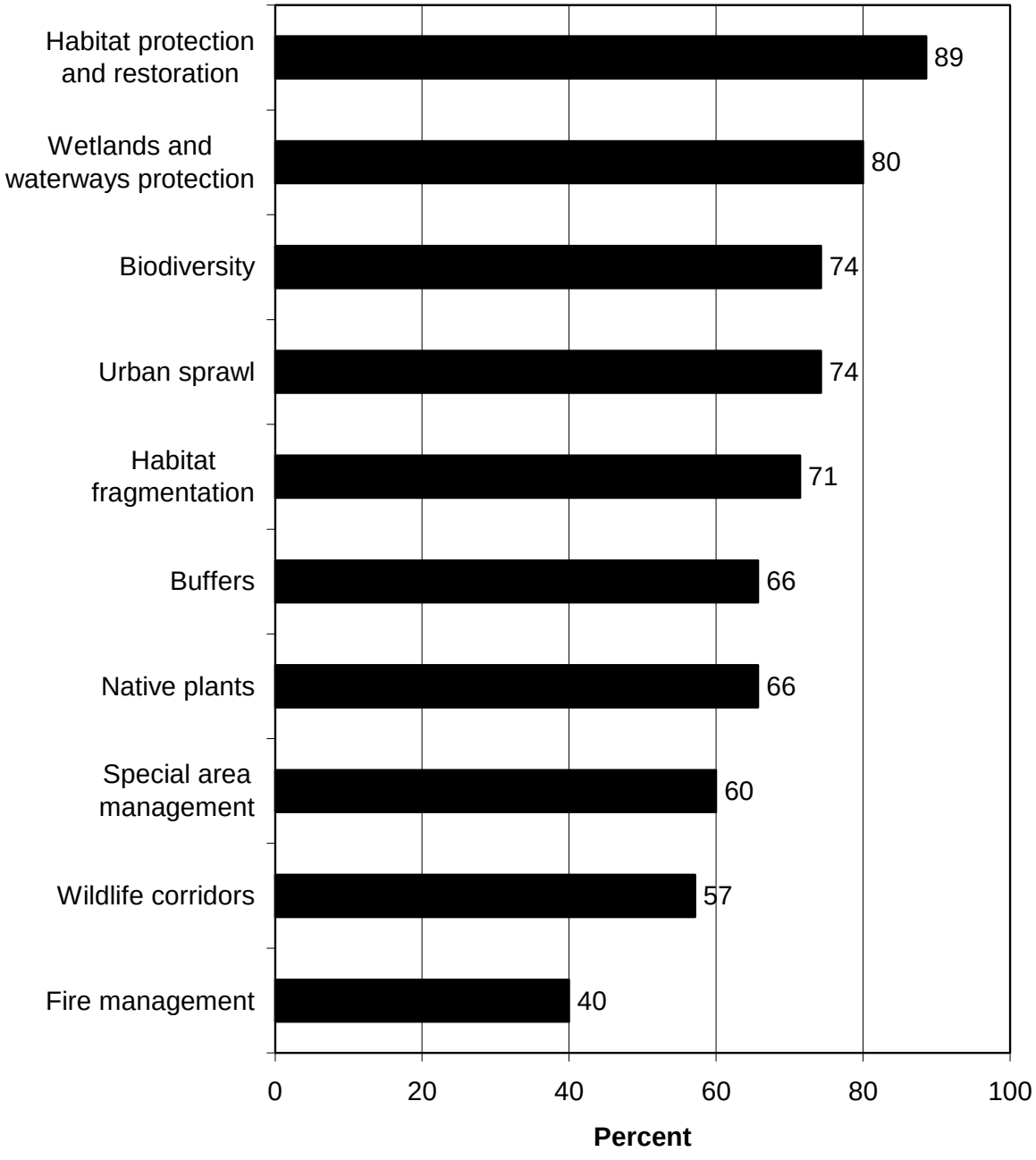
- Coastal resources education/outreach providers perceived that the highest needs for coastal resources education/outreach were among planning commission members, city/town

planners, city/town engineers, property owner associations, and building/development associations (all with 75% saying there was a high need for training among these groups).

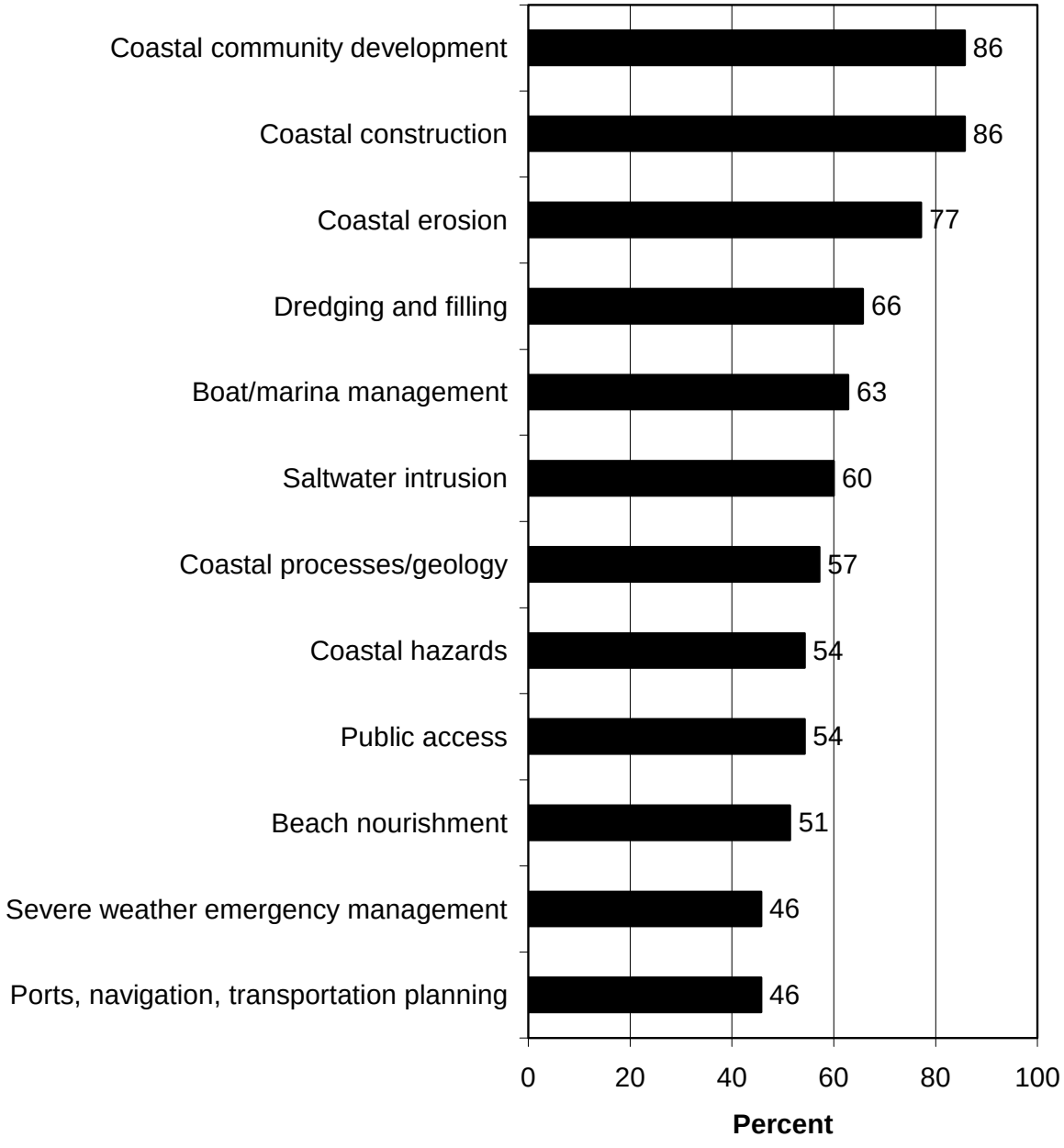
- A majority of respondents (53%) disagreed that there is enough coastal resources education/outreach in New Jersey.
  - 2% strongly agreed and 13% moderately agreed.
  - 15% strongly disagreed and 38% moderately disagreed.

- More respondents disagreed than agreed that there are enough coastal resources education/outreach providers that offer education/outreach for coastal decision-makers in New Jersey.
  - 8% of respondents agreed, and 46% of respondents disagreed.

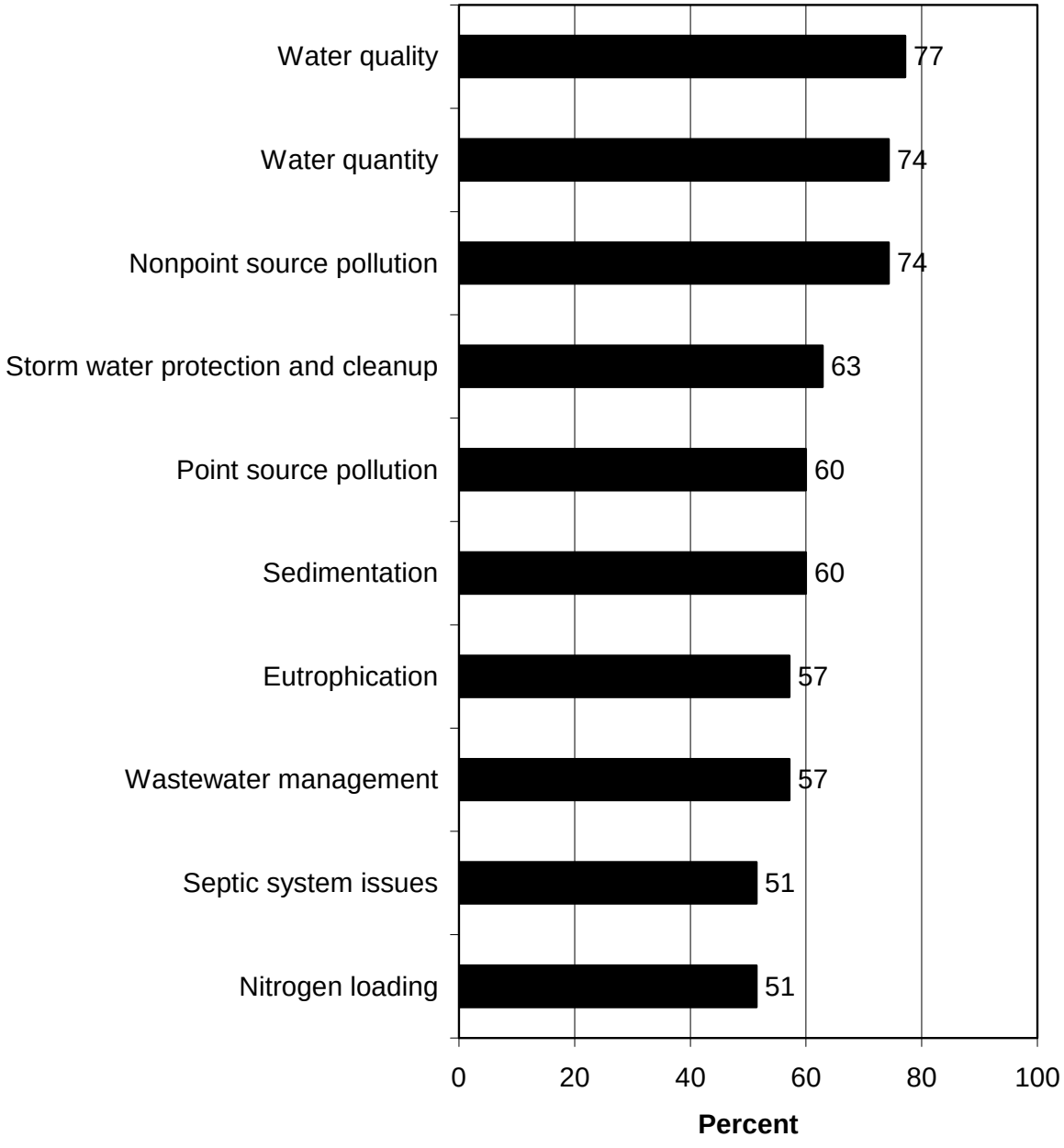
Q154-Q163. Perceptions of coastal training needs for coastal decision-makers regarding habitat issues (percent saying there is a high need).



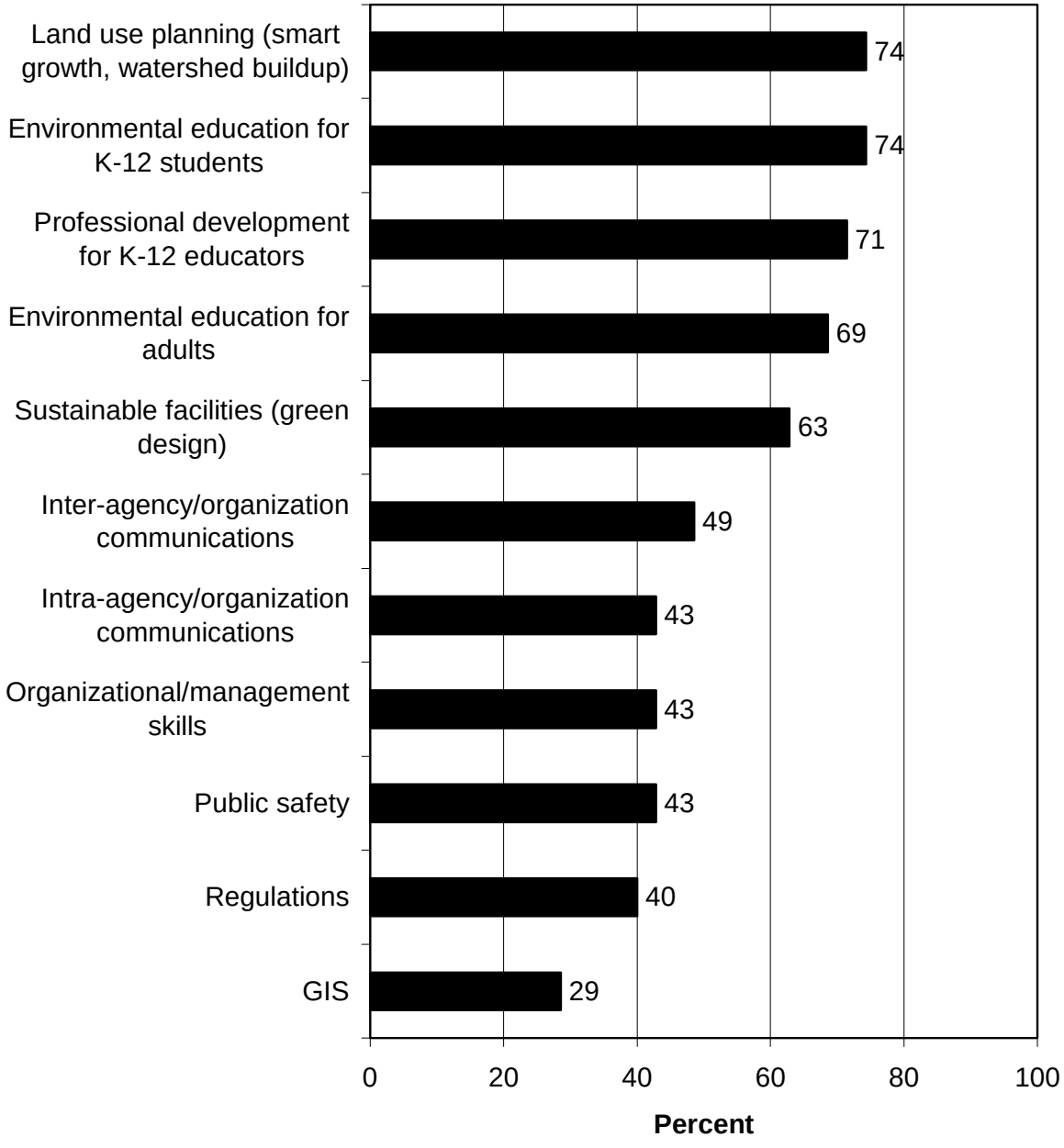
Q164-Q175. Perceptions of coastal training needs for coastal decision-makers regarding coastal issues (percent saying there is a high need).



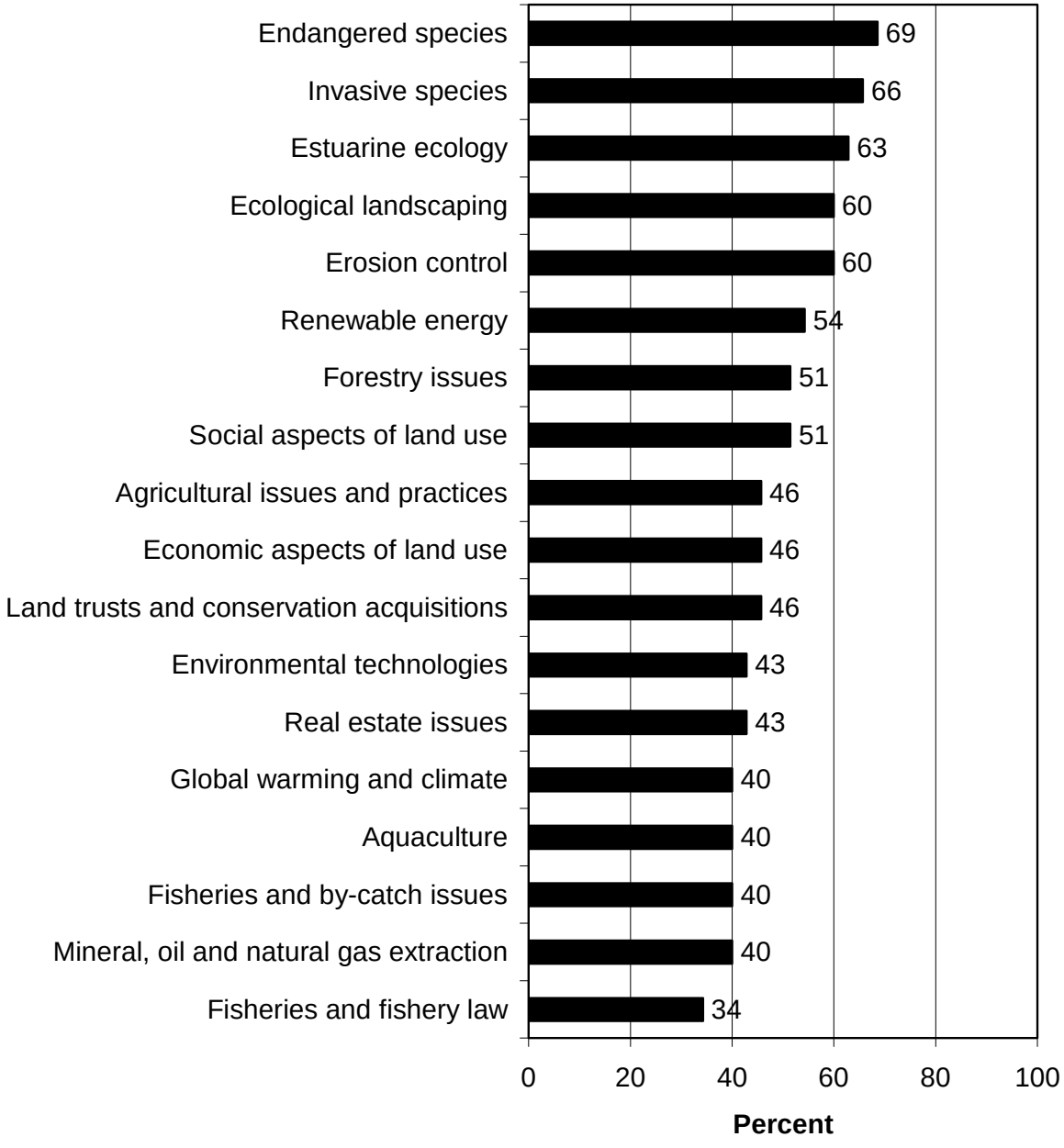
Q176-Q185. Perceptions of coastal training needs for coastal decision-makers regarding water quality issues (percent saying there is a high need).



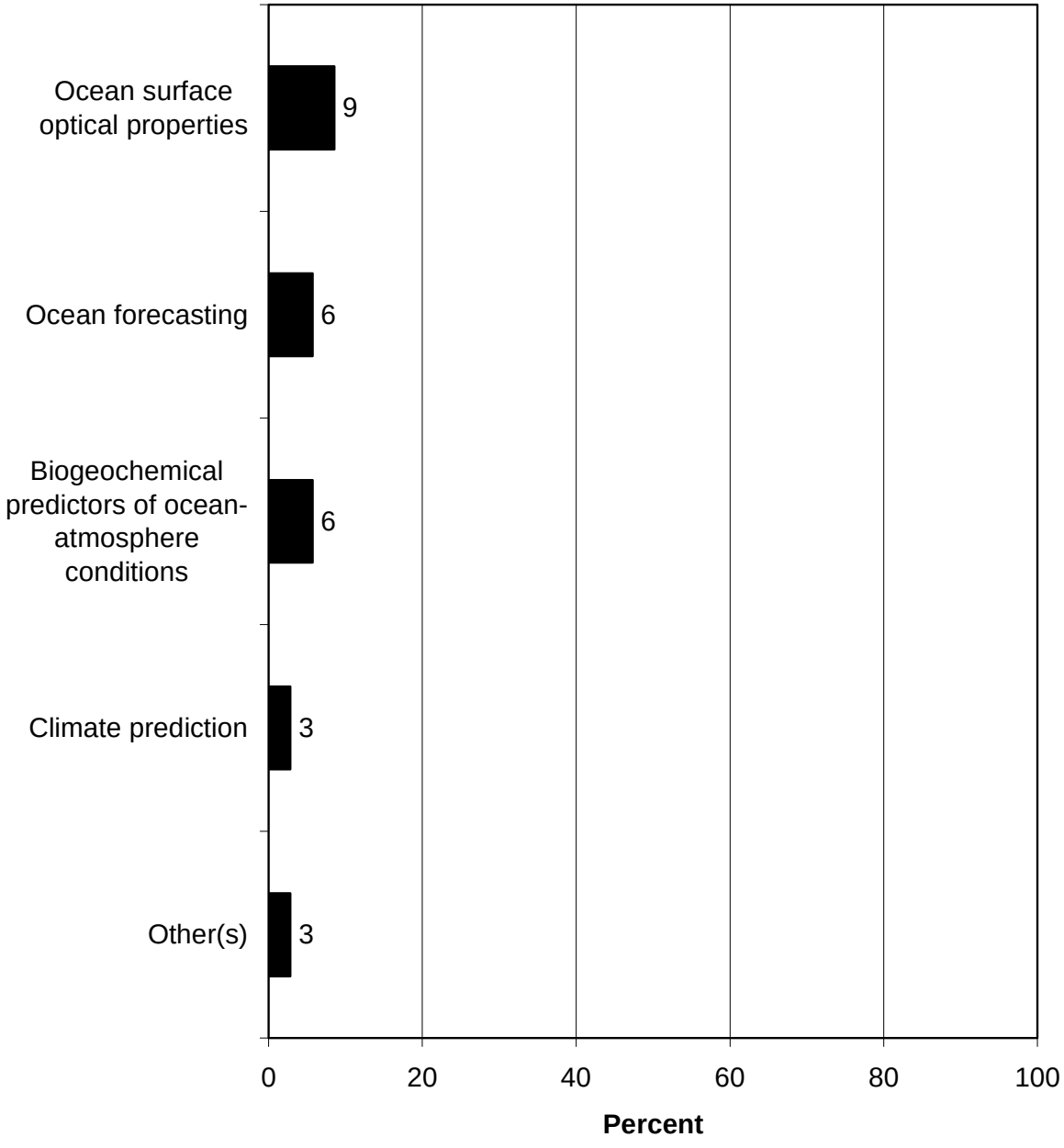
Q186-196. Perceptions of coastal training needs for coastal decision-makers regarding education, planning, and regulation issues (percent saying there is a high need).



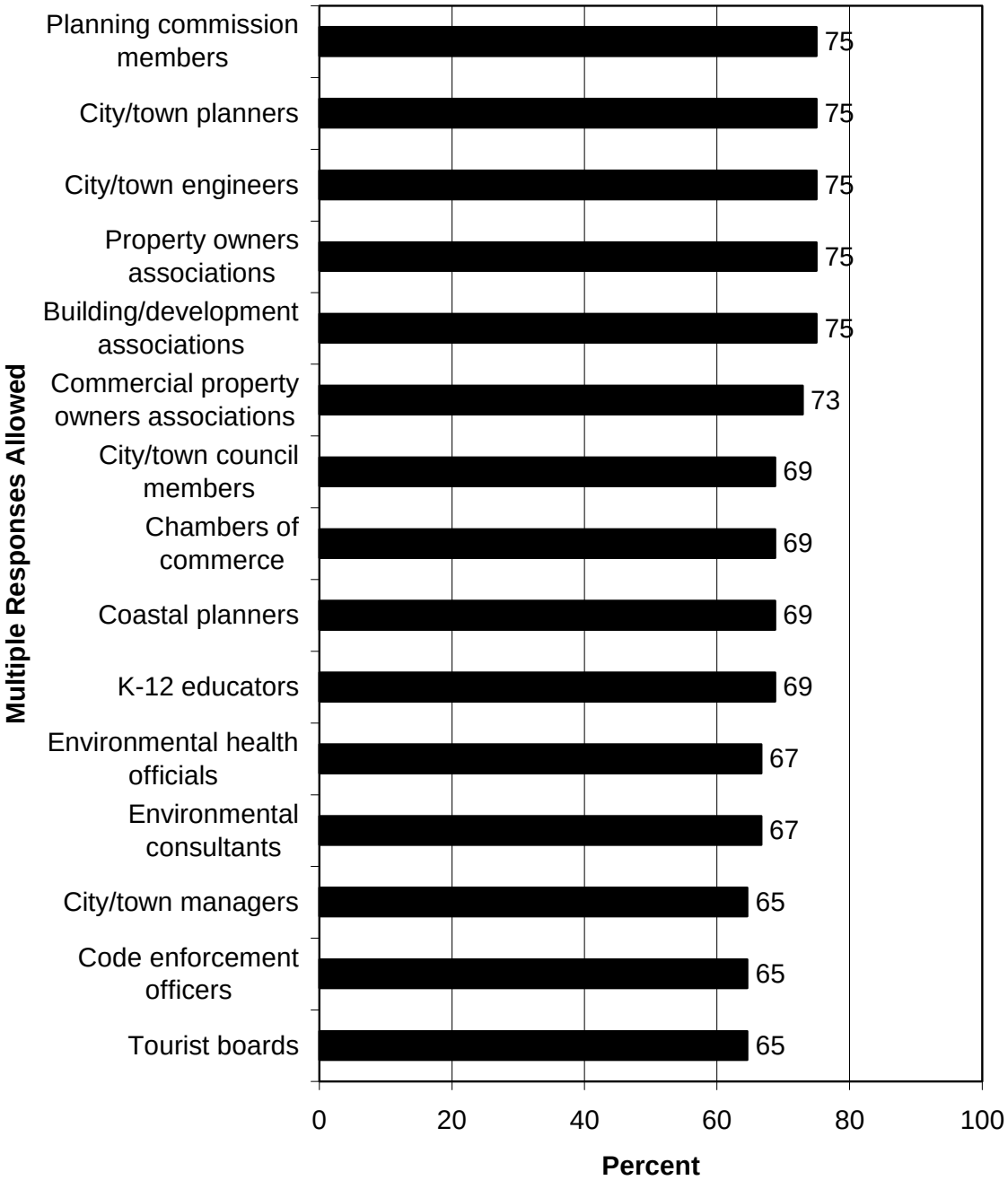
Q197-Q214. Perceptions of coastal training needs for coastal decision-makers regarding resource management and other issues (percent saying there is a high need).



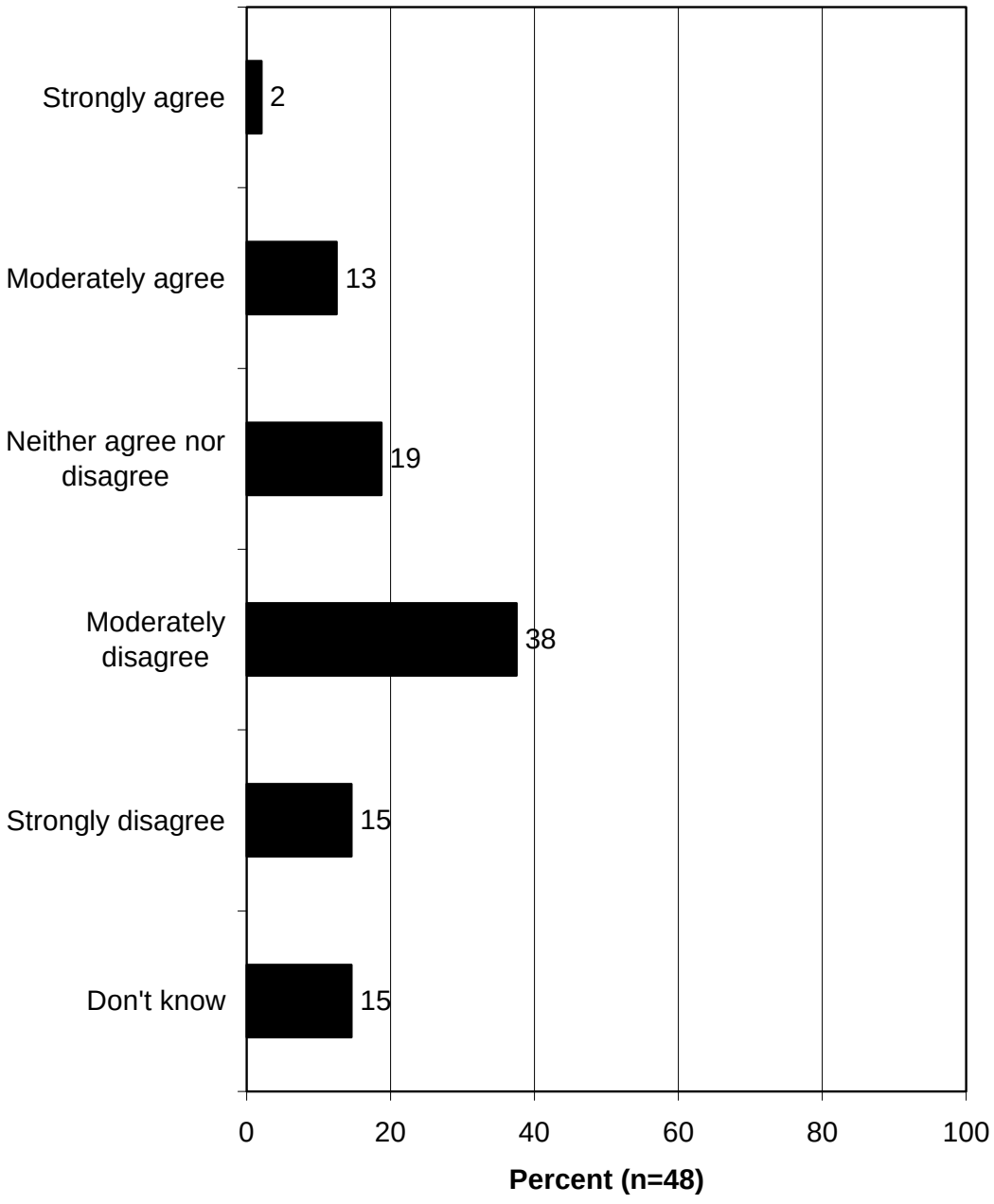
Q215-Q219. Perceptions of coastal training needs for coastal decision-makers regarding ocean sciences topics (percent saying there is a high need).



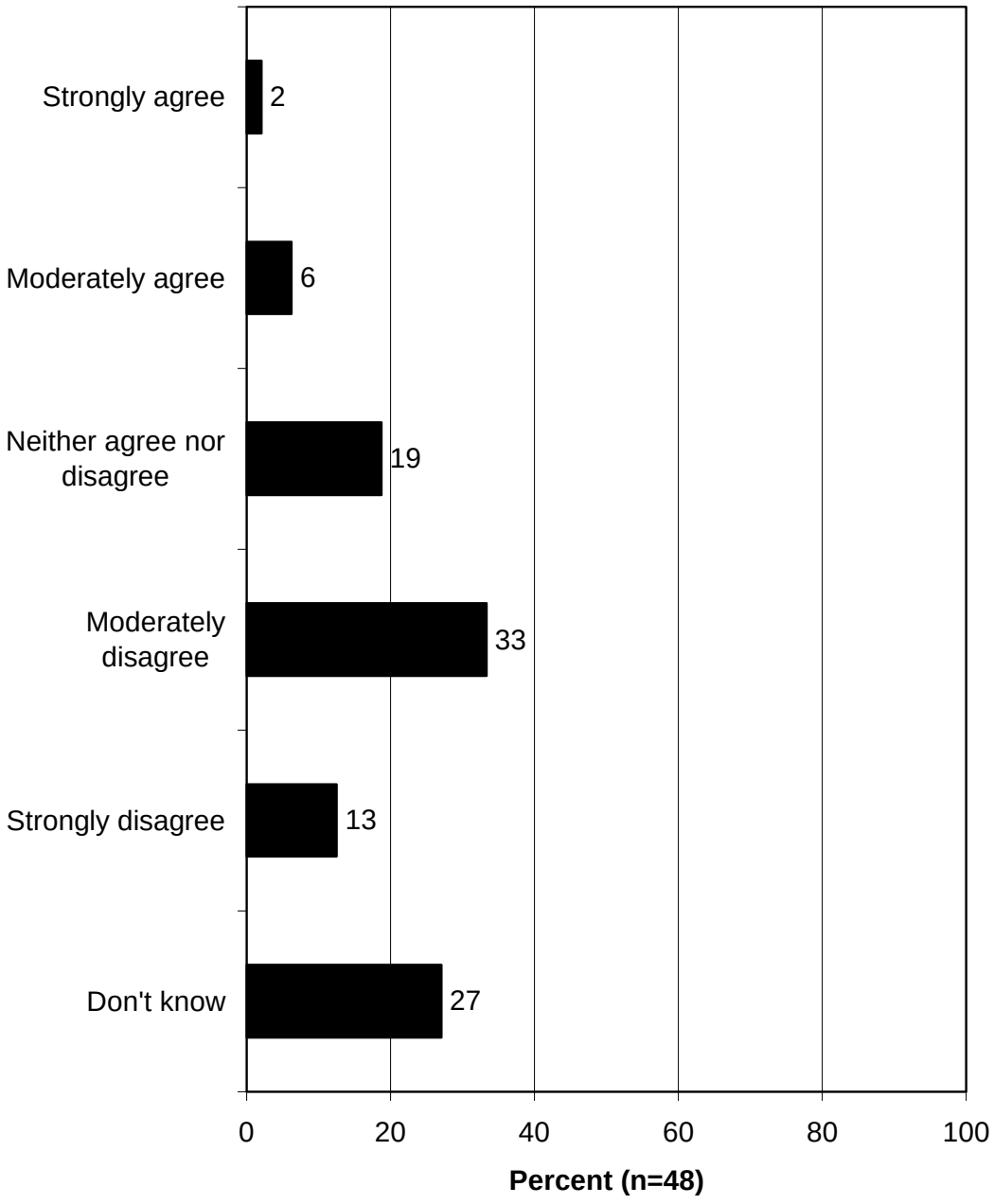
Q257-Q288. Thinks there is a high need for the following groups to receive coastal resource education/outreach. Part 1



Q289. Overall, do you agree or disagree that there is enough coastal resource education/outreach in the state of New Jersey?



Q290. Overall, do you agree or disagree that there are enough coastal resource education/outreach providers that offer education/outreach for coastal decision-makers in New Jersey?



PARTNERING WITH OTHER ORGANIZATIONS

- A strong majority of respondents (77%) said that their division partners with other organizations to conduct coastal resources education/outreach.

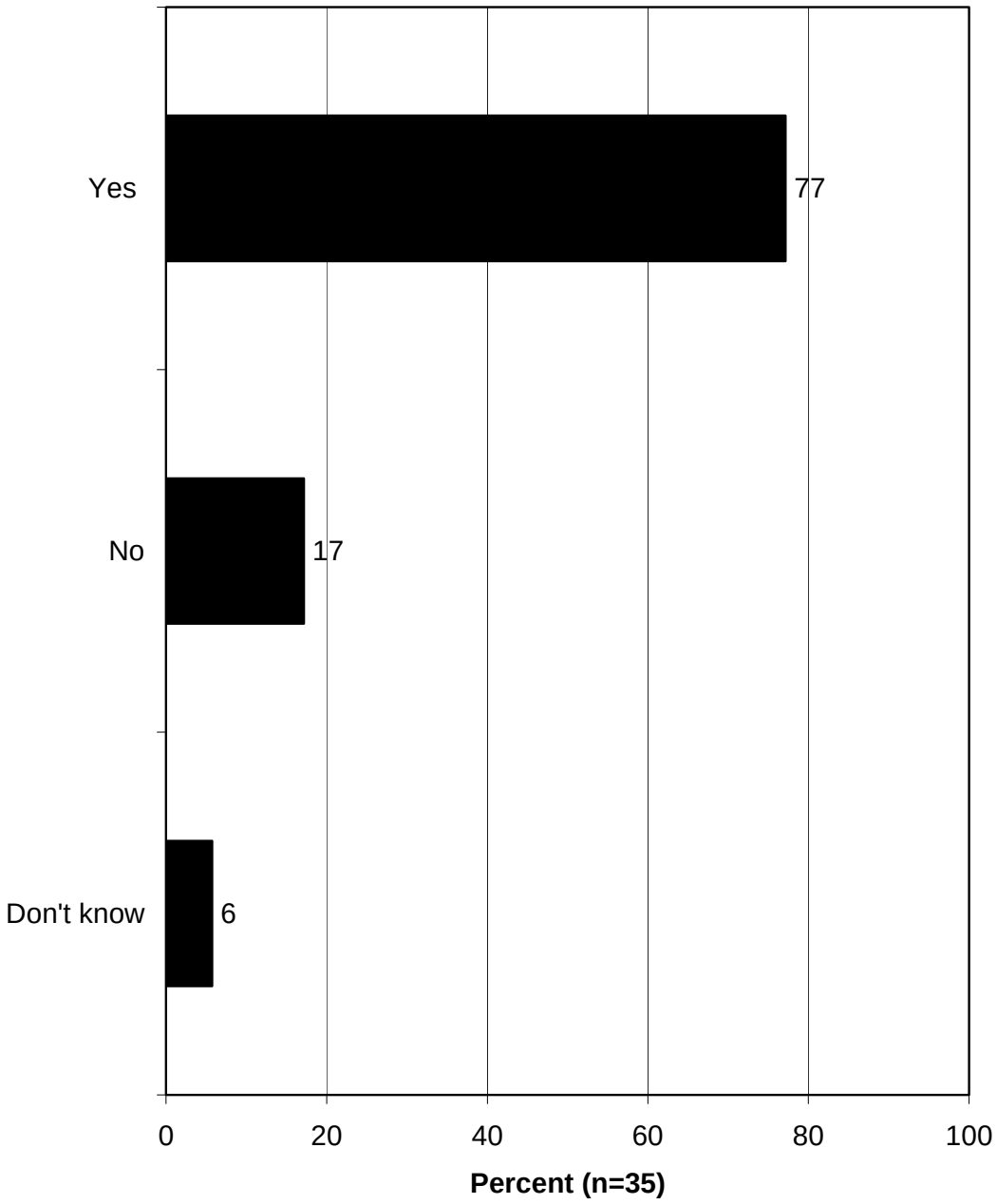
- A strong majority (71%) of those respondents who indicated that their division does not partner with other organizations or who did not know whether their division partnered are very or somewhat interested in having their division partner with another organization to provide coastal resources education/outreach.
  - 19% are very interested, and 52% are somewhat interested.

- The following table shows the agencies and organizations that partner with other agencies and organizations as well as the coastal training programs on which they partner. It is important to note that not all respondents listed the partners and partnership programs, so there may be other relationships that exist that were not captured by this survey.

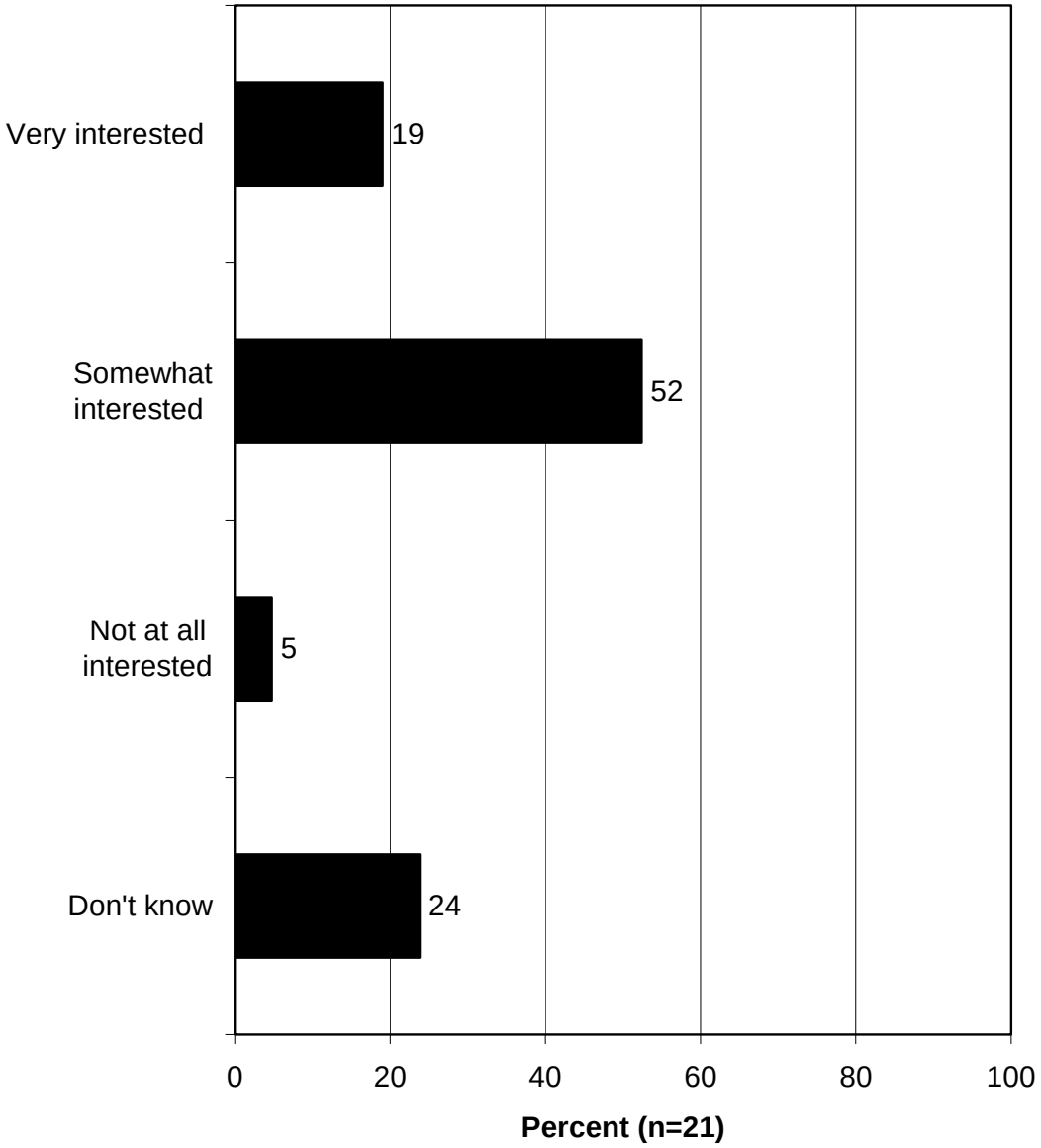
- The entity/item that would be most needed by the respondent's division to have an effective partnership with another organization is a funding agent (74%). Other important entities/ items are the provision of a presenter/trainer (40%) and marketing/promotion assistance (36%).

- The top entities/items that the respondent's division could bring to a partnership are the provision of a presenter/trainer (52%), the provision of content expertise and technical assistance (52%), and facilities and logistical help (45%).

Q241. Does your division partner with other organizations to conduct coastal resources education/outreach?



Q242. How interested are you in having your division partner with other organizations to provide coastal resource education/outreach? (Asked of those who indicated that their division does not partner with other organizations or who did not know whether their division partnered.)



Organizations that conduct coastal training in New Jersey and the programs that they partner on with other organizations		
Organization	**Partner**	**Program**
United States Geological Survey New Jersey District	NJ DEP	None provided
	EPA	None provided
	FEMA	None provided
	Army Corps of Engineers	None provided
US Army Corps of Engineers, Philadelphia district	NJ DEP	Engineering and Construction; Land Use Regulation Program
	U.S. Fish and Wildlife Service	None provided
	U.S. EPA	None provided
	U.S. National Marine Fisheries	None provided
Supawna Meadows National Wildlife Refuge	None provided	None provided
NY/ NJ Harbor Estuary Program (HEP)	NJ DEP	Harbor Estuary Program
	NYS Dept. of Environmental Conservation	Harbor Estuary Program
	NYC Dept. of Environmental Protection	Harbor Estuary Program
	U.S. Army Corps of Engineers	Harbor Estuary Program
	Port Authority of NY and NJ	Harbor Estuary Program
	US EPA	Harbor Estuary Program
	NYC Soil and Water Conservation District	Harbor Estuary Program
	NYC Dept. of Parks and Recreation	Harbor Estuary Program
	NYS Dept. of State, Hudson River Foundation	Harbor Estuary Program
American Littoral Society	Various non-governmental organizations	None provided

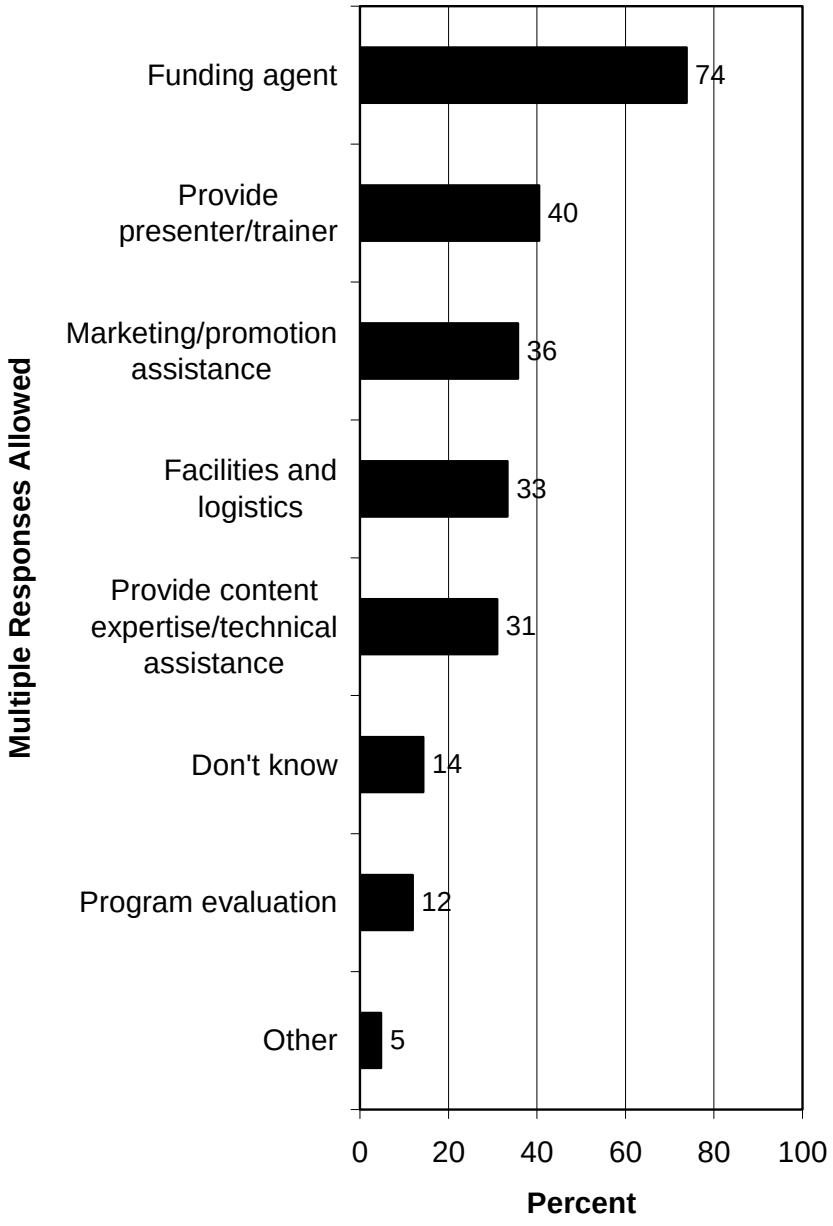
Organizations that conduct coastal training in New Jersey and the programs that they partner on with other organizations		
Organization	**Partner**	**Program**
Citizens United to Protect the Maurice River and its Tributaries	Cumberland County College	None provided
	Landis Sewage Authority	None provided
	NJ DEP	Endangered and nongame species program
	The Nature Conservancy	None provided
	Green Acres	None provided
	Stockton Alliance	None provided
	NJ Audubon Society	None provided
	Wheaton Village	None provided
	Millville Public Library	None provided
Clean Ocean Action	None provided	None provided
Greater Newark Conservancy	NJ DEP	None provided
	NY/NJ Harbor Estuary Program	None provided
	NJ Audubon Society	None provided
Hackensack Riverkeeper, Inc.	NJ DEP	Urban Fishing Program
		Americorps Watershed Ambassador Program
		Crab Advisory
	WMAS Education and Outreach Committee	Signs
		Newsletters
		Workshops
		Videos
	Puffin Cultural Forum	River Films

Organizations that conduct coastal training in New Jersey and the programs that they partner on with other organizations		
Organization	**Partner**	**Program**
New Jersey Chapter of Sierra Club	Riverkeepers	None provided
	American Littoral Society	None provided
	NJ Audubon Society	None provided
	Clean Action Network	None provided
	Baykeepers	None provided
	NJ DEP	None provided
	NJ DEP; Division of Fish and Wildlife	None provided
	NJ DEP; Marine Fisheries	None provided
Wetlands Institute	None provided	None provided
South Branch Watershed Association	Hunterdon County Parks and Recreation	None provided
	Hunterdon County Planning Board	None provided
	Various schools within the watershed	None provided
	Various environmental commissions within the watershed	None provided
Aquatic Discoveries, Inc	None provided	None provided
NJDOT Office of Maritime Resources	None provided	None provided
NJ Department of Environmental Protection; Adopt A Beach program	The Ocean Conservancy	International Coastal Cleanup

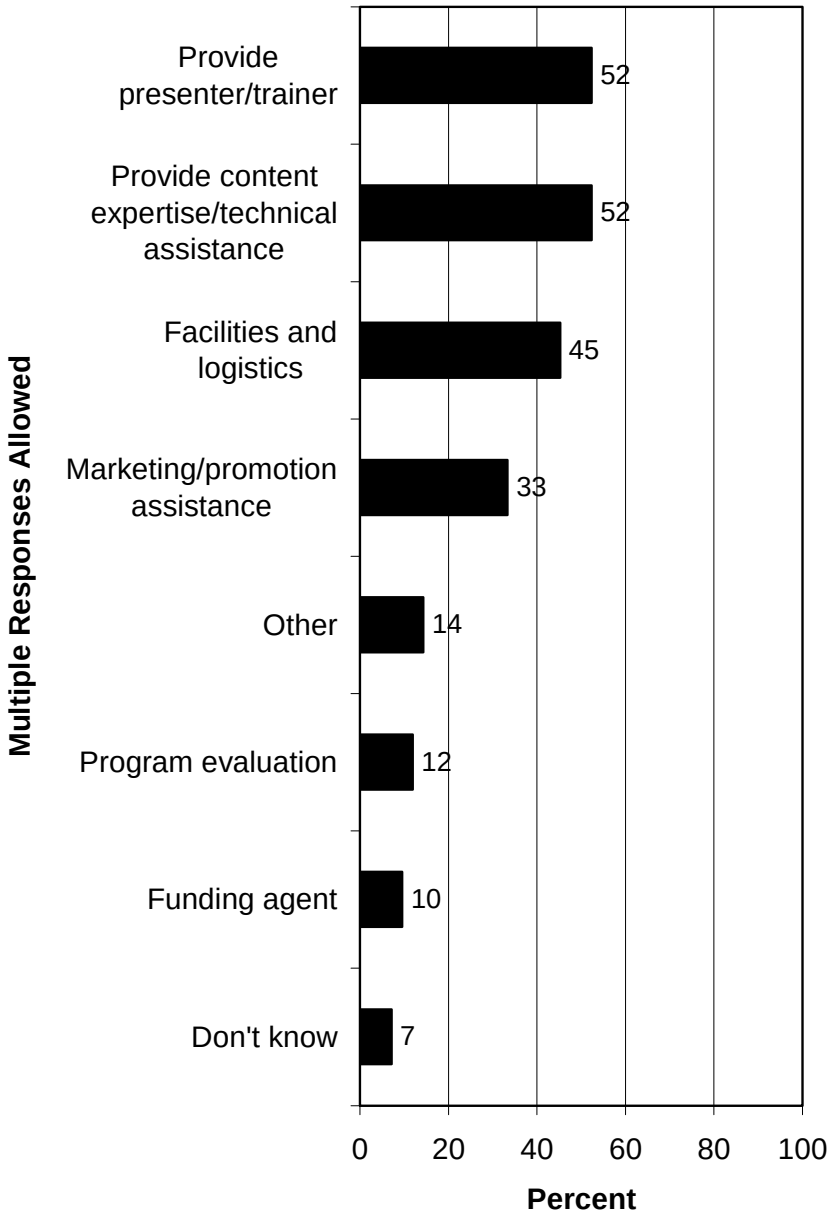
Organizations that conduct coastal training in New Jersey and the programs that they partner on with other organizations		
Organization	**Partner**	**Program**
NJ Division of Fish & Wildlife	The Wetlands Institute	Coastal workshop for teachers and Coastal BOW
	ARE (Aquatice Resource Educators/Coordinators) from DE and MD	Green Eggs and Sand; The Horseshoe Crab/Shorebird Curriculum
	Ocean County Soil Conservation District	Ocean County Environmental Education Roundtable
	Rutgers University	Atlantic County Environmental Education Roundtable
	NJ DEP Division of Watershed Management	Atlantic County Environmental Education Roundtable
	NJBBA	BOW Surf and Flyfishing workshop
	Jersey Coast Anglers	BOW Surf and Flyfishing workshop
	bait and tackle shop owners	BOW Surf and Flyfishing workshop
	educators	BOW Surf and Flyfishing workshop
Camden County Environmental Studies Center (division of the Camden County Dept. of Parks)	Camden County Office of Environmental Affairs	None provided
	DVRPC (Watershed Management Area 18, Education and Outreach Committee)	None provided
Cape May Point State Park	Cape May Bird Observatory	None provided
	Cape May Nature Center	None provided
Island Beach State Park	NJ DEP Dept. of Fish and Wildlife	None provided
	Barnegat Bay Estuary Program	None provided
	Clean Ocean Action	None provided
	Ocean Soil Conservation District	None provided
	Wakefern Corp.	None provided
	Ocean County Parks and Recreation	None provided

Organizations that conduct coastal training in New Jersey and the programs that they partner on with other organizations		
Organization	**Partner**	**Program**
Burlington County Soil Conservation District	Natural Resource Conservation Service	None provided
Freehold Soil Conservation District	Manasquan River Watershed Association	None provided
	Monmouth County Water Resources	None provided
	NJ Conservation Partnership	None provided
Hudson-Essex-Passaic Soil Conservation District	U.S. Dept. of Agriculture	Biodiversity
		Habitat Program
	Natural Resource Conservation Service	Biodiversity
		Habitat Program
	TAC Omni (consultant)	Habitat Protection/Restoration
Morris Cty Soil Conservation District	Wetlands Institute	Project WET training
Rider University- Department of Geological and Marine Sciences	Shoals Marine Laboratory	None provided
	Bermuda Biological Station for Research	None provided
	Newfound Harbor Marine Institute	None provided
Stevens Institute of Technology	New Jersey Sea Grant College Program	Coastal processes
	New Jersey Sea Grant College Program	Protection
	New Jersey Sea Grant College Program	Hazard mitigation
	New Jersey Sea Grant College Program	Sustainable communities
	New Jersey Sea Grant College Program	Natural resource management

Q249. Which of the following does your division need for an effective partnership with other organizations to provide coastal resource education/outreach? (Asked of those who were interested in having their division partner with other organizations.)



Q252. What do you feel your division could bring to a partnership with other organizations to provide coastal resources education/outreach? (Asked of those who were interested in having their division partner with other organizations.)



ORGANIZATIONS THAT PROVIDE COASTAL TRAINING

The following section provides profiles of each agency/organization that said they conducted Coastal Resource Professional Development in New Jersey. This section is designed to provide "fact sheets" on the current Coastal Resource Professional Development providers (based on the respondents) in New Jersey. The profiles contain agency/organization's responses to specific, selected questions. When describing the topics/skills areas that these agencies/organizations felt were in need of more training, majorities in each major category (habitat issues, coastal issues, water quality issues, education, planning and regulation, resource management and other issues, and ocean sciences topics) were used to determine whether or not an agency/organization considered a topic area to be a "high" priority.

Federal Agencies

Supawna Meadows National Wildlife Refuge (NWR)

Mission Statement: To administer the lands and waters of Supawna Meadows NWR for the conservation, management, and where appropriate, restoration of the fish, wildlife, and plant resources and their habitats for the benefit of present and future generations of Americans.

How Important Is Coastal Resource Professional Development to Organization Compared to Other Programs: Somewhat important.

How Well Organization Training Matches Coastal Resource Professional Development Goals: Matches somewhat.

Number of Programs: Varies with requests received.

Number of Program Sessions: 3

Program Names: Third Grade Field Trip.

Types of Training: Science-based information, educational materials, classes, tours or field trips.

Coastal Resource Professional Development Formats: Special events, field trips, interpretive signs.

Coastal Resource Professional Development Delivery Methods: Field trips, courses, presentations.

Staff Size: 4

How Training Provided: 75% organization staff, 25% volunteers.

Money Budgeted for Coastal Resource Professional Development: $0

Partners: NA

Number of People Served: 130

Types of Groups/People Served: K-12 educators, college classes and students, general population.

Cost per Person to Develop Coastal Resource Professional Development Program: Don't know.

Fees per Person: $0

Barriers to Coastal Resource Professional Development: Time, funding, lack of partnerships, lack of personnel in general, lack of education/outreach for personnel.

What Organization Could Bring to a Partnership: Facilities and logistics, provide presenter/trainer.

Top Perceived Training Topic Needs: Habitat issues, coastal issues, water quality issues, education, planning and regulation, resource management and other issues.

Top Perceived Groups in Need of Training: Local county managers/officials, business organizations, K-12 educators.

United States Geological Survey (USGS), New Jersey District

Mission Statement: The USGS provides reliable scientific information to describe and understand the earth, minimize the loss of life and property from natural disasters; manage water, biological, energy, and mineral resources; and enhance and protect our quality of life.

How Important Is Coastal Resource Professional Development to Organization Compared to Other Programs: Somewhat important.

How Well Organization Training Matches Coastal Resource Professional Development Goals: Matches somewhat.

Number of Programs: 1-4, depends on projects each year.

Number of Program Sessions: 2-6

Program Names: Barregat Bay Estuary Program, New York Harbor Sediment Project.

Types of Training: Science-based information, outreach, educational materials.

Coastal Resource Professional Development Formats: Information products and technical resources, seminars, technical education/outreach programs, publications, Websites.

Coastal Resource Professional Development Delivery Methods: Case studies, lecture, presentations, round-table discussion.

Staff Size: 100+

How Training Provided: Don't know.

Money Budgeted for Coastal Resource Professional Development: None specifically for outreach, it is just part of the project.

Partners: NJ DEP, EPA, FEMA, U.S. Army Corps of Engineers.

Number of People Served: 100 +/-

Types of Groups/People Served: City/town council members, county commissioners, planning commission members, city/town managers, city/town planners, city/town engineers, environmental health officials, conservation commissions, chapters of environmental organizations, watershed associations, chambers of commerce, environmental consultants, wetland scientists, environmental educators, universities, estuarine researchers, coastal regulators, coastal planners, environmental protection agency personnel.

Cost per Person to Develop Coastal Resource Professional Development Program: Not sure, but not much.

Fees per Person: $0

Barriers to Coastal Resource Professional Development: Time, funding.

What Organization Could Bring to a Partnership: Facilities and logistics, funding agent.

Top Perceived Training Topic Needs: Habitat issues, coastal issues, water quality issues.

Top Perceived Groups in Need of Training: Local county managers/officials, business organizations, state/agency/professional associations.

USDA – Natural Resources Conservation Service (NRCS)

Mission Statement: The NRCS provides leadership in a partnership effort to help people conserve, maintain, and improve our natural resources and environment.

How Important Is Coastal Resource Professional Development to Organization Compared to Other Programs: Somewhat important.

How Well Organization Training Matches Coastal Resource Professional Development Goals: Matches somewhat.

Number of Programs: 1

Number of Program Sessions: 5

Program Names: We have the Cape May Plant Materials Center which develops superior varieties of plants for the coastal area.

Types of Training: Science-based information.

Coastal Resource Professional Development Formats: Informal education/outreach, publications, field trips, Websites.

Coastal Resource Professional Development Delivery Methods: Demonstration, field trips, courses, presentations.

Staff Size: 80

How Training Provided: 100% organization staff.

Money Budgeted for Coastal Resource Professional Development: $0

Partners: NA

Number of People Served: 150

Types of Groups/People Served: City/town council members, city/town engineers, chapters of environmental organizations, property owners associations, environmental consultants, wetland scientists, coastal planners, marine resources agency personnel, environmental protection agency personnel.

Cost per Person to Develop Coastal Resource Professional Development Program: $5

Fees per Person: $0

Barriers to Coastal Resource Professional Development: Time, funding, lack of personnel in general, lack of education/outreach for personnel.

What Organization Could Bring to a Partnership: Marketing/promotion assistance, facilities and logistics, provide presenter/trainer, provide content expertise/technical assistance.

Top Perceived Training Topic Needs: Habitat issues.

Top Perceived Groups in Need of Training: Local county managers/officials, state agency/ professional associations.

U.S. Army Corps of Engineers, Philadelphia District

Mission Statement: No formal mission statement.

How Important Is Coastal Resource Professional Development to Organization Compared to Other Programs: Somewhat important.

How Well Organization Training Matches Coastal Resource Professional Development Goals: Matches somewhat.

Number of Programs: No formal programs.

Number of Program Sessions: 15

Program Names: NA

Types of Training: Science-based information, outreach, educational materials.

Coastal Resource Professional Development Formats: Informal education/outreach, publications, Websites.

Coastal Resource Professional Development Delivery Methods: Presentations, round-table discussion.

Staff Size: 4

How Training Provided: 90% organization staff, 10% consultants.

Money Budgeted for Coastal Resource Professional Development: $30,000

Partners: NJ DEP; Engineering and Construction, NJ DEP; Land Use Regulation Program, USFWS, US EPA, US NMF

Number of People Served: Hundreds – most at public meetings and workshops on Corps coastal projects.

Types of Groups/People Served: City/town council members, city/town managers, city/town engineers, conservation commissions, chapters of environmental organizations, property owners associations, environmental consultants, coastal regulators, coastal planners, marine resources agency personnel, fisheries and wildlife personnel, environmental protection agency personnel, K-12 educators.

Cost per Person to Develop Coastal Resource Professional Development Program: $1

Fees per Person: $0

Barriers to Coastal Resource Professional Development: Time, funding, lack of partnerships.

What Organization Could Bring to a Partnership: Provide presenter/trainer, provide content expertise/technical assistance.

Top Perceived Training Topic Needs: Coastal issues, water quality issues.

Top Perceived Groups in Need of Training: Local county managers/officials.

State Agencies

New Jersey Department of Environmental Protection, Adopt a Beach Program

Mission Statement: No mission statement.

How Important Is Coastal Resource Professional Development to Organization Compared to Other Programs: Very important.

How Well Organization Training Matches Coastal Resource Professional Development Goals: Matches exactly.

Number of Programs: 1

Number of Program Sessions: 2

Program Names: Spring and Fall beach cleanups.

Types of Training: Science-based information, outreach, educational materials, classes, tours, or field trips.

Coastal Resource Professional Development Formats: Informal education/outreach, special events, field trips.

Coastal Resource Professional Development Delivery Methods: Field trips, courses.

Staff Size: 1

How Training Provided: 100% organization staff.

Money Budgeted for Coastal Resource Professional Development: The program receives $50,000 per year from the Coastal Protection Trust Fund.

Partners: The Ocean Conservancy, International Coastal Cleanup.

Number of People Served: Approximately 1,200

Types of Groups/People Served: Property owners associations, environmental educators, coastal regulators, marine resources agency personnel, fisheries and wildlife personnel, K-12 educators, general population.

Cost per Person to Develop Coastal Resource Professional Development Program: NA

Fees per Person: $0

Barriers to Coastal Resource Professional Development: Don't know.

What Organization Could Bring to a Partnership: Don't know.

Top Perceived Training Topic Needs: Habitat issues, coastal issues, water quality issues, education, planning and regulation, resource management and other issues, ocean sciences topics.

Top Perceived Groups in Need of Training: Local county managers/officials, volunteer organization members, business organizations, state/agency/professional associations, K-12 educators, general population.

NJ DEP, Division of Fish and Wildlife, Aquatic Education Program

Mission Statement: To protect and manage the State's fish and wildlife to maximize their long-term biological, recreational and economic values for all New Jerseyans.

How Important Is Coastal Resource Professional Development to Organization Compared to Other Programs: Somewhat important.

How Well Organization Training Matches Coastal Resource Professional Development Goals: Matches somewhat.

Number of Programs: 9

Number of Program Sessions: NA.

Program Names:
Coastal Teachers Workshop
Environmental Educators Roundtable
Sedge Island Workshops
Green Eggs and Sand-Shorebird/Horseshoe Crab Workshop
Project Aquatic WILD
Becoming an Outdoorswoman
Coastal Bay Workshop

Surf and Fly Fishing Workshops
Fly fishing for Women Clinic

Types of Training: Formal training, science-based information, outreach.

Coastal Resource Professional Development Formats: Certification programs, conferences, informal education/outreach, in-service education/outreach for educators, publications, Websites.

Coastal Resource Professional Development Delivery Methods: One-on-one instruction, presentations, round-table discussion.

Staff Size: 3

How Training Provided: 100% organization staff.

Money Budgeted for Coastal Resource Professional Development: $160,000

Partners: The Wetlands Institute, ARE (aquatic resource educators/coordinators) from Delaware and Maryland, Ocean County Soil Conservation District, Rutgers University, NJ DEP Division of Watershed Management, NJBBA, Jersey Coast Anglers, bait and tackle shop owners.

Number of People Served: 700-800

Types of Groups/People Served: Environmental educators, universities, K-12 educators, general population.

Cost per Person to Develop Coastal Resource Professional Development Program: NA.

Fees per Person: Free (except for Becoming an Outdoors Woman).

Barriers to Coastal Resource Professional Development: Funding.

What Organization Could Bring to a Partnership: Marketing/promotion assistance, provide content expertise/technical assistance.

Top Perceived Training Topic Needs: Coastal issues, water quality issues, education, planning and regulation, resource management and other issues.

Top Perceived Groups in Need of Training: Local county managers/officials, business organizations, K-12 educators, general population.

Island Beach State Park

Mission Statement: The New Jersey Division of Parks and Forestry is dedicated to the excellent stewardship of the state's rich and diverse historic, cultural, recreational, and natural resources, for the benefit of present and future generations. We are committed to establishing a creative

and cooperative environment that attracts and retains dedicated employees and promotes dynamic partnerships to effectively manage the resources entrusted to us.

How Important Is Coastal Resource Professional Development to Organization Compared to Other Programs: Very important.

How Well Organization Training Matches Coastal Resource Professional Development Goals: Matches exactly.

Number of Programs: 13

Number of Program Sessions: NA

Program Names: Barrier Island Ecology, Tour the Beach, Seine the Bay, Fish Tank Feeding Frenzy, Kayaking Sedge Islands, Birding By Kayak, Bird Walks, Surf Fishing, Night Walks, Barrier Island Garden Tour, Touch Tank – Bay Life, Beach Plum – History and Picking, Bird Banding.

Types of Training: Formal training, science-based information, outreach, educational materials, classes, tours or field trips.

Coastal Resource Professional Development Formats: Informal education/outreach, in-service education/outreach for educators, publications, interpretive signs, Websites.

Coastal Resource Professional Development Delivery Methods: Demonstration, field trips, courses, lecture, one-on-one instruction, presentations.

Staff Size: 1

How Training Provided: 85% organization staff, 15% volunteers, sometimes 100% others.

Money Budgeted for Coastal Resource Professional Development: NA.

Partners: Fish and Wildlife, Barnegat Bay Estuary Program, Clean Ocean Action, Ocean Soil Conservation, Wakefern Corporation, Ocean County Parks and Recreation.

Number of People Served: 60,000

Types of Groups/People Served: Environmental and schools, chapters of environmental organizations, watershed associates, tourist boards.

Cost per Person to Develop Coastal Resource Professional Development Program: $0 – not including salaries or monies obtained from grants.

Fees per Person: $0

Barriers to Coastal Resource Professional Development: Time, funding, lack of personnel in general.

What Organization Could Bring to a Partnership: Marketing/promotion assistance, facilities and logistics, provide presenter/trainer, provide content expertise/technical assistance.

Top Perceived Training Topic Needs: Habitat issues, coastal issues, water quality issues, education, planning and regulation, resource management and other issues.

Top Perceived Groups in Need of Training: Local county managers/officials, volunteer organization members, business organizations, state/agency/professional associations, K-12 educators, general population.

Cape May Point State Park

Mission Statement: Stewardship of natural resources, public recreation and education.

How Important Is Coastal Resource Professional Development to Organization Compared to Other Programs: Very important.

How Well Organization Training Matches Coastal Resource Professional Development Goals: Matches somewhat.

Number of Programs: 6

Number of Program Sessions: 25

Program Names:
Delaware Bay program
Beach Scavenger Hunt
Rocks and Fossils at Sunset Beach
Beach Slide Show
Horseshoe Crab Outreach
Touch Tank

Types of Training: Classes, tours or field trips.

Coastal Resource Professional Development Formats: Informal education/outreach, field trips, interpretive signs.

Coastal Resource Professional Development Delivery Methods: Demonstration, field trips/ courses, lecture, one-on-one instruction, presentations.

Staff Size: 16

How Training Provided: 50% organization staff, 50% volunteers.

Money Budgeted for Coastal Resource Professional Development: NA

Partners: Cape May Bird Observatory, Cape May Nature Center.

Number of People Served: 700

Types of Groups/People Served: K-12 educators, general population.

Cost per Person to Develop Coastal Resource Professional Development Program: NA.

Fees per Person: $0

Barriers to Coastal Resource Professional Development: Time, funding, distance, lack of partnerships, lack of personnel in general.

What Organization Could Bring to a Partnership: Facilities and logistics.

Top Perceived Training Topic Needs: Habitat issues.

Top Perceived Groups in Need of Training: Local county managers/officials, business organizations, K-12 educators, general population.

Liberty State Park Interpretive Center

Mission Statement: To provide the public with access to the harbor's resources, a sense of its history and the charge of responsibility for its continued improvement.

How Important Is Coastal Resource Professional Development to Organization Compared to Other Programs: Very important.

How Well Organization Training Matches Coastal Resource Professional Development Goals: Matches somewhat.

Number of Programs: 4

Number of Program Sessions: 40

Program Names: Estuary Explorers, Urban Scientists, Project WET (Water Education for Teachers), Project Aquatic WILD.

Types of Training: Formal training, science-based information, outreach, educational materials, classes, tours, or field trips.

Coastal Resource Professional Development Formats: Field-based courses, in-service education/outreach for educators, publications, field trips, interpretive signs.

Coastal Resource Professional Development Delivery Methods: Field trips, courses, lecture, one-on-one instruction.

Staff Size: 3

How Training Provided: 100% organization staff.

Money Budgeted for Coastal Resource Professional Development: Don't know; Park Superintendent does budgets.

Partners: NA.

Number of People Served: 1,000

Types of Groups/People Served: School teachers and members of the local community, K-12 educators.

Cost per Person to Develop Coastal Resource Professional Development Program: Don't know.

Fees per Person: All of our programs are free, as we are a state park.

Barriers to Coastal Resource Professional Development: Time, funding, distance, lack of partnerships, lack of education/outreach for personnel.

What Organization Could Bring to a Partnership: Marketing/promotion assistance, facilities and logistics, provide presenter/trainer.

Top Perceived Training Topic Needs: Education, planning and regulation, ocean science topics.

Top Perceived Groups in Need of Training: Local/county managers/officials, volunteer organization members, business organizations, state/agency/professional associations, K-12 educators, general population.

New Jersey Department of Transportation, Office of Maritime Resources

Mission Statement: NA.

How Important Is Coastal Resource Professional Development to Organization Compared to Other Programs: Somewhat important.

How Well Organization Training Matches Coastal Resource Professional Development Goals: Matches somewhat.

Number of Programs: 1 formal.

Number of Program Sessions: Varies.

Program Names: Children's Educational Webpage
All Hands on Deck
Dredging 101
Coast Day New Jersey
Clean Marina Program

Types of Training: Science-based information, outreach, educational materials, classes, tours or field trips.

Coastal Resource Professional Development Formats: Special events.

Coastal Resource Professional Development Delivery Methods: NA

Staff Size: 8

How Training Provided: 90% organization staff, 5% consultants, 5% academics.

Money Budgeted for Coastal Resource Professional Development: $60,000

Partners: Said they partner, but none listed.

Number of People Served: NA.

Types of Groups/People Served: County commissioners, city/town planners, city/town engineers, transportation officials, legislators and staff, school children, general population.

Cost per Person to Develop Coastal Resource Professional Development Program: NA

Fees per Person: NA.

Barriers to Coastal Resource Professional Development: Time, funding, lack of personnel in general.

What Organization Could Bring to a Partnership: Marketing/promotion assistance, funding agent, provide content expertise/technical assistance.

Top Perceived Training Topic Needs: NA.

Top Perceived Groups in Need of Training: Local county managers/officials, K-12 educators, general population.

The Richard Stockton Coastal Research Center

Mission Statement: To provide regional information on coastal zone changes and long-term trends, at enough sites to be statistically meaningful to State and local coastal zone managers.

How Important Is Coastal Resource Professional Development to Organization Compared to Other Programs: Somewhat important.

How Well Organization Training Matches Coastal Resource Professional Development Goals: Matches somewhat.

Number of Programs: Rarely formal programs; on demand.

Number of Program Sessions: 0

Program Names: NA.

Types of Training: Formal training, science-based information, outreach.

Coastal Resource Professional Development Formats: Conferences, information products and technical resources, Web-based programs.

Coastal Resource Professional Development Delivery Methods: Case studies, field trips/courses, lectures, presentations.

Staff Size: 8

How Training Provided: NA.

Money Budgeted for Coastal Resource Professional Development: NA.

Partners: None.

Number of People Served: 0

Types of Groups/People Served: City/town council members, city/town managers, city/town engineers, federal/state regulatory officials, environmental consultants, engineering firms, coastal regulators, coastal planners, marine resources agency personnel, fisheries and wildlife personnel, environmental protection agency personnel.

Cost per Person to Develop Coastal Resource Professional Development Program: NA

Fees per Person: NA

Barriers to Coastal Resource Professional Development: Time, funding, lack of personnel.

What Organization Could Bring to a Partnership: NA.

Top Perceived Training Topic Needs: Coastal issues.

Top Perceived Groups in Need of Training: Local county managers/officials, business organizations, volunteer organization members.

Warren County Soil Conservation District

Mission Statement: To enhance, protect and conserve the vital natural resources of Warren County through federal, state, regional, county and local cooperation.

How Important Is Coastal Resource Professional Development to Organization Compared to Other Programs: Not at all important.

How Well Organization Training Matches Coastal Resource Professional Development Goals: Don't know.

Number of Programs: 0

Number of Program Sessions: 4

Program Names: NA.

Types of Training: Formal training, science-based information, outreach, educational materials, classes, tours, or field trips.

Coastal Resource Professional Development Formats: Informal education/outreach, publications, field trips, interpretive signs.

Coastal Resource Professional Development Delivery Methods: Demonstration, field trips, courses, presentations.

Staff Size: 5

How Training Provided: 100% organization staff.

Money Budgeted for Coastal Resource Professional Development: Don't know.

Partners: NA.

Number of People Served: 5,000

Types of Groups/People Served: County commissioners, planning commission members, city/town planners, conservation commissions, watershed associations, property owners associations, building/development associations, environmental consultants, environmental

educators, estuarine researchers, environmental protection agency personnel, K-12 educators, general population.

Cost per Person to Develop Coastal Resource Professional Development Program: Don't know.

Fees per Person: $0 - $30

Barriers to Coastal Resource Professional Development: Time, funding, lack of personnel in general.

What Organization Could Bring to a Partnership: Facilities and logistics, provide presenter/trainer, provide content expertise/technical assistance, program evaluation.

Top Perceived Training Topic Needs: Habitat issues, coastal issues, water quality issues, education, planning and regulation, resource management and other issues, ocean sciences topics.

Top Perceived Groups in Need of Training: Local county managers/officials, volunteer organization members, business organizations, state/agency/professional associations, K-12 educators, general population.

Freehold Soil Conservation District

Mission Statement: To provide leadership and administer programs to help people conserve, improve and sustain our natural resources and environment.

How Important Is Coastal Resource Professional Development to Organization Compared to Other Programs: Somewhat important.

How Well Organization Training Matches Coastal Resource Professional Development Goals: Matches somewhat.

Number of Programs: 1

Number of Program Sessions: 10

Program Names: Classroom presentations using the Enviroscape to demonstrate nonpoint source pollution, *Watershed Property Management Guide* for the Manasquan River Watershed Association, poster-brochure for the Monmouth Coastal Watershed Partnership.

Types of Training: Outreach, educational materials.

Coastal Resource Professional Development Formats: Informal education/outreach, special events, workshops, publications, Websites.

Coastal Resource Professional Development Delivery Methods: Demonstration.

Staff Size: 18

How Training Provided: 100% organization staff.

Money Budgeted for Coastal Resource Professional Development: NA.

Partners: Manasquan River Watershed Association, Monmouth County Water Resources, New Jersey Conservation Partnership.

Number of People Served: 1,500

Types of Groups/People Served: Watershed associations, rotary international, environmental educators, K-12 educators.

Cost per Person to Develop Coastal Resource Professional Development Program: NA.

Fees per Person: $0

Barriers to Coastal Resource Professional Development: Time, funding.

What Organization Could Bring to a Partnership: NA.

Top Perceived Training Topic Needs: Water quality issues.

Top Perceived Groups in Need of Training: Local county managers/officials, business organizations.

Hudson-Essex-Passaic Soil Conservation District

Mission Statement: The purposes of soil conservation and the control and prevention of soil erosion to be furthered by the State Soil Conservation Committee and the of the soil conservation districts shall include, wherever applicable, the prevention of damage to soil and soil resources by floodwater or by sediment and the furtherance of conservation of water for agricultural purposes.

How Important Is Coastal Resource Professional Development to Organization Compared to Other Programs: Somewhat important.

How Well Organization Training Matches Coastal Resource Professional Development Goals: Don’t know.

Number of Programs: 3

Number of Program Sessions: 10

Program Names: New Jersey Soil Erosion and Sediment Control Program
New Jersey Stormwater Discharge Program
New Jersey Envirothon

Types of Training: Formal training, science-based information, educational materials.

Coastal Resource Professional Development Formats: Certification programs, continuing education classes, informal outreach/education, information products and technical resources, special events, publications, interpretive signs.

Coastal Resource Professional Development Delivery Methods: Case studies, demonstrations, lecture, round-table discussion.

Staff Size: 5

How Training Provided: 75% organization staff, 20% consultants, 5% volunteers.

Money Budgeted for Coastal Resource Professional Development: $2500

Partners: USDA-NRCS, TRC Omni (consultant).

Number of People Served: 275

Types of Groups/People Served: City/town council members, county commissioners, planning commission members, city/town engineers, code enforcement officers, conservation commissions, chapters of environmental organizations, watershed associations, environmental consultants, environmental educators, environmental protection agency personnel, K-12 educators.

Cost per Person to Develop Coastal Resource Professional Development Program: $25

Fees per Person: $5

Barriers to Coastal Resource Professional Development: Time, lack of personnel in general.

What Organization Could Bring to a Partnership: Funding agent, provide presenter/trainer, provide content expertise.

Top Perceived Training Topic Needs: Habitat issues, water quality issues.

Top Perceived Groups in Need of Training: Volunteer organization members.

Not-for-Profit Organizations

Hackensack Riverkeeper, Inc. (HRI)

Mission Statement: The primary mission of HRI is to provide representation for the natural living resources of the Hackensack River. This representation is manifested in environmental advocacy, education and conservation programs. The focus of HRI is to protect and defend the environmental quality of the ecosystem of the estuary, river and watershed and the quality of life for the people and other creatures that inhabit the Hackensack River Watershed.

How Important Is Coastal Resource Professional Development to Organization Compared to Other Programs: Very important.

How Well Organization Training Matches Coastal Resource Professional Development Goals: Matches somewhat.

Number of Programs: 12

Number of Program Sessions: 400

Program Names: Eco-Cruises, Eco-Walks, Canoe Project, River Clean-Ups, River Films Video Series, Urban Fishing Program, High School Water Quality Monitoring, Watershed Ambassador (Enviroscape: nonpoint source pollution, RATS, BATS, etc.), Coles Brook Restoration Project, speaking engagements, Blue Claw Crab Consumption Advisory, Exhibiting.

Types of Training: Science-based information, outreach, educational materials, classes, tours, or field trips, clean-ups, tabling, speaking, restorations.

Coastal Resource Professional Development Formats: Field-based courses, informal education/outreach, special events, publications, field trips, Websites, speaking engagements.

Coastal Resource Professional Development Delivery Methods: Case studies, demonstration, field trips, Internet/On-line, lecture, presentations, round-table discussion.

Staff Size: 6

How Training Provided: 95% organization staff, 5% volunteers.

Money Budgeted for Coastal Resource Professional Development: NA.

Partners: NJ DEP – Urban Fishing Program; NJ DEP – AmeriCorps Watershed Ambassador Program; WMAS Education and Outreach Committee – signs, newsletters, workshops, video, etc; Puffin Cultural Forum – river films, NJDEP – Crab Advisory.

Number of People Served: Conservative estimate is 15,000.

Types of Groups/People Served: City/town council members, county commissioners, planning commissioners, city/town managers, city/town planners, city/town engineers, code enforcement officers, conservation commissions, land trusts, chapters of environmental organizations, watershed associations, building/development associations, commercial property owners associations, chambers of commerce, Rotary International, tourist boards, environmental consultants, wetland scientists, environmental educators, universities, estuarine researchers, K-12 educators, general population.

Cost per Person to Develop Coastal Resource Professional Development Program: NA.

Fees per Person: $4.50

Barriers to Coastal Resource Professional Development: Time, funding.

What Organization Could Bring to a Partnership: Marketing/promotion assistance, facilities and logistics, provide presenter/trainer.

Top Perceived Training Topic Needs: Habitat issues, coastal issues, water quality issues, education, planning and regulation, resource management and other issues.

Top Perceived Groups in Need of Training: Local county managers/officials, volunteer organization members, business organizations, state/agency/professional associations, K-12 educators, general population.

Citizens United to Protect the Maurice River and its Tributaries

Mission Statement: To preserve and protect the Maurice River and its tributaries' natural and cultural resources from degradation for enjoyment by this and future generations. To foster an awareness of these resources.

How Important Is Coastal Resource Professional Development to Organization Compared to Other Programs: Very important.

How Well Organization Training Matches Coastal Resource Professional Development Goals: Matches somewhat.

Number of Programs: 2, plus the following: 4 teacher workshops, 6 meetings with speakers, 12 presentations, 2 major tours, 3 festivals.

Number of Program Sessions: 27

Program Names: Down Jersey Celebrating our Sense of Place: A Teachers' Curriculum
Maurice River Watershed Awareness

Types of Training: Formal training, science-based information, outreach, educational materials, classes, tours or field trips.

Coastal Resource Professional Development Formats: Certification programs, informal education/outreach, in-service education/outreach for educators, special events, workshops, publications, field trips, interpretive signs, Websites.

Coastal Resource Professional Development Delivery Methods: Demonstration, field trips/courses, Internet/on-line, lab exercises, lecture, one-on-one instruction, presentations, round-table discussion, videos/documentaries.

Staff Size: All volunteers; one volunteer works full time.

How Training Provided: 90% consultants, 10% organization staff.

Money Budgeted for Coastal Resource Professional Development: $8,800

Partners: Cumberland County College, Landis Sewage Authority, NJ DEP Endangered and Nongame Species Program, The Nature Conservancy, NLT, Green Acres, Stockton Alliance, New Jersey Audubon Society, Wheaton Village, Millville Public Library.

Number of People Served: Hundreds to thousands.

Types of Groups/People Served: K-12 educators, general population.

Cost per Person to Develop Coastal Resource Professional Development Program: $335

Fees per Person: $25

Barriers to Coastal Resource Professional Development: Time, funding, lack of personnel in general.

What Organization Could Bring to a Partnership: A model of some of things that have been successful for this organization.

Top Perceived Training Topic Needs: Habitat issues, coastal issues, water quality issues, education, planning and regulation, resource management and other issues, ocean science topics.

Top Perceived Groups in Need of Training: Local county managers/officials, volunteer organization members, business organizations, state/agency/professional associations, K-12 educators, general population.

Clean Ocean Action

Mission Statement: To improve the degraded water quality of the waters off the New Jersey/New York coast. Clean Ocean Action will identify the sources of pollution and mount an attack on each source by using research, public education, and citizen action to convince our public officials to enact and enforce measures which will clean up and protect our oceans.

How Important Is Coastal Resource Professional Development to Organization Compared to Other Programs: Very important.

How Well Organization Training Matches Coastal Resource Professional Development Goals: Matches somewhat.

Number of Programs: 15

Number of Program Sessions: Many.

Program Names:
Beach Sweeps
Storm Drain Stenciling Kit and Instruction Cards
Ten tips series on non-point source pollution
Non-point Source Pollution Teacher Curriculum
Videos ("Painting the Town Blue," "Clean Beaches Naturally," "Local Legacies"
Monthly newsletter: "Ocean Advocate"
Special publications (e.g., Wastewater Technical and Citizen guides, dredged material management citizen guides, Annual Beach Sweeps reports)
Various issue fact sheets
Student Summit
Presentations to schools and groups
Clean Ocean Action Shore Tips campaign
Fundraising programs, action campaigns, education programs, Institute of Coastal Education

Types of Training: Science-based information, outreach, educational materials, classes, tours or field trips, other-Citizen Action events and campaigns, fundraising events.

Coastal Resource Professional Development Formats: Certification programs, conferences, continuing education classes, informal outreach/education, information products and technical resources, in-service education/outreach for educators, seminars, special events, technical education/outreach programs, workshops, publications, field trips, Websites.

Coastal Resource Professional Development Delivery Methods: Internet/on-line, lecture, presentations, round-table discussion.

Staff Size: 8

How Training Provided: 75% organization staff, 25% volunteers.

Money Budgeted for Coastal Resource Professional Development: NA.

Partners: Said they partner, but no partners listed.

Number of People Served: Thousands.

Types of Groups/People Served: City/town council members, county commissioners, planning commission members, city/town managers, environmental health officials, volunteer organization members, realty associations, chambers of commerce, rotary international, tourist boards, environmental consultants, environmental educators, universities, estuarine researchers, coastal regulators, coastal planners, marine resources agency personnel, environmental protection agency personnel, K-12 educators, general population, college students.

Cost per Person to Develop Coastal Resource Professional Development Program: NA.

Fees per Person: NA.

Barriers to Coastal Resource Professional Development: Time, funding, lack of personnel in general.

What Organization Could Bring to a Partnership: Marketing/promotion assistance, facilities and logistics, provide presenter/trainer, provide content expertise/technical assistance.

Top Perceived Training Topic Needs: Habitat issues, coastal issues, water quality issues, education, planning and regulation, resource management and other issues, ocean science topics. In addition, Dredging Technologies and disposal alternatives, Community Action and Sediment Contamination.

Top Perceived Groups in Need of Training: Local county managers/officials, volunteer organization members, business organizations, state/agency/professional associations, K-12 educators, general population.

Greater Newark Conservancy

Mission Statement: To educate, train and support communities in creating environmentally safe neighborhoods through grassroots education and training, community organizing, preservation and improvement of open space, revitalization and beautification, job training and economic development.

How Important Is Coastal Resource Professional Development to Organization Compared to Other Programs: Somewhat important.

How Well Organization Training Matches Coastal Resource Professional Development Goals: Matches somewhat.

Number of Programs: 3

Number of Program Sessions: 15

Program Names: Hooked on Fishing, not on Drugs
History of Newark Bay for Teachers
Project WET
NJ Waters
Wonders of Wetlands Professional Development Program

Types of Training: Formal training, science-based information, classes, tours or field trips.

Coastal Resource Professional Development Formats: In-service education/outreach for educators, informal education/outreach (meetings, etc.).

Coastal Resource Professional Development Delivery Methods: Field trips, courses and in-class lessons.

Staff Size: 20-45 (depending on summer employees).

How Training Provided: 90% by staff; 10% by consultants.

Money Budgeted for Coastal Resource Professional Development: $15,000

Partners: NJ DEP, NY/NJ Harbor Estuary Program, NJ and National Project WET, NJ Audubon Society.

Number of People Served: 500

Types of Groups/People Served: K-12 educators, general population, children K-8.

Cost per Person to Develop Coastal Resource Professional Development Program: $5

Fees per Person: $5

Barriers to Coastal Resource Professional Development: Funding.

What Organization Could Bring to a Partnership: Facilities and logistics, provide presenter/trainer.

Top Perceived Training Topic Needs: Habitat issues, coastal issues, water quality issues, education, planning and regulation, resource management and other issues.

Top Perceived Groups in Need of Training: Local county managers/officials, volunteer organization members, business organizations, state/agency/professional associations, K-12 educators, general population.

New Jersey Marine Sciences Consortium

Mission Statement: To foster stewardship and wise management of the region's coastal resources. (Vision statement): To provide leadership in marine affairs in New Jersey and the surrounding region by improving science literacy among all citizens, contributing to science-based management policy and technology development, and by promoting sustainability through balanced economic growth and environmental stewardship.

How Important Is Coastal Resource Professional Development to Organization Compared to Other Programs: Very important.

How Well Organization Training Matches Coastal Resource Professional Development Goals: Matches exactly.

Number of Programs: 10

Number of Program Sessions: 845

Program Names:
The Coastal Experience (K-12 field trip programs); 4 program titles
The Coastal Express (after school programs for schools and informal groups)
"Bring the Ocean into Your Classroom" teacher training programs
NJSSI Specialty site
FISH (Families Investigate Science Hands-on) family education programs
Coast Day NJ Cape May and Long Beach Island outreach festivals
Summer College Program
A Partnership for Learning (minority-outreach teacher training and student program)
Marine Science Summer Day Camp
PROJECT Grad, Marine Science Week (summer minority outreach program for high school students)

Types of Training: Formal training, science-based information, outreach, educational materials, classes, tours or field trips.

Coastal Resource Professional Development Formats: University courses, field-based courses, informal education/outreach, in-service education/outreach for educators, seminars, field trips, Websites.

Coastal Resource Professional Development Delivery Methods: Field trips/courses, Internet/on-line, lab exercises, round-table discussion.

Staff Size: 3

How Training Provided: 90% organization staff, 5% consultants, 5% academics.

Money Budgeted for Coastal Resource Professional Development: $0

Partners: NA.

Number of People Served: 24,000

Types of Groups/People Served: Planning commission members, transportation officials, chapters of environmental organizations, watershed associations, chambers of commerce, tourist boards, state/agency/professional associations, K-12 educators.

Cost per Person to Develop Coastal Resource Professional Development Program: $12

Fees per Person: $6

Barriers to Coastal Resource Professional Development: Time, funding, lack of partnerships, lack of personnel in general, lack of education/outreach for personnel.

What Organization Could Bring to a Partnership: Marketing/promotion assistance, facilities and logistics, provide presenter/trainer, provide content expertise/technical assistance.

Top Perceived Training Topic Needs: Coastal issues, water quality issues.

Top Perceived Groups in Need of Training: Business organizations, general population.

American Littoral Society

Mission Statement: To promote the conservation and understanding of the coastal environment.

How Important Is Coastal Resource Professional Development to Organization Compared to Other Programs: Very important.

How Well Organization Training Matches Coastal Resource Professional Development Goals: Matches somewhat.

Number of Programs: 4

Number of Program Sessions: 50

Program Names:
New York program
New Jersey program
Florida program
Caribbean program

Types of Training: Formal training, science-based information, outreach, educational materials, classes, tours or field trips.

Coastal Resource Professional Development Formats: Publications, field trips, Websites.

Coastal Resource Professional Development Delivery Methods: Field trips/courses, Internet/on-line, lecture, one-on-one instruction, presentations, round-table discussion.
Staff Size: 35

How Training Provided: NA.

Money Budgeted for Coastal Resource Professional Development: NA.

Partners: Various NGOs, state agencies, and NOAA.

Number of People Served: 500

Types of Groups/People Served: Volunteer organization members, environmental educators, coastal regulators, coastal planners, K-12 educators, general population.

Cost per Person to Develop Coastal Resource Professional Development Program: NA.

Fees per Person: NA.

Barriers to Coastal Resource Professional Development: Funding, lack of personnel.

What Organization Could Bring to a Partnership: Provide presenter/trainer, provide content expertise/technical assistance.

Top Perceived Training Topic Needs: Habitat issues, coastal issues, water quality issues, education, planning and regulation, resource management and other issues.

Top Perceived Groups in Need of Training: Local county managers/officials, volunteer organization members, business organizations, general population.

New Jersey Chapter of Sierra Club

Mission Statement: To explore, enjoy, and protect the wild places of the earth; to practice and promote the responsible use of the earth's ecosystems and resources; to educate and enlist humanity to protect and restore the quality of the natural and human environments.

How Important Is Coastal Resource Professional Development to Organization Compared to Other Programs: Very important.

How Well Organization Training Matches Coastal Resource Professional Development Goals: Matches exactly.

Number of Programs: No formal programs.

Number of Program Sessions: A few.

Program Names: NA.

Types of Training: Outreach, classes, tours or field trips.

Coastal Resource Professional Development Formats: Publications, Websites.

Coastal Resource Professional Development Delivery Methods: Internet/on-line, presentations, round-table discussion.

Staff Size: 3

How Training Provided: 10% organization staff, 90% volunteers.

Money Budgeted for Coastal Resource Professional Development: Staff time cost is minimal and volunteer time is free. Any literature to audiences are donated to us.

Partners: Riverkeepers, American Littoral Society, NJ Audubon Society, Clean Action Network, Baykeepers, NJ Department of Environmental Protection, NJ Fish and Wildlife (Division of NJ DEP), Marine Fisheries (Division of NJ DEP).

Number of People Served: Several hundred.

Types of Groups/People Served: Land trusts, chapters of environmental organizations, watershed associations, wetland scientists, environmental educators, universities, environmental protection agency personnel, K-12 educators.

Cost per Person to Develop Coastal Resource Professional Development Program: $0

Fees per Person: $0

Barriers to Coastal Resource Professional Development: Time, funding.

What Organization Could Bring to a Partnership: Internet action network.

Top Perceived Training Topic Needs: Habitat issues, coastal issues, water quality issues, education, planning and regulation, resource management and other issues, ocean science topics.

Top Perceived Groups in Need of Training: Local county managers/officials, volunteer organization members, business organizations, state/agency/professional associations, K-12 educators, general population.

South Branch Watershed Association

Mission Statement: To protect the water resources of the South Branch Raritan River and its tributaries.

How Important Is Coastal Resource Professional Development to Organization Compared to Other Programs: Somewhat important.

How Well Organization Training Matches Coastal Resource Professional Development Goals: Matches somewhat.

Number of Programs: 3

Number of Program Sessions: 1 or 2

Program Names: Biological Monitoring Program
Waterways Stewardship Project
Hunterdon Green Table

Types of Training: Formal training, outreach, educational materials.

Coastal Resource Professional Development Formats: Publications, Websites, press releases and articles in community newsletter.

Coastal Resource Professional Development Delivery Methods: Internet/on-line, one-on-one instruction, presentations, round-table discussion.

Staff Size: 4

How Training Provided: 50% organization staff, 30% consultants, 20% volunteers.

Money Budgeted for Coastal Resource Professional Development: $15,000 - $30,000

Partners: Hunterdon County Parks and Recreation, Hunterdon County Planning Board, various schools within the watershed, various environmental commissions within the watershed.

Number of People Served: 500

Types of Groups/People Served: City/town council members, city/town planners, environmental educators, K-12 educators, general population.

Cost per Person to Develop Coastal Resource Professional Development Program: NA.

Fees per Person: NA.

Barriers to Coastal Resource Professional Development: Time, funding.

What Organization Could Bring to a Partnership: Provide content expertise/technical assistance.

Top Perceived Training Topic Needs: Habitat issues, coastal issues, water quality issues, education, planning and regulation, resource management and other issues, ocean science topics.

Top Perceived Groups in Need of Training: Local county managers/officials, volunteer organization members, business organizations, K-12 educators, general population.

Wetlands Institute

Mission Statement: To promote appreciation and understanding of the vital role wetlands and coastal ecosystems play in the survival of life on this planet.

How Important Is Coastal Resource Professional Development to Organization Compared to Other Programs: Very important.

How Well Organization Training Matches Coastal Resource Professional Development Goals: Matches somewhat.

Number of Programs: 25 or more.

Number of Program Sessions: 100 or more.

Program Names:
Project WET
School programs (K-12)
Public speakers
Tourists programs
Tours off site
Newsletter

Types of Training: Formal training, science-based information, outreach, educational materials, classes, tours, or field trips, Wildlife Art Festival.

Coastal Resource Professional Development Formats: Conferences, continuing education classes, university courses, distance learning programs, field-based courses, informal education/outreach, information products and technical resources, in-service education/outreach for educators, special events and workshops, publications, interpretive signs, Websites, waypoint signs.

Coastal Resource Professional Development Delivery Methods: Demonstration, field trips/courses, lecture, one-on-one instruction, presentation.

Staff Size: 15

How Training Provided: 80% organization staff, 10% academics, 10% volunteers.

Money Budgeted for Coastal Resource Professional Development: $200,000

Partners: NJ DEP, U.S. Department of the Interior, NJ Fish and Wildlife, Cape May National Wildlife Refuge.

Number of People Served: 60,000

Types of Groups/People Served: City/town council members, chapters of environmental organizations, watershed associations, property owners associations, chambers of commerce, tourist boards, environmental consultants, wetland scientists, environmental educators, universities, estuarine researchers, coastal regulators, marine resources agency personnel, fisheries and wildlife personnel, environmental protection agency personnel, K-12 educators.

Cost per Person to Develop Coastal Resource Professional Development Program: NA.

Fees per Person: $2 - $5

Barriers to Coastal Resource Professional Development: Time, funding, distance, lack of education/outreach for personnel.

What Organization Could Bring to a Partnership: Facilities and logistics, provide presenter/trainer, provide content expertise/technical assistance, program evaluation.

Top Perceived Training Topic Needs: Habitat issues, coastal issues, water quality issues, education, planning and regulation, resource management and other issues.

Top Perceived Groups in Need of Training: Local county managers/officials, volunteer organization members, business organizations, state/agency/professional associations, K-12 educators, general population.

Morris County Soil Conservation District

Mission Statement: The use of our natural resources in such a way as to assure the needs of the present without compromising the ability of future generations to meet their own needs.

How Important Is Coastal Resource Professional Development to Organization Compared to Other Programs: Somewhat important.

How Well Organization Training Matches Coastal Resource Professional Development Goals: Matches somewhat.

Number of Programs: 2

Number of Program Sessions: 0

Program Names: Project WET
Project Aquatic WILD

Types of Training: Educational materials, Project WET and Aquatic WILD workshops, New Jersey Envirothon training.

Coastal Resource Professional Development Formats: NA.

Coastal Resource Professional Development Delivery Methods: Presentations.

Staff Size: 8

How Training Provided: NA.

Money Budgeted for Coastal Resource Professional Development: NA.

Partners: The Wetlands Institute.

Number of People Served: 0

Types of Groups/People Served: NA.

Cost per Person to Develop Coastal Resource Professional Development Program: $10

Fees per Person: $0

Barriers to Coastal Resource Professional Development: Distance, lack of personnel in general, lack of education/outreach for personnel.

What Organization Could Bring to a Partnership: Provide presenter/trainer.

Top Perceived Training Topic Needs: Habitat issues, coastal issues.

Top Perceived Groups in Need of Training: No groups perceived to be in high need.

Burlington County Soil Conservation District

Mission Statement: The Burlington County Soil Conservation District provides assistance for the purpose of soil conservation and the control and prevention of soil erosion and the prevention of damage to soil and soil resources by floodwaters and uncontrolled construction and the furtherance of the conservation of water for agricultural purposes.

How Important Is Coastal Resource Professional Development to Organization Compared to Other Programs: Somewhat important.

How Well Organization Training Matches Coastal Resource Professional Development Goals: NA

Number of Programs: 0

Number of Program Sessions: 4

Program Names: NA.

Types of Training: Science-based information, outreach, educational materials.
Coastal Resource Professional Development Formats: Publications, in class sessions.

Coastal Resource Professional Development Delivery Methods: NA.

Staff Size: 9

How Training Provided: NA.

Money Budgeted for Coastal Resource Professional Development: NA.

Partners: Natural Resource Conservation Service.

Number of People Served: 0

Types of Groups/People Served: NA.

Cost per Person to Develop Coastal Resource Professional Development Program: NA.

Fees per Person: NA.

Barriers to Coastal Resource Professional Development: Funding, lack of partnerships.

What Organization Could Bring to a Partnership: Provide presenter/trainer.

Top Perceived Training Topic Needs: Habitat issues, water quality issues.

Top Perceived Groups in Need of Training: Local county managers/officials, state/agency/ professional associations, K-12 educators, general population.

Hunterdon County Soil Conservation District

Mission Statement: No official mission statement.

How Important Is Coastal Resource Professional Development to Organization Compared to Other Programs: Somewhat important.

How Well Organization Training Matches Coastal Resource Professional Development Goals: Don't know.

Number of Programs: NA.

Number of Program Sessions: 15

Program Names: Did This Come From a Tree?; Wonderful Worms; What's My Address?; Soil Investigations; Building Blocks of Rocks; Eco-History Detectives.

Types of Training: Educational materials, professional development credit hours in Project WET (Water Education for Teachers).

Coastal Resource Professional Development Formats: Informal education/outreach, in-service education/outreach for educators, seminars, special events (excluding conferences), publications, advisor to Butterfly Garden project, guest speaker at children's day camps.

Coastal Resource Professional Development Delivery Methods: Demonstration, lecture, presentations.

Staff Size: 15

How Training Provided: 100% organization staff.

Money Budgeted for Coastal Resource Professional Development: $1,200

Partners: NA.

Number of People Served: 100

Types of Groups/People Served: The public, home schooled children, private schools, Scouts, Rotary International, K-12 educators, general population.

Cost per Person to Develop Coastal Resource Professional Development Program: $3/student

Fees per Person: $0/county resident.

Barriers to Coastal Resource Professional Development: Funding, distance, lack of partnerships.

What Organization Could Bring to a Partnership: Facilities and logistics.

Top Perceived Training Topic Needs: Water quality issues, resource management and other issues.

Top Perceived Groups in Need of Training: Local county managers/officials, K-12 educators, general population.

For-Profit Business

Aquatic Discoveries, Inc.

Mission Statement: Aquatic Discoveries is dedicated to educating children about our marine environments in a fun, interactive, and hands-on way. With a strong emphasis on understanding, appreciating, and protecting our oceans, we hope to inspire our future generations to take an active role in respecting and conserving our natural resources.

How Important Is Coastal Resource Professional Development to Organization Compared to Other Programs: Very important.

How Well Organization Training Matches Coastal Resource Professional Development Goals: Matches somewhat.

Number of Programs: 1

Number of Program Sessions: 13

Program Names: Science Education at Sea field trips.

Types of Training: Classes, tours, or field trips.

Coastal Resource Professional Development Formats: Field-based courses, informal education/outreach.

Coastal Resource Professional Development Delivery Methods: Field trips/courses.

Staff Size: 4

How Training Provided: 100% organization staff.

Money Budgeted for Coastal Resource Professional Development: NA.

Partners: Wetlands Institute, Oceans Unlimited.

Number of People Served: 1,000

Types of Groups/People Served: Environmental educators, K-12 educators.

Cost per Person to Develop Coastal Resource Professional Development Program: NA.

Fees per Person: $17.

Barriers to Coastal Resource Professional Development: Time, funding.

What Organization Could Bring to a Partnership: Provide presenter/trainer, provide content expertise/technical assistance.

Top Perceived Training Topic Needs: Habitat issues, coastal issues, water quality issues, education, planning and regulation.

Top Perceived Groups in Need of Training: Local county managers/officials, volunteer organization members, business organizations, state/agency/professional associations, K-12 educators, general population.

Universities/Colleges

Stevens Institute of Technology

Mission Statement: Stevens seeks to develop its graduates as leaders who posses the skills and insight needed to renew American innovation, competitive spirit, and productivity through its strong commitment to academic excellence and education rooted in **Technogenesis** where students, faculty and industry work closely together, sharing ideas and nurturing technology form innovation to implementation. The Civil, Environmental and Ocean Engineering Department strives to achieve national prominence by virtue of the quality of its educational programs, the achievement of its graduates, and the contributions of its research to the advancement of the Civil, Environmental and Ocean Engineering professions.

How Important Is Coastal Resource Professional Development to Organization Compared to Other Programs: Very important.

How Well Organization Training Matches Coastal Resource Professional Development Goals: Matches somewhat.

Number of Programs: 3

Number of Program Sessions: 30+

Program Names: Advanced Degrees in Coastal and Ocean Engineering (Masters & Ph.D.), New Jersey Coastal Protection Technical Assistance Service (CPTAS), New Jersey Sea Grant Extension in Coastal Processes (NJSG).

Types of Training: Formal training, science-based information, outreach, educational materials, classes, tours, or field trips.

Coastal Resource Professional Development Formats: University courses, distance learning programs, field-based courses, informal education/outreach, information products and technical resources, laboratory courses, seminars, special events, workshops, publications, field trips, interpretive signs, Websites, educational manuals, videos, technical reviews.

Coastal Resource Professional Development Delivery Methods: Case studies, demonstration, field trips, courses, Internet/on-line, lab exercises, lecture, one-on-one instruction, presentations, round-table discussion.

Staff Size: 20

How Training Provided: 25% organization staff, 50% academics, 25% students.

Money Budgeted for Coastal Resource Professional Development: $100,000

Partners: New Jersey Sea Grant College Program: Coastal processes, protection, hazard mitigation, sustainable communities, natural resource management; State of New Jersey: Technical analysis of shore protection methods, review of shoreline evolution and storm impacts, shoreline management, real-time coastal monitoring, long-term shoreline change analysis.

Number of People Served: 5,000

Types of Groups/People Served: City/town council members, county commissioners, planning commission members, city/town managers, city/town planners, city/town engineers, code enforcement officers, conservation commissions, chapters of environmental organizations, property owners associations, realty associations, building/development associations, commercial property owners associations, chambers of commerce, tourist boards, environmental consultants, estuarine researchers, coastal regulators, coastal planners, marine resources agency personnel, environmental protection agency personnel, K-12 educators.

Cost per Person to Develop Coastal Resource Professional Development Program: $20

Fees per Person: Varies – Graduate courses, $750/credit; Public Meetings and Workshops, free; Bulletins, Fact Sheets and Brochures, free; Documents, shipping and handling cost.

Barriers to Coastal Resource Professional Development: Time, funding, lack of personnel in general.

What Organization Could Bring to a Partnership: Provide content expertise/technical assistance.

Top Perceived Training Topic Needs: Coastal issues.

Top Perceived Groups in Need of Training: Business organizations, K-12 educators, general population.

NY-NJ Harbor Estuary Program (HEP) Office

Mission Statement: The HEP is a partnership of federal, state, local environmental agencies, scientists and citizens working together to protect and restore the natural resources of the NY-NJ Harbor Estuary, its tributaries, and the New York Bight. The goal of the program is to establish and maintain a healthy and productive harbor ecosystem with full beneficial uses.

How Important Is Coastal Resource Professional Development to Organization Compared to Other Programs: Very important.

How Well Organization Training Matches Coastal Resource Professional Development Goals: Matches exactly.

Number of Programs: Don't know.

Number of Program Sessions: NA.

Program Names: Not sure we run "programs." We have a newsletter (*The Tidal Exchange*) and a mini-grant program (groups get up to $5,000 for Education/Outreach projects).

Types of Training: Outreach.

Coastal Resource Professional Development Formats: Publications, Websites.

Coastal Resource Professional Development Delivery Methods: NA.

Staff Size: 3

*How Training Provided: 8*0% organization staff, 5% academics, 5% volunteers, 10% program partners – NJ Department of Environmental Protection; NYS Department of Environmental Conservation; NYC Department of Environmental Protection, US Army Corps of Engineers; Port Authority of New York and New Jersey; US EPA; NYC Soil and Water Conservation District; NYC Department of Parks and Recreation; NYS Department of State; Hudson River Foundation; and others.

Money Budgeted for Coastal Resource Professional Development: $50,000 - $25,000 for printing costs and $25,000 for mini-grants.

Partners: NJ Department of Environmental Protection, NYS Department of Environmental Conservation, NYC Department of Environmental Protection, US Army Corps of Engineers, Port Authority of NY and NJ, US EPA, NYC Soil and Water Conservation District, NYC Department of Parks and Recreation, NYS Department of State, Hudson River Foundation, on the Harbor Estuary Program, and others.

Number of People Served: Don't know.

Types of Groups/People Served: Chapters of environmental organizations, watershed associations, environmental educators, K-12 educators, general population.

Cost per Person to Develop Coastal Resource Professional Development Program: NA.

Fees per Person: NA.

Barriers to Coastal Resource Professional Development: Time, funding, lack of personnel in general, lack of education/outreach for personnel.

What Organization Could Bring to a Partnership: Marketing/promotion assistance, facilities and logistics, provide content expertise/technical assistance, program evaluation.

Top Perceived Training Topic Needs: Habitat issues, water quality issues, education, planning and regulation.

Top Perceived Groups in Need of Training: Local county managers/officials, volunteer organization members, business organizations, state/agency/professional associations, K-12 educators, general population.

Rider University; Department of Geological and Marine Sciences

Mission Statement: NA.

How Important Is Coastal Resource Professional Development to Organization Compared to Other Programs: Very important.

How Well Organization Training Matches Coastal Resource Professional Development Goals: Matches somewhat.

Number of Programs: 2

Number of Program Sessions: 10

Program Names: B.S. in Marine Science
B.S. in Liberal Studies: Marine Ecological Emphasis

Types of Training: Classes, tours or field trips.

Coastal Resource Professional Development Formats: Continuing education classes, university courses, distance learning programs, field-based courses, laboratory courses.

Coastal Resource Professional Development Delivery Methods: Accelerated learning techniques, field trips/courses, Internet/on-line, lab exercises, lecture, one-on-one instruction, presentations, round-table discussion.

Staff Size: 5

How Training Provided: 100% academics.

Money Budgeted for Coastal Resource Professional Development: $15,000

Partners: Shoals Marine Laboratory, Newfound Harbor Marine Institute, Bermuda Biological Station for Research.

Number of People Served: 40

Types of Groups/People Served: Wetland scientists, environmental educators, universities, K-12 educators.

Cost per Person to Develop Coastal Resource Professional Development Program: $2,000

Fees per Person: $1,000

Barriers to Coastal Resource Professional Development: Time, funding, lack of personnel in general.

What Organization Could Bring to a Partnership: Provide presenter/trainer, provide content expertise/technical assistance.

Top Perceived Training Topic Needs: Habitat issues, coastal issues, water quality issues, education, planning and regulation, resource management and other issues, ocean science topics.

Top Perceived Groups in Need of Training: Local county managers/officials, volunteer organization members, business organizations, state/agency/professional associations, K-12 educators, general population.

Monmouth University; Biology Department

Mission Statement: To provide students with a basic diversified background in the life sciences and prepare them for graduate work, professional school (medicine, dentistry, podiatry, chiropractic, etc.), laboratory work in government and industry, and careers in teaching.

How Important Is Coastal Resource Professional Development to Organization Compared to Other Programs: Somewhat important.

How Well Organization Training Matches Coastal Resource Professional Development Goals: Matches exactly.

Number of Programs: 30 (classes)

Number of Program Sessions: 1,500

Program Names: Classes in biology, zoology, ecology, botany, biochemistry, genetics, vascular plants, and evolution.

Types of Training: Science-based information, educational materials, classes, tours or field trips.

Coastal Resource Professional Development Formats: Conferences, university courses, field-based courses, informal education/outreach, information products and technical resources, laboratory courses, seminars, field trips, Websites.

Coastal Resource Professional Development Delivery Methods: Demonstrations, field trips/courses, Internet/on-line, lab exercises, lecture.

Staff Size: 14
How Training Provided: 100% academics.

Money Budgeted for Coastal Resource Professional Development: $12,000

Partners: Does not partner.

Number of People Served: 20

Types of Groups/People Served: College students.

Cost per Person to Develop Coastal Resource Professional Development Program: $375

Fees per Person: $1,700

Barriers to Coastal Resource Professional Development: Time, funding, distance, lack of partnerships, lack of personnel in general.

What Organization Could Bring to a Partnership: Provide presenter/trainer, provide content expertise/technical assistance, program evaluation.

Top Perceived Training Topic Needs: Habitat issues, coastal issues, water quality issues, education, planning and regulation, resource management and other issues, ocean science topics.

Top Perceived Groups in Need of Training: Business organizations, state/agency/professional associations, K-12 educators, general population.

K-12 Education Institutions

Warren County Technical School

Mission Statement: To support continuous educational improvement for the students of Warren County by providing educators with professional development experiences and technical

assistance related to meeting the NJ Core Curriculum Standards, especially in the area of technology.

How Important Is Coastal Resource Professional Development to Organization Compared to Other Programs: Somewhat important.

How Well Organization Training Matches Coastal Resource Professional Development Goals: Does not match at all.

Number of Programs: No formal programs—just Internet resources.

Number of Program Sessions: 0

Program Names: NA

Types of Training: Internet resources.

Coastal Resource Professional Development Formats: Websites.

Coastal Resource Professional Development Delivery Methods: NA.

Staff Size: 2

How Training Provided: NA.

Money Budgeted for Coastal Resource Professional Development: $0

Partners: Schools, grant funded agencies.

Number of People Served: 0

Types of Groups/People Served: NA.

Cost per Person to Develop Coastal Resource Professional Development Program: $0

Fees per Person: NA.

Barriers to Coastal Resource Professional Development: Time, funding, lack of personnel in general.

What Organization Could Bring to a Partnership: County contacts within the educational environment.

Top Perceived Training Topic Needs: Habitat issues, coastal issues.

Top Perceived Groups in Need of Training: State/agency/professional associations, K-12 educators.

Other Entities

Jacques Cousteau National Estuarine Research Reserve

Mission Statement: To promote research, stewardship and education of New Jersey's coastal resources.

How Important Is Coastal Resource Professional Development to Organization Compared to Other Programs: Very important.

How Well Organization Training Matches Coastal Resource Professional Development Goals: Matches exactly.

Number of Programs: 4

Number of Program Sessions: 25

Program Names:
K-12 Professional Development for Teachers
CTP-Coastal Resource Professional Development Program
Family Science Programs
Family Education/Field Programs

Types of Training: Formal training, science-based information, outreach, educational materials, classes, tours or field trips.

Coastal Resource Professional Development Formats: Certification programs, field-based courses, information products and technical resources, in-service education/outreach for educators, special events, technical education/outreach programs, Web-based programs, workshops, publications, Websites, open house, festivals.

Coastal Resource Professional Development Delivery Methods: Case studies, demonstration, field trips/courses, Internet/on-line, lecture, one-on-one instruction, presentations, round-table discussion.

Staff Size: 9

How Training Provided: 70% organization staff, 30% academics.

Money Budgeted for Coastal Resource Professional Development: $84,957 (not staff salary); $263,176 (Reserve staff).

Partners: NJ DEP-Coastal Management Program, Barnegat Bay Estuary Program.

Number of People Served: 1,184 directly.

Types of Groups/People Served: City/town council members, county commissioners, planning commission members, city/town managers, city/town planners, conservation commissions, watershed associations, environmental consultants, environmental educators, estuarine researchers, coastal regulators, coastal planners, marine resources agency personnel, environmental protection agency personnel, K-12 educators.

Cost per Person to Develop Coastal Resource Professional Development Program: $15-$1,200

Fees per Person: $0-$400

Barriers to Coastal Resource Professional Development: Time, funding, lack of personnel in general.

What Organization Could Bring to a Partnership: Facilities and logistics, funding agent, provide content expertise/technical assistance.

Top Perceived Training Topic Needs: Habitat issues, coastal issues, water quality issues, education, planning and regulation.

Top Perceived Groups in Need of Training: Most local county mangers/officials, volunteer organization members, most business organizations, state/agency/professional associations, K-12 educators, general population.

Camden County Environmental Studies Center

Mission Statement: To make a substantial contribution to awareness of, and concern for, the need to preserve open spaces and parkland, to protect our fragile watersheds, and other environmental issues of importance to Camden County, by creating and conducting environmental education and outdoor recreation programs, and providing environmental information and referral services to, diverse segments of the county population.

How Important Is Coastal Resource Professional Development to Organization Compared to Other Programs: Very important.

How Well Organization Training Matches Coastal Resource Professional Development Goals: Matches somewhat.

Number of Programs: 3

Number of Program Sessions: 50

Program Names: Seashore Treasures
Pond studies
Watershed walks and bus tours
Annual Watershed Awareness Day

Types of Training: Science-based information, outreach, educational materials, classes, tour or field trips.

Coastal Resource Professional Development Formats: Field-based courses, informal education/outreach, special events, field trips, publications, interpretive signs.

Coastal Resource Professional Development Delivery Methods: Field trips/courses, presentations.

Staff Size: 1

How Training Provided: 90% organization staff, 10% consultants.

Money Budgeted for Coastal Resource Professional Development: NA.

Partners: Camden County Office of Environmental Affairs, DVRPC (Watershed Management Area 18, Education and Outreach Committee).

Number of People Served: 750

Types of Groups/People Served: K-12 educators, general population.

Cost per Person to Develop Coastal Resource Professional Development Program: $0

Fees per Person: NA.

Barriers to Coastal Resource Professional Development: NA.

What Organization Could Bring to a Partnership: NA.

Top Perceived Training Topic Needs: High need for all areas.

Top Perceived Groups in Need of Training: None listed.

ORGANIZATIONS THAT DO NOT CONDUCT COASTAL RESOURCE PROFESSIONAL DEVELOPMENT

State Agencies

Camden County Soil Conservation District

Mission Statement: To take available technical, financial, and educational resources, whatever their source, and focus or coordinate them so that they meet the needs of the local land user for conservation of soil, water, and related resources.

Staff Size: 7

Interested in Partnerships: Don't know.

What Organization Could Bring to a Partnership: NA.

Barriers to Coastal Resource Professional Development: Time, funding, distance, lack of personnel in general.

Top Perceived Groups in Need of Training: NA.

Gloucester County Soil Conservation District

Mission Statement: To provide leadership and to administer programs to help people conserve, improve, and sustain our natural resources and environment.

Staff Size: 10

Interested in Partnerships: Somewhat interested.

What Organization Could Bring to a Partnership: Provide presenter/trainer, expertise on soil erosion and sediment control measures.

Barriers to Coastal Resource Professional Development: Time, funding, lack of personnel in general, lack of education/outreach for personnel.

Top Perceived Groups in Need of Training: Volunteer organization members, K-12 educators, general population.

Bergen County Soil Conservation District

Mission Statement: We provide soil information and conservation education to the public. We also implement the Soil Erosion and Sediment Control Act, P.L. 1975, Chapter 251. Through this state law we regulate the control of soil erosion and sedimentation from construction sites and other land disturbances in excess of 5,000 square feet.

Staff Size: 5

Interested in Partnerships: NA.

What Organization Could Bring to a Partnership: Don't know.

Barriers to Coastal Resource Professional Development: Time, funding, lack of personnel in general, don't know.

Top Perceived Groups in Need of Training: State/agency/professional associations.

Ocean County Soil Conservation District

Mission Statement: NA.

Staff Size: 9

Interested in Partnerships: Somewhat interested.

What Organization Could Bring to a Partnership: Marketing/promotion assistance, provide content expertise/technical assistance.

Barriers to Coastal Resource Professional Development: Time, funding, lack of personnel in general, lack of education/outreach for personnel.

Top Perceived Groups in Need of Training: Local county mangers/officials, business organizations.

New Jersey Pinelands Commission

Mission Statement: To preserve, protect, and enhance the natural and cultural resources of the Pinelands National Reserve, and to encourage compatible economic and other human activities consistent with that purpose.

Staff Size: 55

Interested in Partnerships: Very interested.

What Organization Could Bring to a Partnership: Marketing/promotion assistance, facilities and logistics, provide presenter/trainer, provide content expertise/technical assistance.

Barriers to Coastal Resource Professional Development: Time, funding, lack of personnel in general, lack of education/outreach for personnel.

Top Perceived Groups in Need of Training: Local county managers/officials, volunteer organization members, business organizations, state/agency/professional associations, K-12 educators, general population.

New Jersey Department of Education

Mission Statement: NA.

Staff Size: 16

Interested in Partnerships: Somewhat interested.

What Organization Could Bring to a Partnership: Marketing/promotion assistance, program evaluation, standards and assessment expertise.

Barriers to Coastal Resource Professional Development: Time, funding, lack of personnel in general, lack of education/outreach for personnel.

Top Perceived Groups in Need of Training: Volunteer organization members, business organizations, K-12 educators.

Not-for-Profit Organizations

The Nature Conservancy of New Jersey; Pine Barrens Program

Mission Statement: To protect the plants, animals and natural communities that represent the diversity of life on Earth by protecting the lands and waters they need to survive.

Staff Size: 7

Interested in Partnerships: Somewhat interested.

What Organization Could Bring to a Partnership: Marketing/promotion assistance.

Barriers to Coastal Resource Professional Development: Right now, coastal resources are not a priority for this organization, but they could become a priority in the future.

Top Perceived Groups in Need of Training: Business organizations.

New Jersey Agricultural Society

Mission Statement: To educate the non-farm public about the importance of agriculture to New Jersey's economy and quality of life.

Staff Size: 6

Interested in Partnerships: Somewhat interested.

What Organization Could Bring to a Partnership: Marketing/promotion assistance, facilities and logistics.

Barriers to Coastal Resource Professional Development: Time, funding, lack of personnel in general, lack of education/outreach for personnel.

Top Perceived Groups in Need of Training: None selected.

University

William Paterson University; Department of Environmental Science and Geography

Mission Statement: We are primarily a teaching institution with mostly undergraduate students. We do have a graduate program and plan to expand it somewhat. All of the faculty have active research programs. We are especially strong in aquatic (mostly freshwater) systems – environmental, ecology and geochemistry.

Staff Size: 7

Interested in Partnerships: Not at all interested.

What Organization Could Bring to a Partnership: NA.

Barriers to Coastal Resource Professional Development: Time, funding, distance, lack of partnerships, lack of personnel in general.

Top Perceived Groups in Need of Training: State/Agency/Professional Associations.

K-12 Education Institutions

Camden City Board of Education's Environmental Center; Division of Curriculum and Instruction

Mission Statement: To provide for each student an opportunity to become a contributing and productive member of society by offering intellectual, academic and environmental experiences through instruction. The environmental instruction will advance awareness, knowledge and skills in order that those who inhabit and will inherit the earth may understand the complexities of the natural world they live in. Further, to create an atmosphere where staff, visiting teachers, students, IA's and parents will work for the betterment of all. Our major goal is to have classes participating at the Environmental Center 95% of the days that the Camden City Schools are in session.

Staff Size: 3

Interested in Partnerships: Don't know.

What Organization Could Bring to a Partnership: NA.

Barriers to Coastal Resource Professional Development: Need to be elementary level pre-school to 4th grade level.

Top Perceived Groups in Need of Training: Local county managers/officials, volunteer organization members, business organizations, K-12 educators, general population.

Middlesex Educational Technology Training Center (ETTC)

Mission Statement: To provide ongoing technology staff development to meet the needs of New Jersey's Core Curriculum Content Standards.

Staff Size: 3

Interested in Partnerships: Don't know.

What Organization Could Bring to a Partnership: NA.

Barriers to Coastal Resource Professional Development: Don't know.

Top Perceived Groups in Need of Training: Local county managers/officials, volunteer organization members, business organizations, state/agency/professional associations, K-12 educators, general population.

County-Based Training Center

Essex County Educational Technology Training Center (ETTC)

Mission Statement: To provide ongoing, high quality professional development that is responsive to the educational technology training and curriculum needs of educators from all grade levels (K-12) aligned with New Jersey's Core Curriculum Content Standards.

Staff Size: 3

Interested in Partnerships: Not sure.

What Organization Could Bring to a Partnership: NA.

Barriers to Coastal Resource Professional Development: Funding, lack of education/outreach for personnel.

Top Perceived Groups in Need of Training: Volunteer organization members, business organizations, state/agency/professional associations.

Federal Agency

Great Swamp Outdoor Education Center

Mission Statement: The staff of the Morris County Park Commission's Great Swamp Outdoor Education Center is committed to providing the community with the opportunity to attain an understanding of, and delight in, the unique environment and history of the great swamp. The ultimate goal is to make every person aware that the swamp is a sanctuary for the benefit of native plants and animal life, as well as for the education of its human visitors. Through the use of trail guides, wildlife surveys and interpretive hikes we encourage a wise and responsible relationship with nature.

Staff Size: 6

Interested in Partnerships: Somewhat interested.

What Organization Could Bring to a Partnership: Facilities and logistics, provide content expertise/technical assistance.

Barriers to Coastal Resource Professional Development: Time, funding, lack of partnerships, lack of personnel in general.

Top Perceived Groups in Need of Training: Don't know.

COMPARISON OF NEEDS ASSESSMENT AND MARKET INVENTORY

METHODOLOGY

The needs assessment and the marketing analysis had many similar questions. Comparisons of opinions, attitudes and behaviors across the two surveys held great potential for bringing together coastal resource decision-makers and providers to better understand gaps in coastal training programs in New Jersey.

Special attention to survey coding by the survey manager allowed direct comparison of many types of responses. Comparisons on needs (rated high, medium, or low) for a variety programs were compared, graphed, subjected to statistical analyses, and summarized in a new series of graphs. The statistical analyses performed were chi-square analyses (Sheskin, 2000). The new series of graphs for these analyses were made by subtracting the percent of constituents who rated programs as a "high" need, from the number of providers who rated a program as a "high" need. The resulting graphs showed the difference in needs between these two groups. High numbers indicated that providers had greater interest than constituents in a program.

Additionally, another analysis used the percent of constituents who thought a program was of high or moderate need, and compared that data to the percent of providers who actually provided that type of program.

Two assumptions were made that allowed these comparisons. The first assumption was that a good measure of actual need/actual intent to attend a program was the percent of constituents who perceived that a program had a high or moderate need for training. The second assumption was that the percent of providers who offered a particular program was a good measure of the availability/number of programs actually offered.

These assumptions may not hold under certain circumstances. For instance, constituents may have low interest in something that they might be required to attend, and therefore they would give low ratings to a program that they would certainly attend. Another example of a possible confound to this assumption would be if a single provider offered a program, making the percentage of providers offering a program seem quite low, but that provider offered that

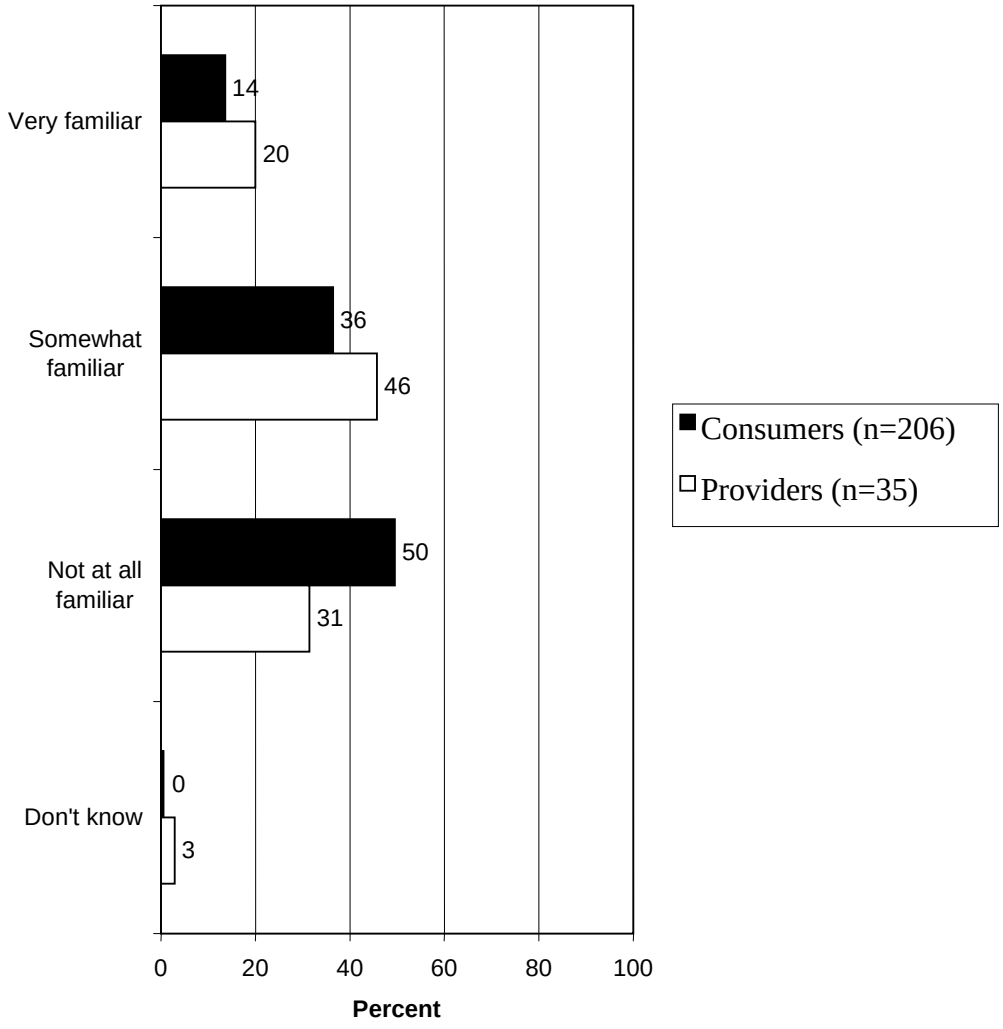
program so often and in so many venues that they might have already saturated the market. In both cases, subtracting the percent of providers of a program from the number of constituents interested in a program might give misleading results.

Because it seems unlikely that these scenarios seemed unlikely to affect all of the data, and because of the opportunities offered by the analysis, the graphical and statistical analyses were performed on this data. A summary graph was also created to depict this data. The summary graph shows the difference between constituent needs and provider offerings of the programs. It serves as a measure of "unmet need." High percentages in these graphs indicated that constituents have needs that exceed the current level of offerings for a particular program.

FAMILIARITY WITH JACQUES COUSTEAU NATIONAL ESTUARINE RESEARCH RESERVE

- Providers of coastal training were more familiar with the Jacques Cousteau National Estuarine Research Reserve than were consumers of coastal training.
  - While 66% of providers indicated that they were very or somewhat familiar with the Reserve, only 50% of consumers of coastal training indicated familiarity.

Q40/Q46. Before this survey, were you very familiar, somewhat familiar, or not at all familiar with the Jacques Cousteau National Estuarine Research Reserve in New Jersey?

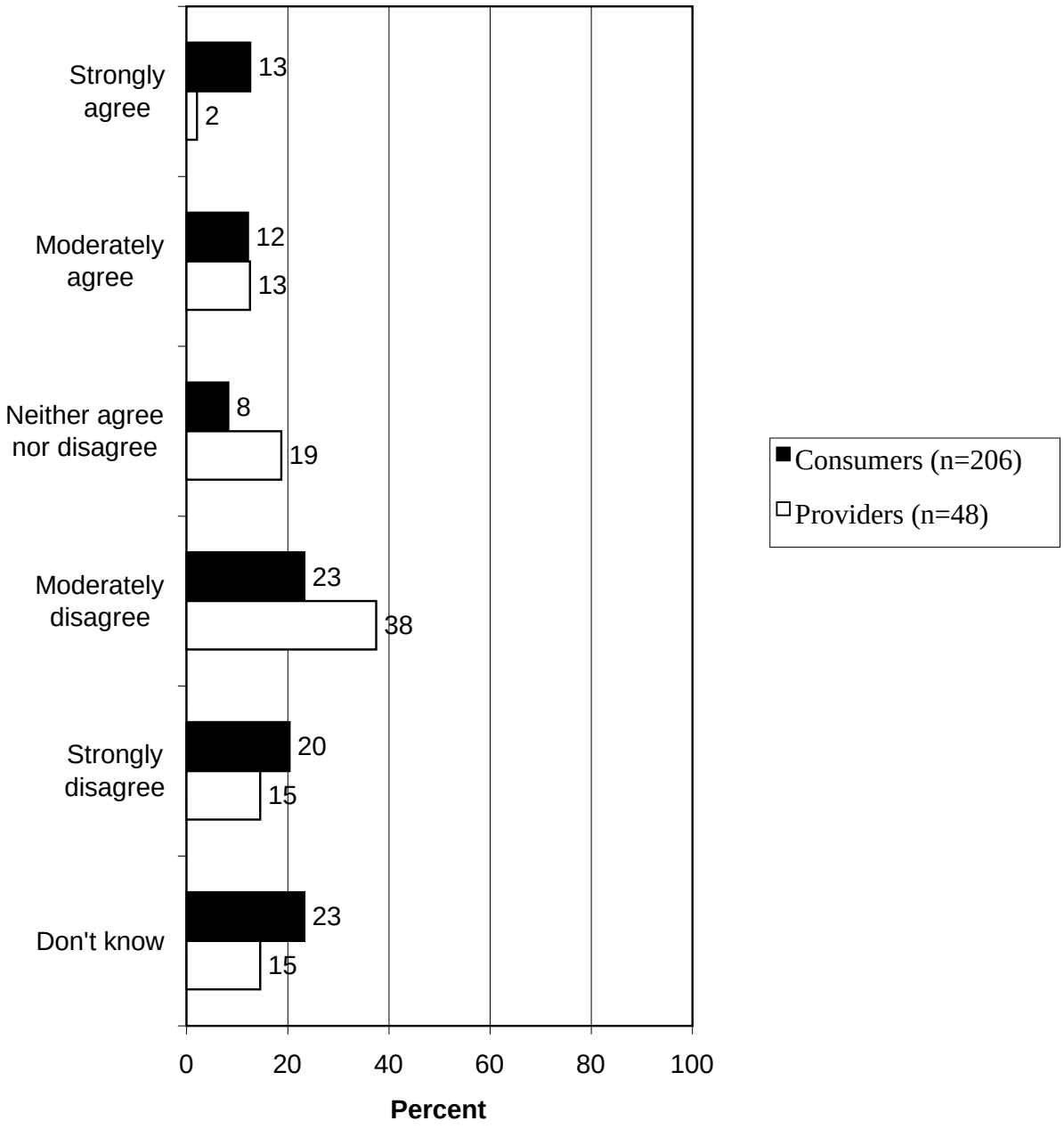


PERCEIVED NEEDS FOR TRAINING

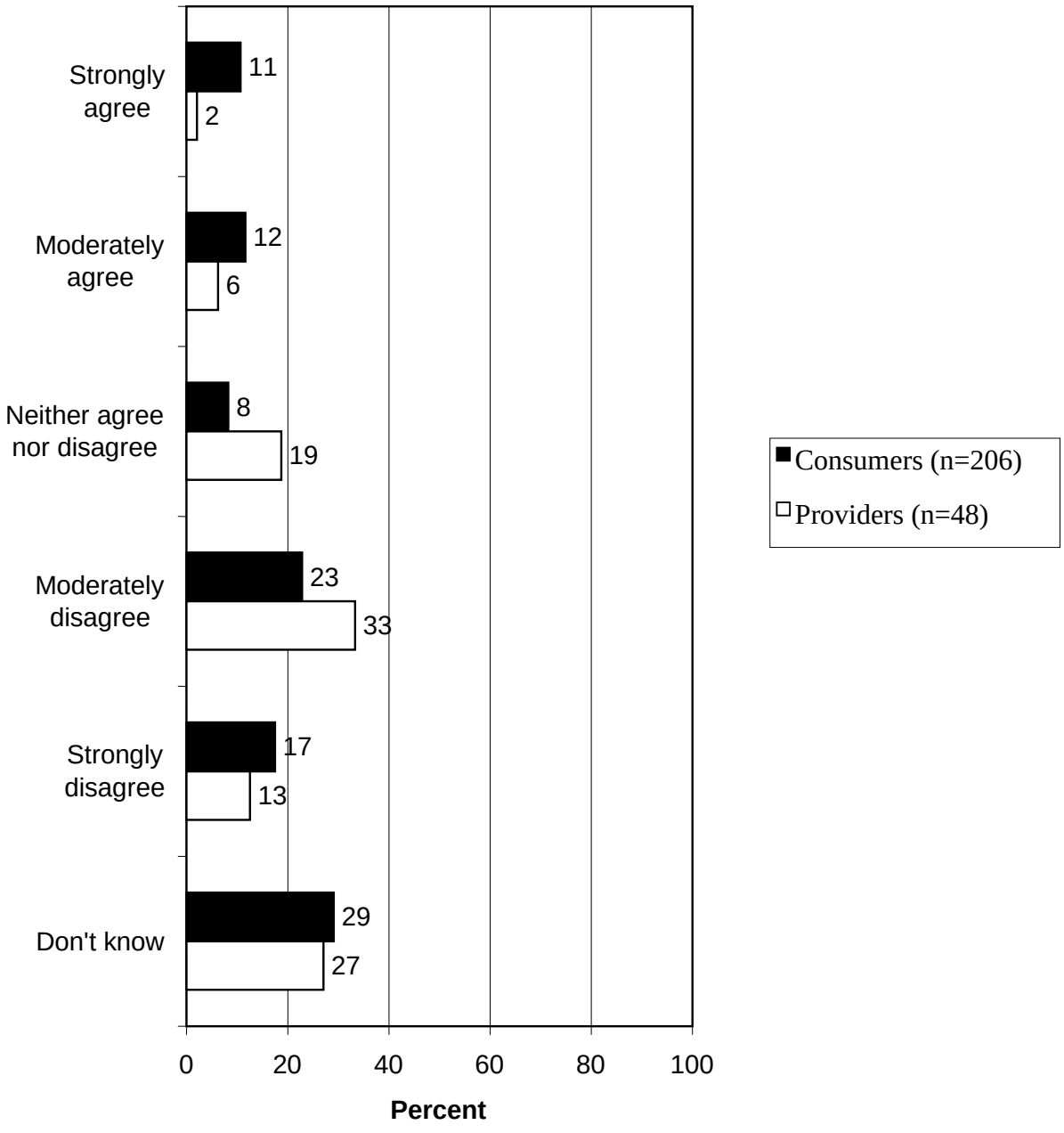
- Consumers were more likely than were providers to agree that there is enough coastal resource professional development being provided in New Jersey.
  - While 25% of consumers strongly or moderately agreed, only 15% of providers strongly or moderately agreed.
  - Conversely, less than a majority (43%) of consumers disagreed, while a majority (53%) of providers disagreed that there is enough coastal resource professional development being provided in New Jersey.

- Consumers were more likely than were providers to agree that there are enough coastal resource professional development providers in New Jersey.
  - 23% of consumers strongly or moderately agreed that there are enough coastal resource professional development providers in New Jersey, but only 8% of providers agreed.

Q208/Q290. Overall, do you agree or disagree that there is enough available coastal resource professional development for coastal resource decision-makers in the state of New Jersey?

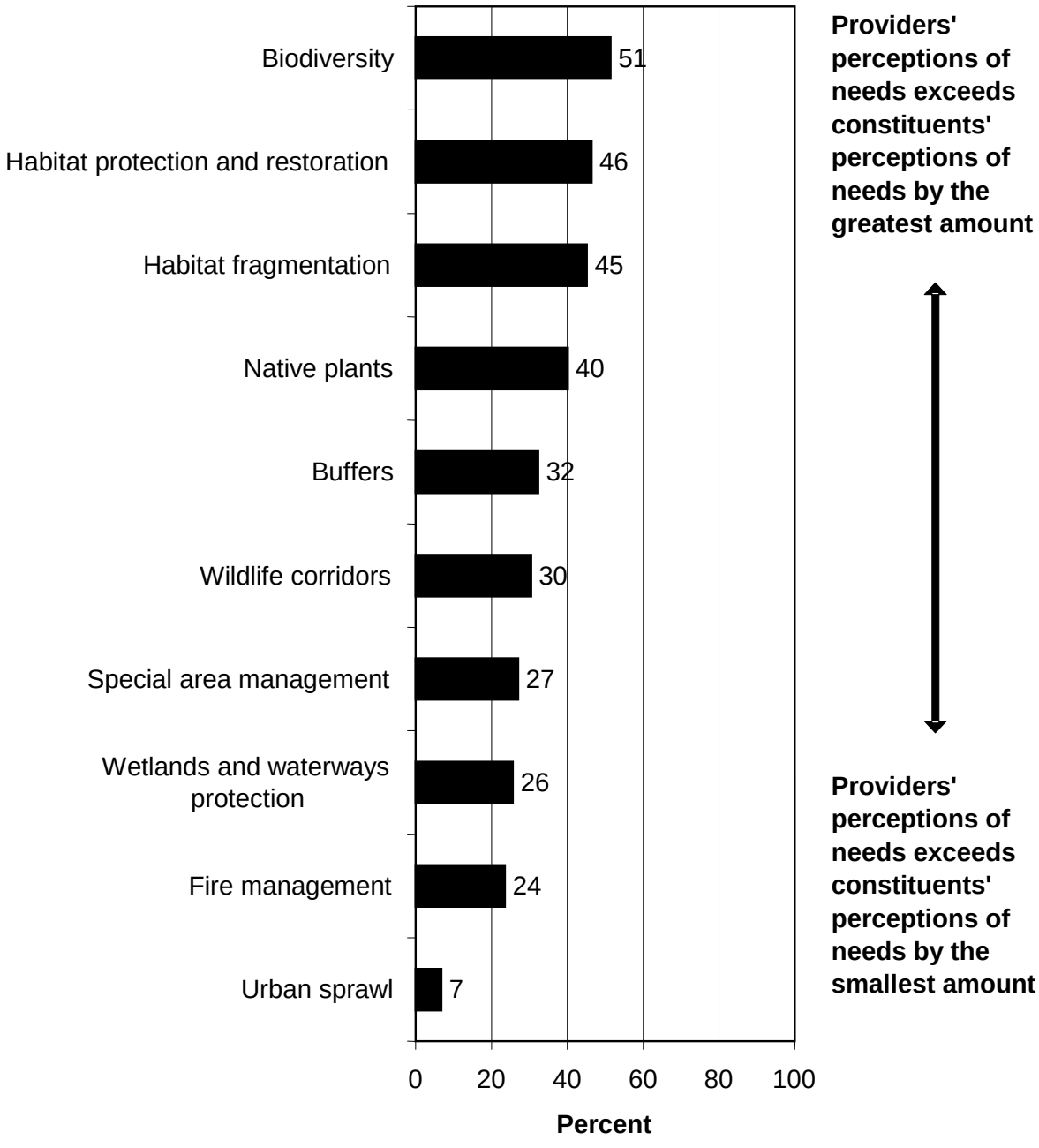


Q209/Q291. Overall, do you agree or disagree that there are enough coastal resource professional development providers that offer training for coastal decision-makers in New Jersey?

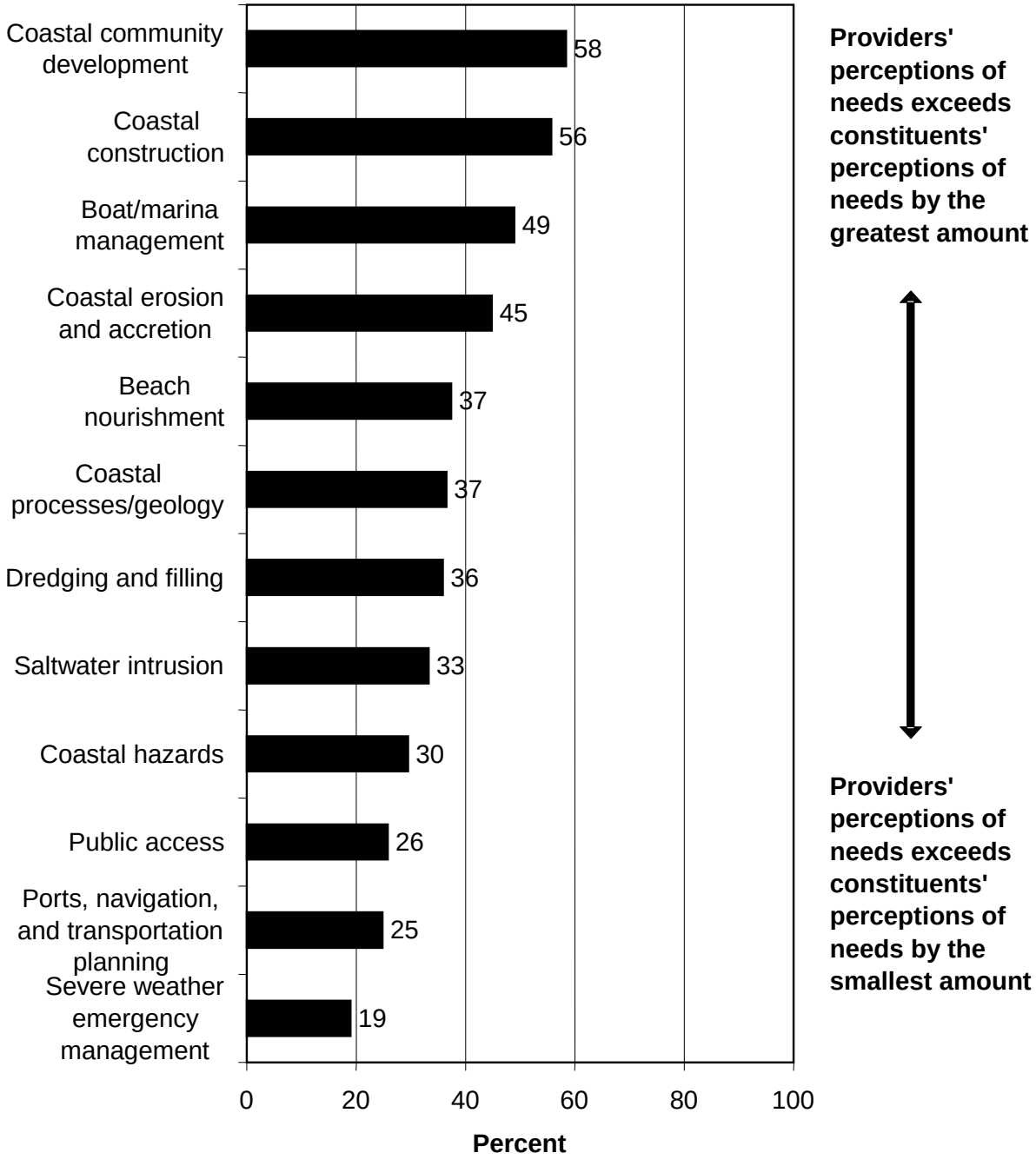


- The following graphs show the percentage point difference between the percent of providers who indicated that there is a high need for training in the given issue (e.g., biodiversity, habitat protection and restoration, habitat fragmentation) and the percent of consumers who indicated that there is a high need for training in the given issue. The results show where providers' perceptions of needs exceed consumers' perceptions of needs or vice-versa. For every topic/skill area except three, a higher percentage of providers than consumers said there was a high need for that topic/skill (the exceptions were within the category of *regulation issues*—public safety, GIS education/outreach, and regulations).
  - For *habitat issues*, the topics/skills with the greatest percentage point differences between providers' perceptions and consumers' perceptions are biodiversity, habitat protection and restoration, habitat fragmentation, and native plants.
  - For *coastal issues*, the topics/skills with the greatest percentage point differences between providers' perceptions and consumers' perceptions are coastal community development, coastal construction, boat/marina management, and coastal erosion and accretion.
  - For *water quality issues*, the topics/skills with the greatest percentage point differences between providers' perceptions and consumers' perceptions are water quantity, sedimentation, and water quality.
  - For *regulation issues*, the topics/skills with the greatest percentage point differences between providers' perceptions and consumers' perceptions are land use planning and sustainable facilities. *Regulation issues* had three aforementioned topics/skills for which consumers' perceptions exceeded providers' perceptions regarding needs.
  - For *resource management and other issues*, the topics/skills with the greatest percentage point differences between providers' perceptions and consumers' perceptions are endangered species, estuarine ecology, invasive species, ecological landscaping, and forestry issues.
  - For *ocean sciences topics*, the topic/skill with the greatest percentage point difference between providers' perceptions and consumers' perceptions is ocean surface optical properties.

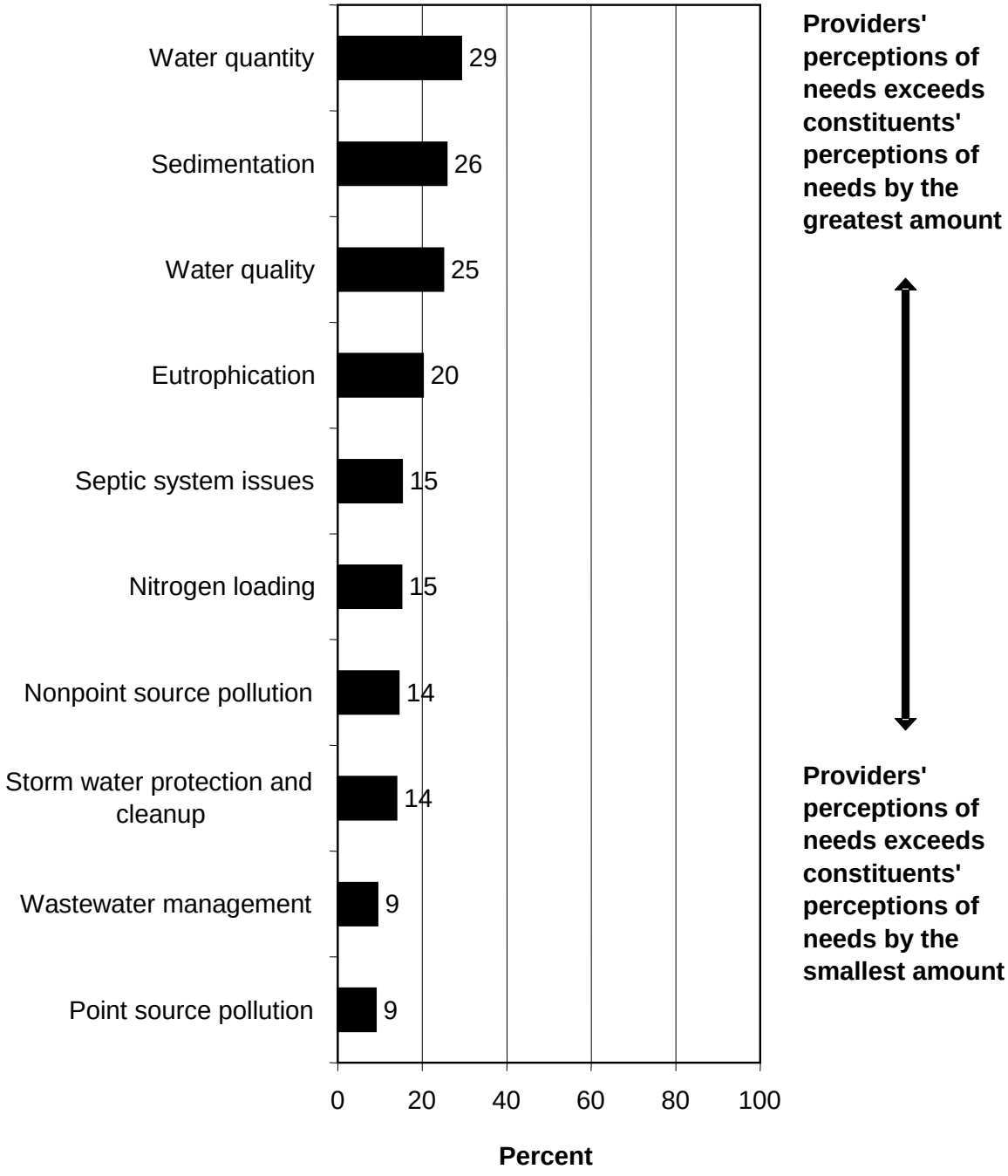
Percentage point differences between ratings of high needs among providers and high needs among consumers on habitat issues

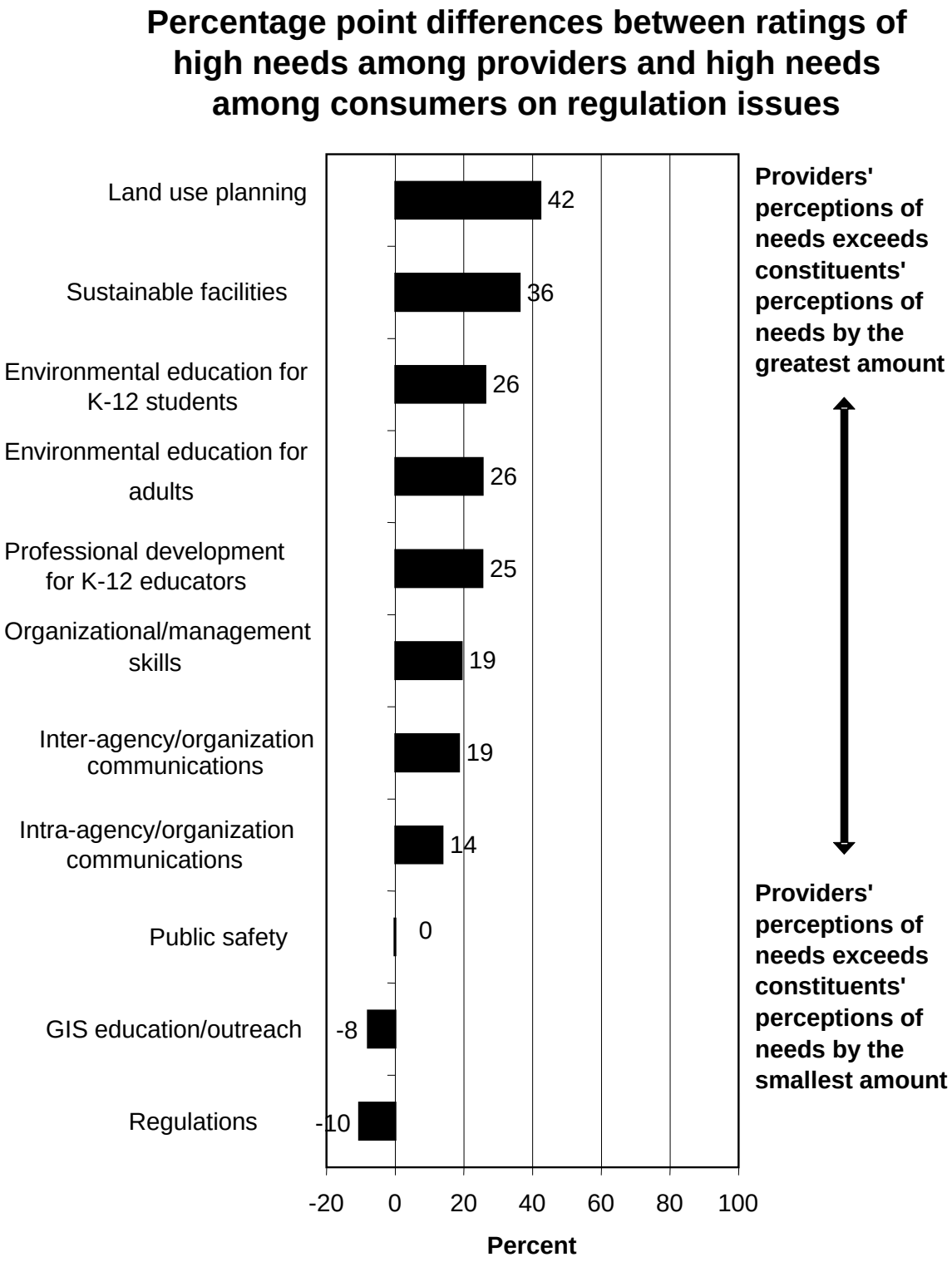


Percentage point differences between ratings of high needs among providers and high needs among consumers on coastal issues

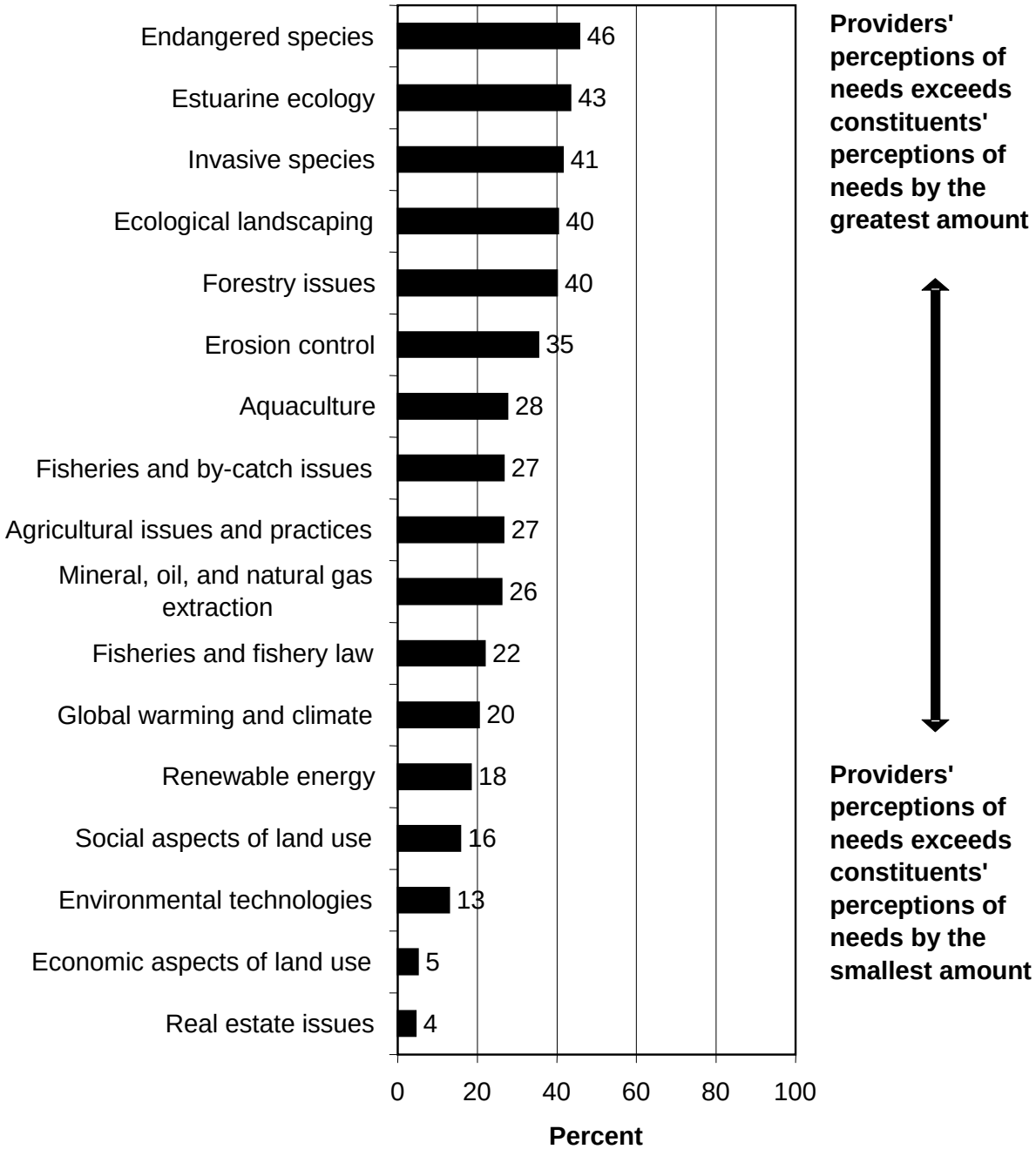


Percentage point differences between ratings of high needs among providers and high needs among consumers on water quality issues

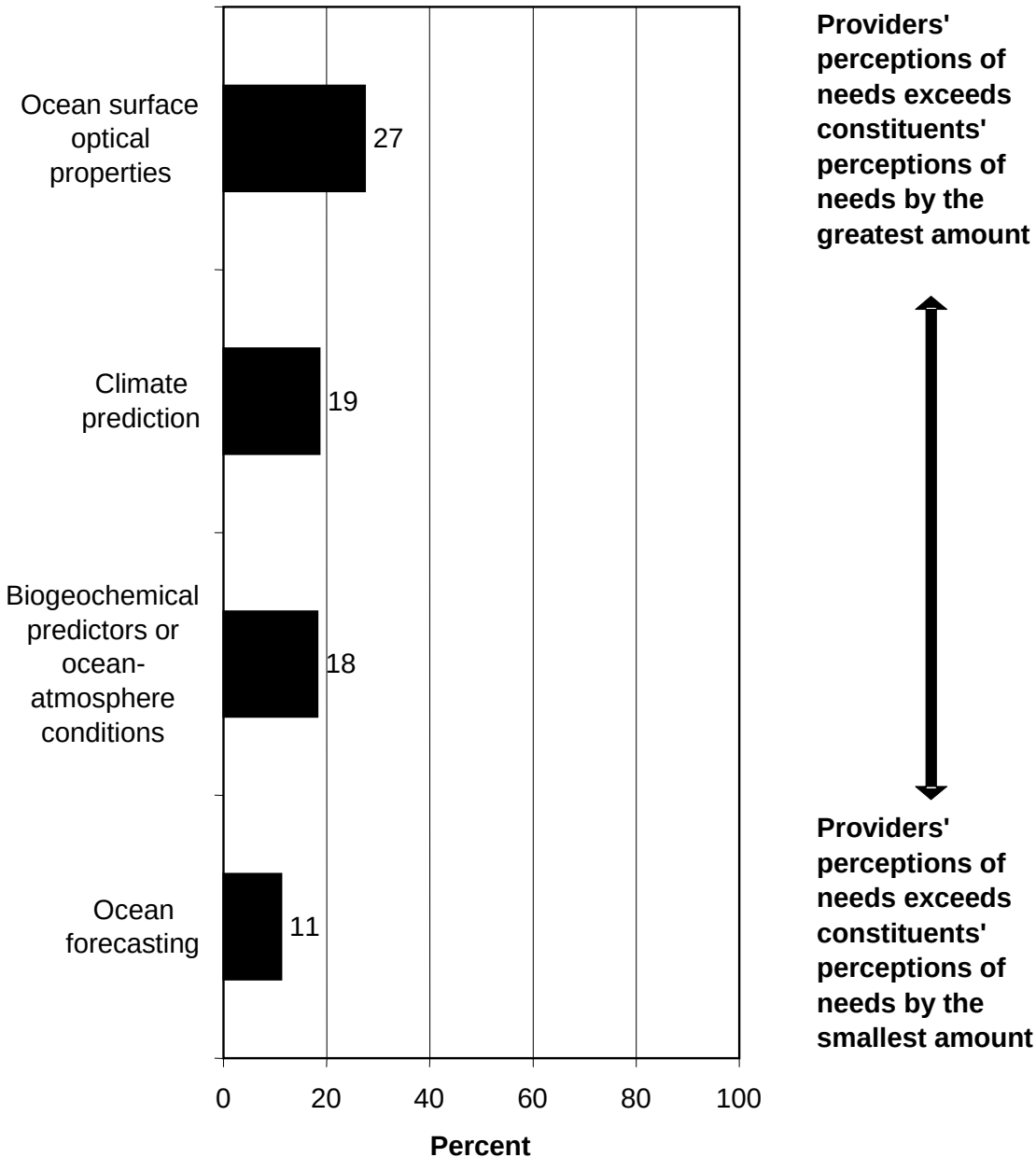



Percentage point differences between ratings of high needs among providers and high needs among consumers on regulation issues
Land use planning
42
Sustainable facilities
36
Environmental education for K-12 students
26
Environmental education for adults
26
Professional development for K-12 educators
25
Organizational/management skills
19
Inter-agency/organization communications
19
Intra-agency/organization communications
14
Public safety
0
GIS education/outreach
-8
Regulations
-10
-20
0
20
40
60
80
100
Percent
Providers' perceptions of needs exceeds constituents' perceptions of needs by the greatest amount
Providers' perceptions of needs exceeds constituents' perceptions of needs by the smallest amount

Percentage point differences between ratings of high needs among providers and high needs among consumers on resource management and other issues

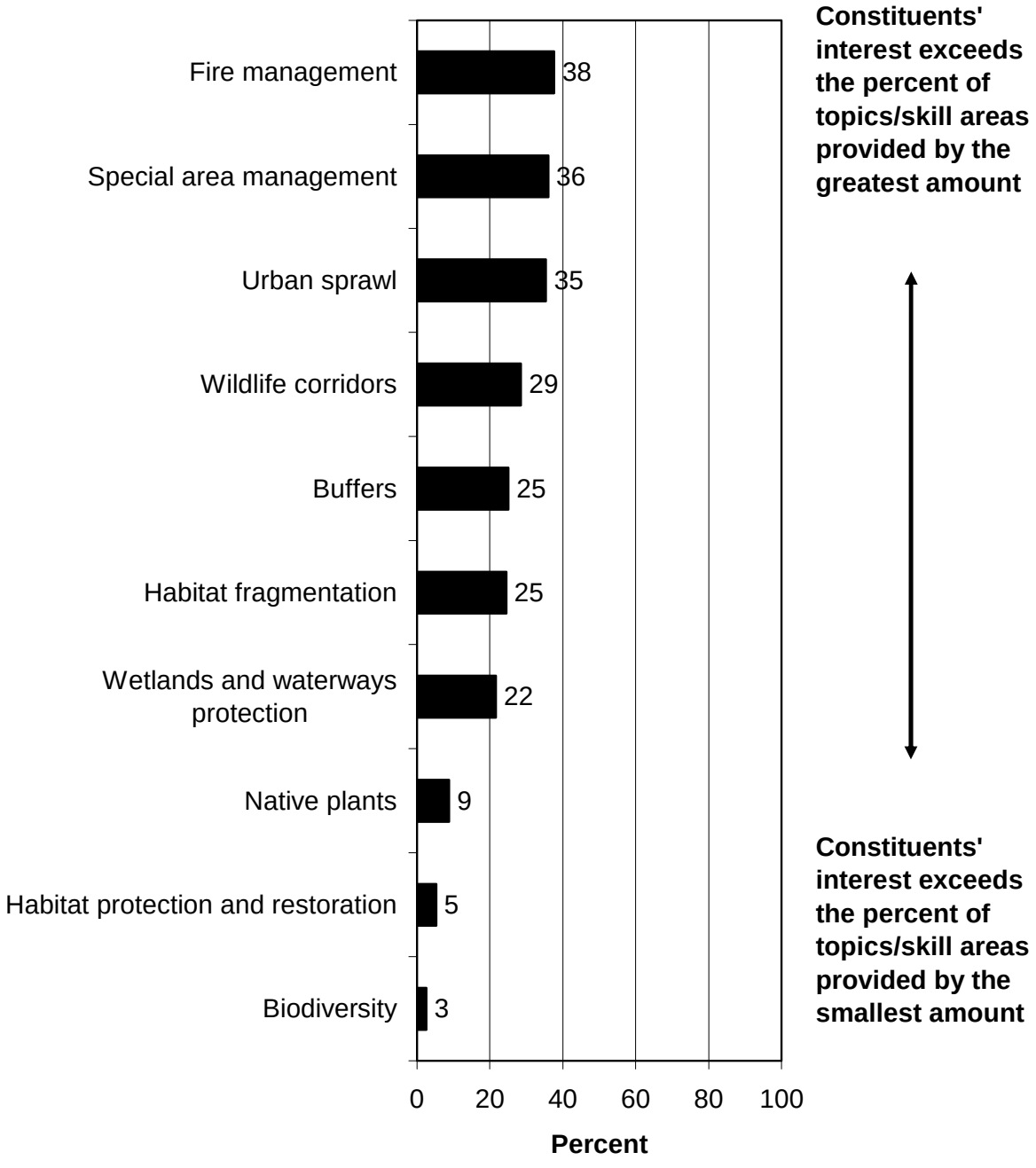


Percentage point differences between ratings of high needs among providers and high needs among consumers on ocean sciences topics

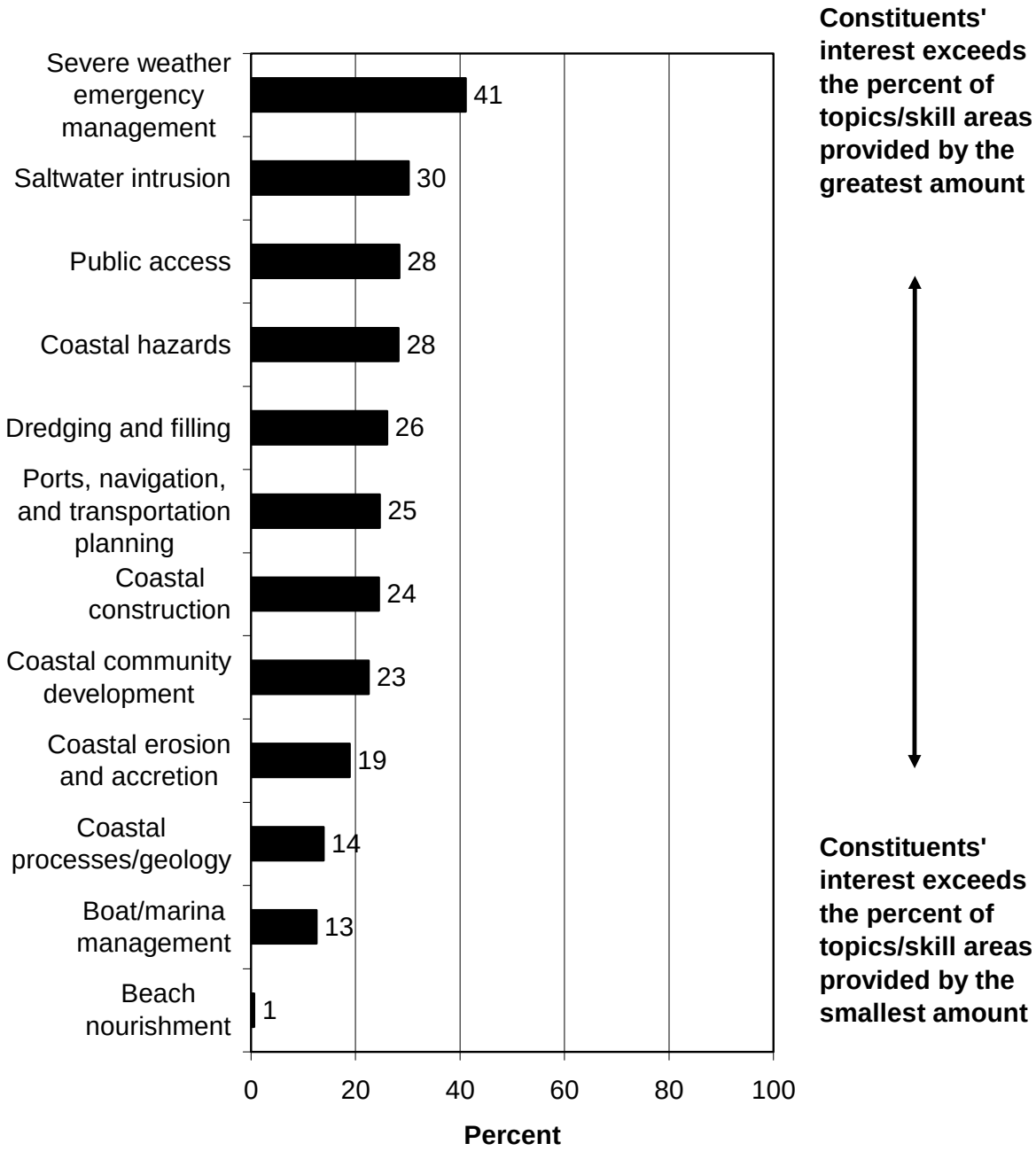


- The following graphs show the percentage point difference between consumers' high or moderate interest in the given issue and the percentage of providers who offer training pertaining to that issue. Note that this gap does not always mean that not enough training about that topic is being provided, since in some instances a limited number of providers may have the capacity to meet all the needs; rather, it simply points to issues that should be monitored to ensure that training needs in that issue are met.
  - The *habitat issues* that have the largest difference between consumers' interest in the issue and the percentage of providers offering training in that issue are fire management, special area management, and urban sprawl.
  - The *coastal issues* that have the largest difference between consumers' interest in the issue and the percentage of providers offering training in that issue are severe weather emergency management, saltwater intrusion, public access, and coastal hazards.
  - The *water quality issues* that have the largest difference between consumers' interest in the issue and the percentage of providers offering training in that issue are wastewater management, septic system issues, and storm water protection and cleanup.
  - The *regulation issues* that have the largest difference between consumers' interest in the issue and the percentage of providers offering training in that issue are public safety, GIS education/outreach, organizational/management skills, and regulations.
  - The *resource management and other issues* that have the largest difference between consumers' interest in the issue and the percentage of providers offering training in that issue are environmental technologies, renewable energy, and land trusts and conservation acquisitions.
  - The *ocean sciences topic* that has the largest difference between consumers' interest in the issue and the percentage of providers offering training in that issue is climate prediction.

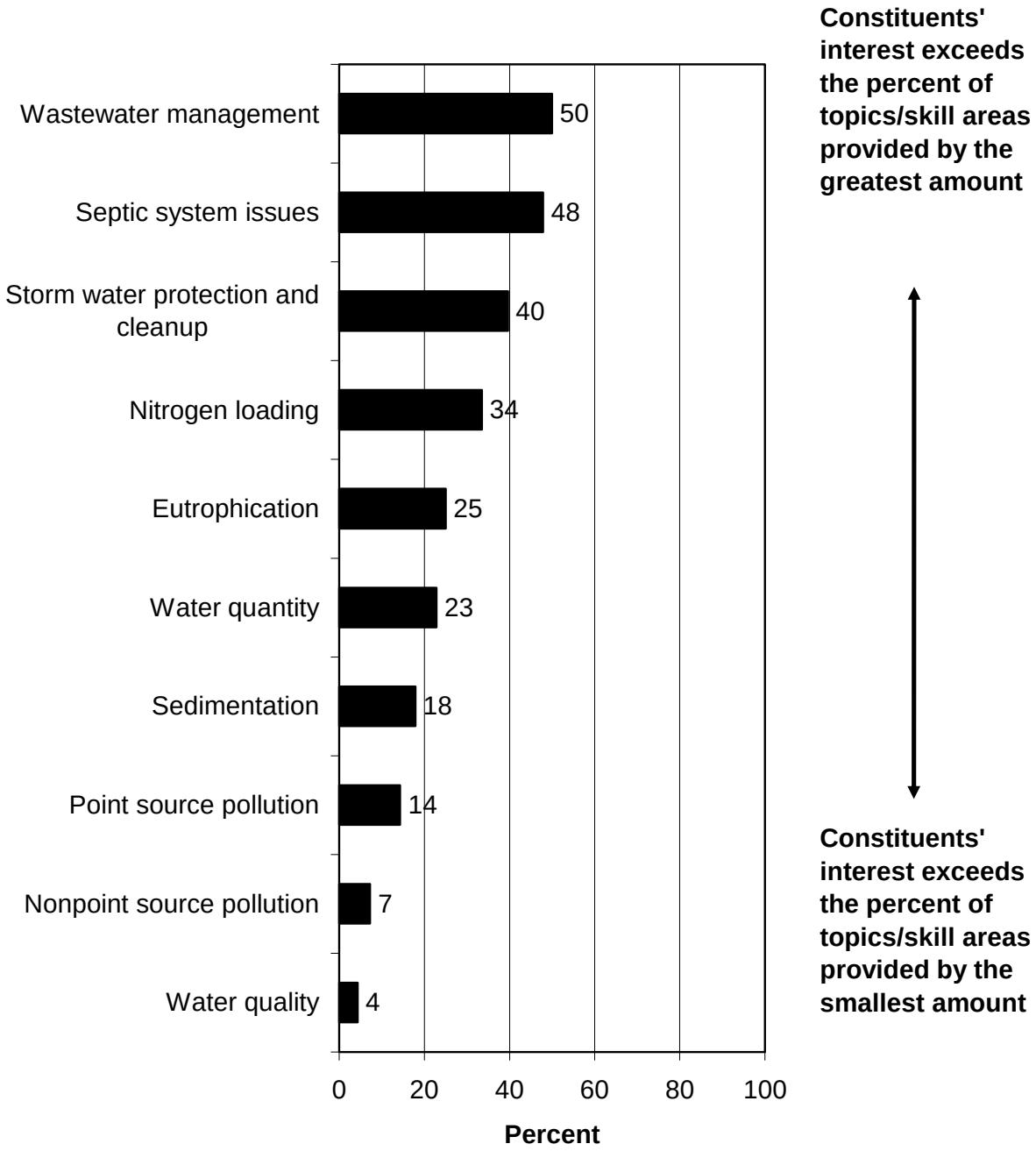
Percentage point differences in the percent of constituents' high and/or moderate interest in an issue and the percent of providers offering the service (habitat issues)



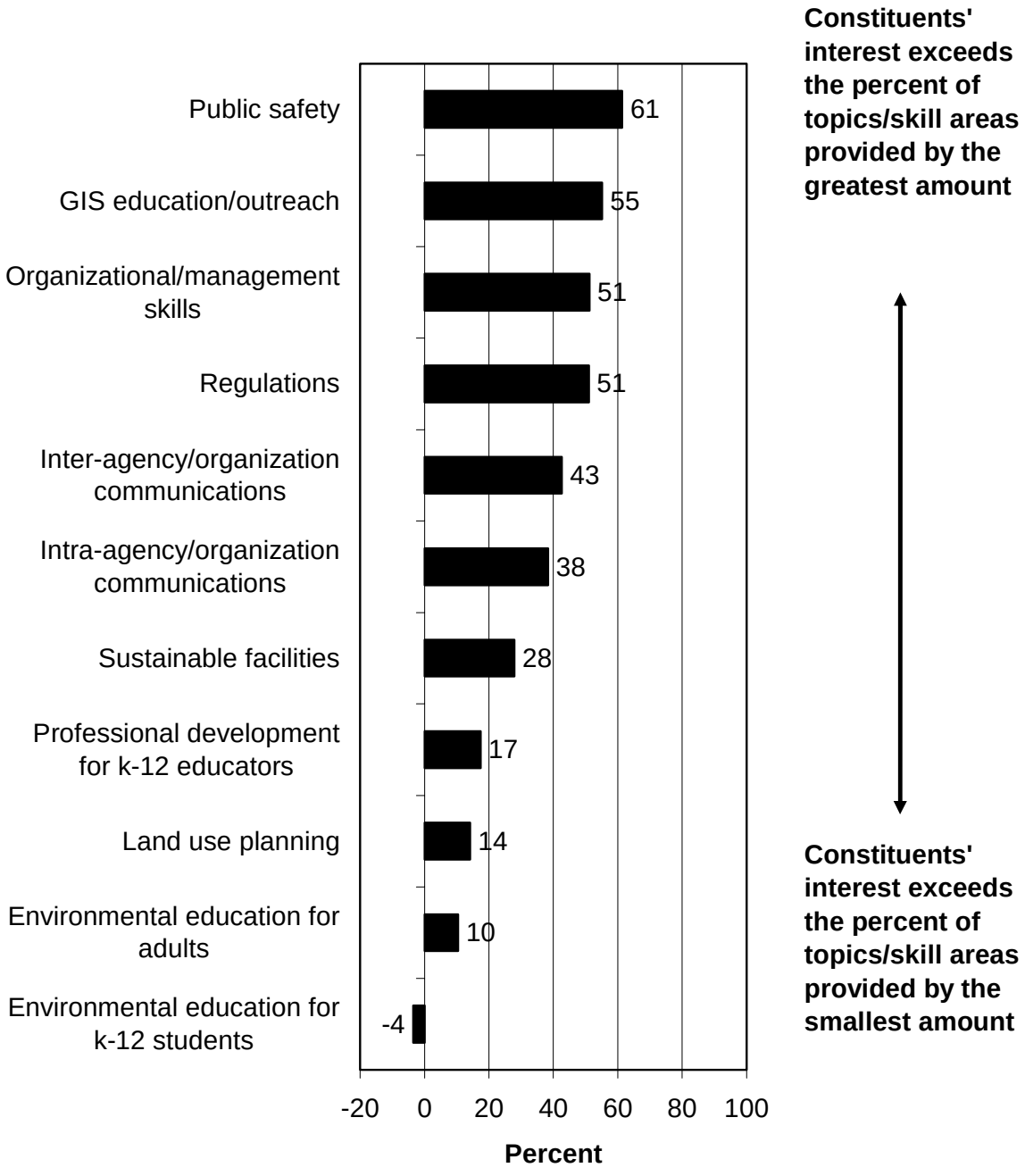
Percentage point differences in the percent of constituents' high and/or moderate interest in an issue and the percent of providers offering the service (coastal issues)



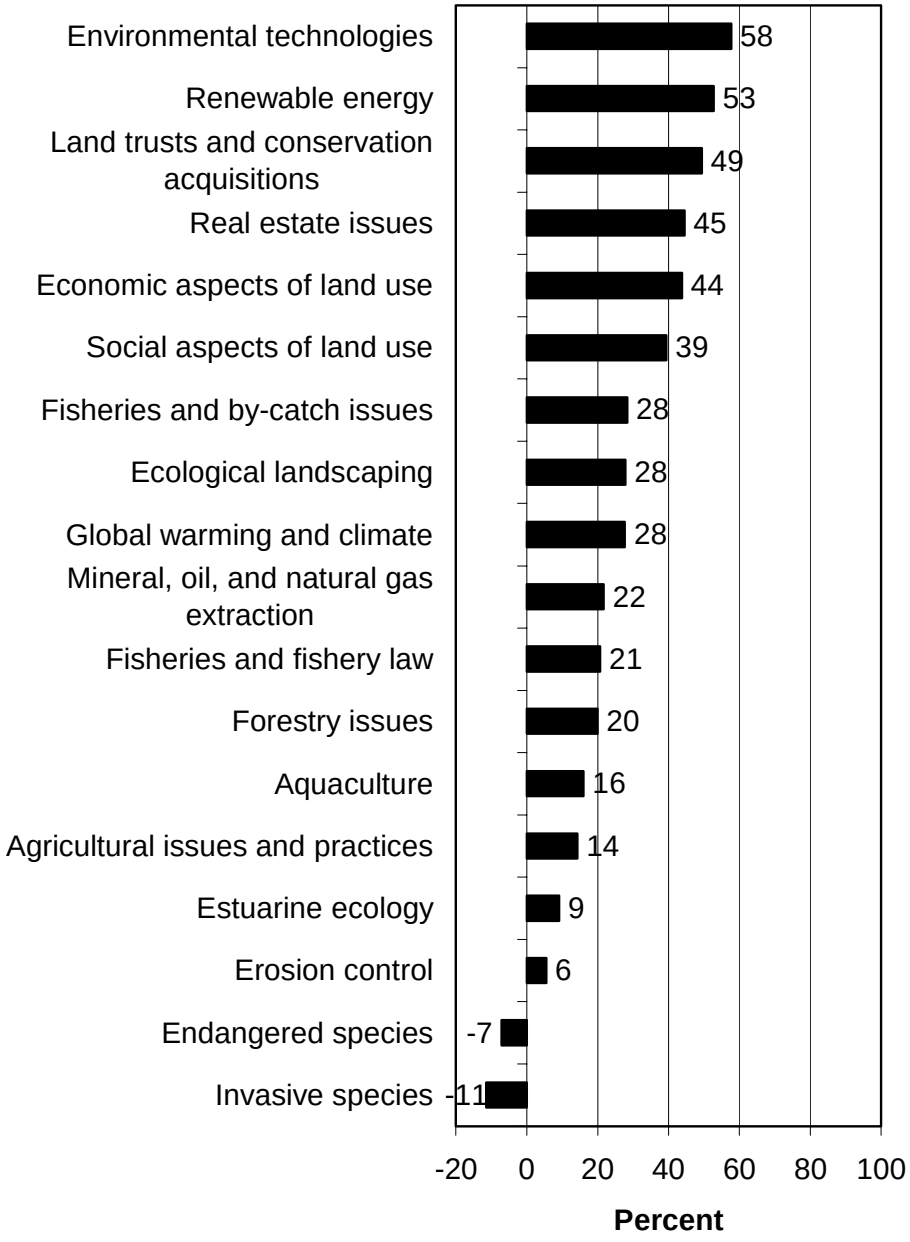
Percentage point differences in the percent of constituents' high and/or moderate interest in an issue and the percent of providers offering the service (water quality issues)



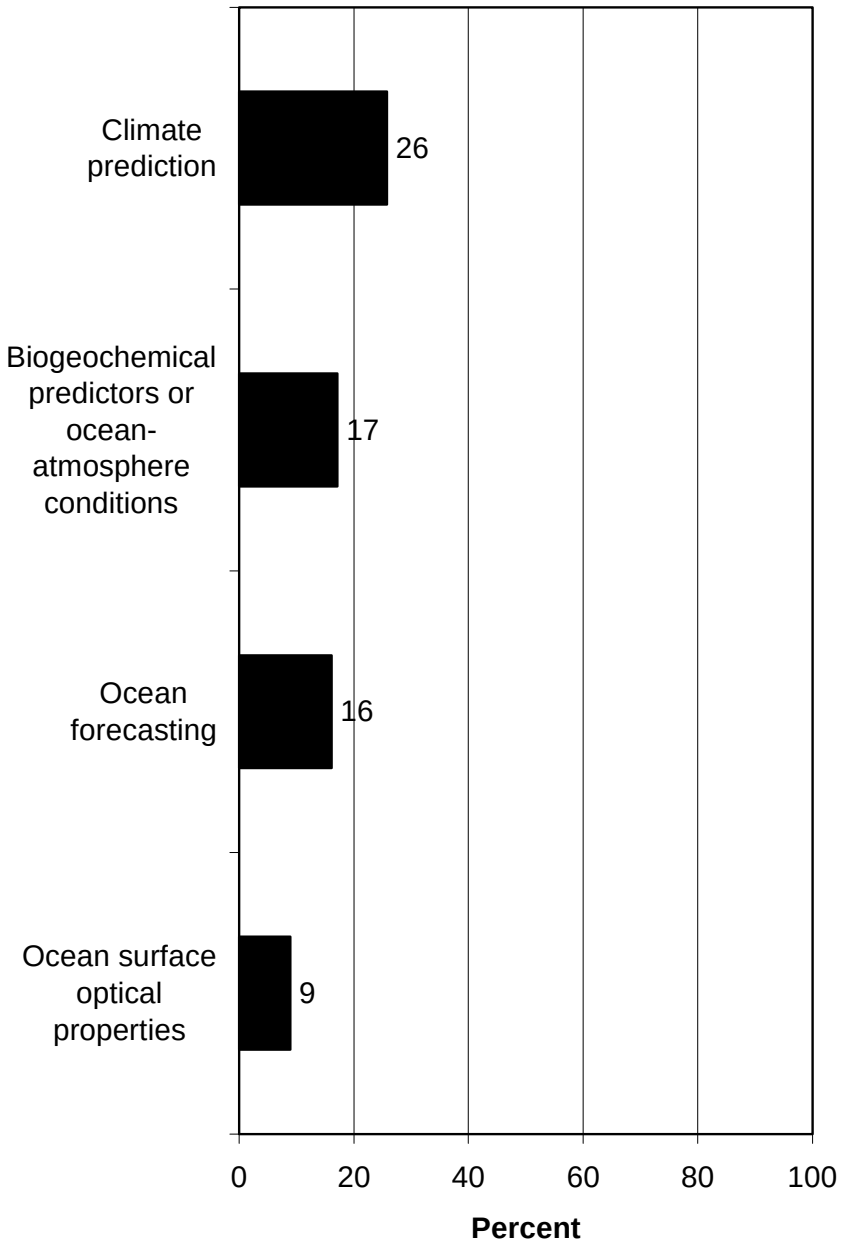
Percentage point differences in the percent of constituents' high and/or moderate interest in an issue and the percent of providers offering the service (regulation issues)



Percentage point differences in the percent of constituents' high and/or moderate interest in an issue and the percent of providers offering the service (resource management and other issues)



Percentage point differences in the percent of constituents' high and/or moderate interest in an issue and the percent of providers offering the service (ocean sciences topics)

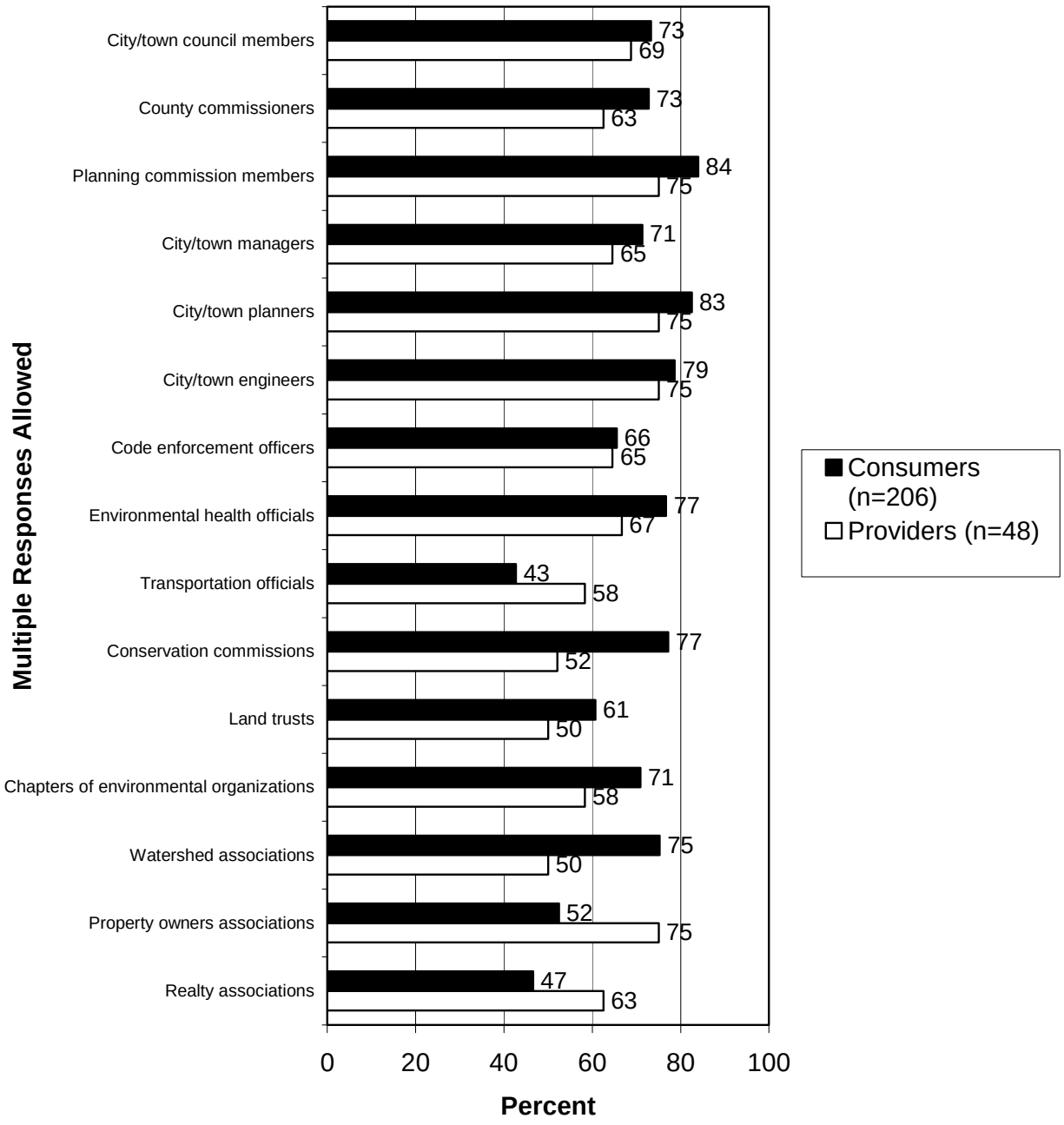


Constituents' interest exceeds the percent of topics/skill areas provided by the greatest amount

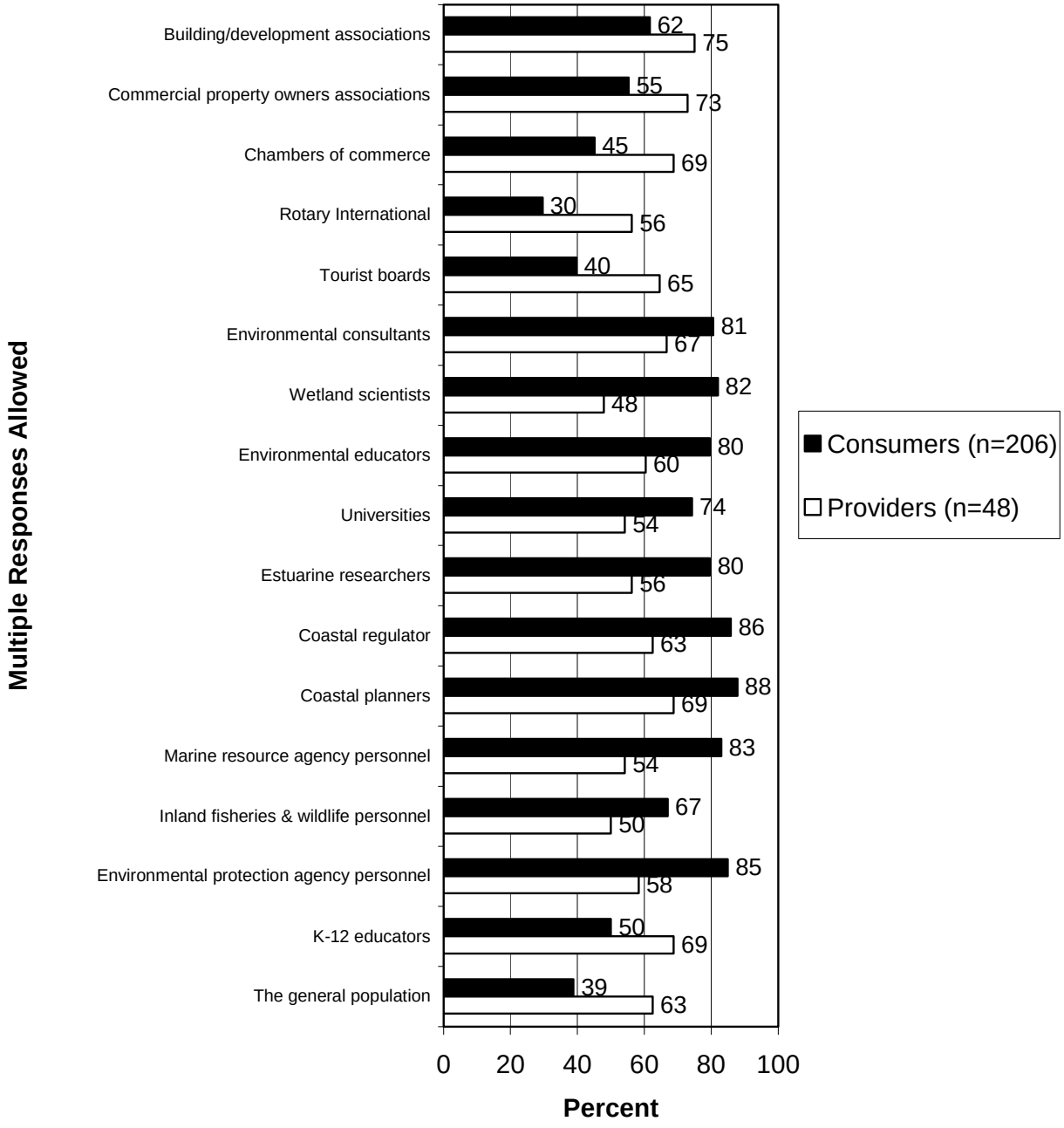
Constituents' interest exceeds the percent of topics/skill areas provided by the smallest amount

- The following graphs show the differences between consumers' perceptions and providers' perceptions of the types of people most in need of training. For some, consumers' perceptions exceeded providers' perceptions of needs; for others, providers' perceptions exceeded consumers' perceptions.
  - The groups of people for which consumers' perceptions of needs greatly exceeds (more than 20 percentage points) providers' perceptions of needs are wetland scientists, marine resource agency personnel, environmental protection agency personnel, conservation commissions, watershed associations, estuarine researchers, and coastal regulators.
  - The groups of people for which providers' perceptions of needs greatly exceeds (more than 20 percentage points) consumers' perceptions of needs are K-12 educators, Rotary International, tourist boards, chambers of commerce, the general population, and property owners associations.

People for whom respondents felt there was a high need for coastal resource planning information and professional development.
Part 1



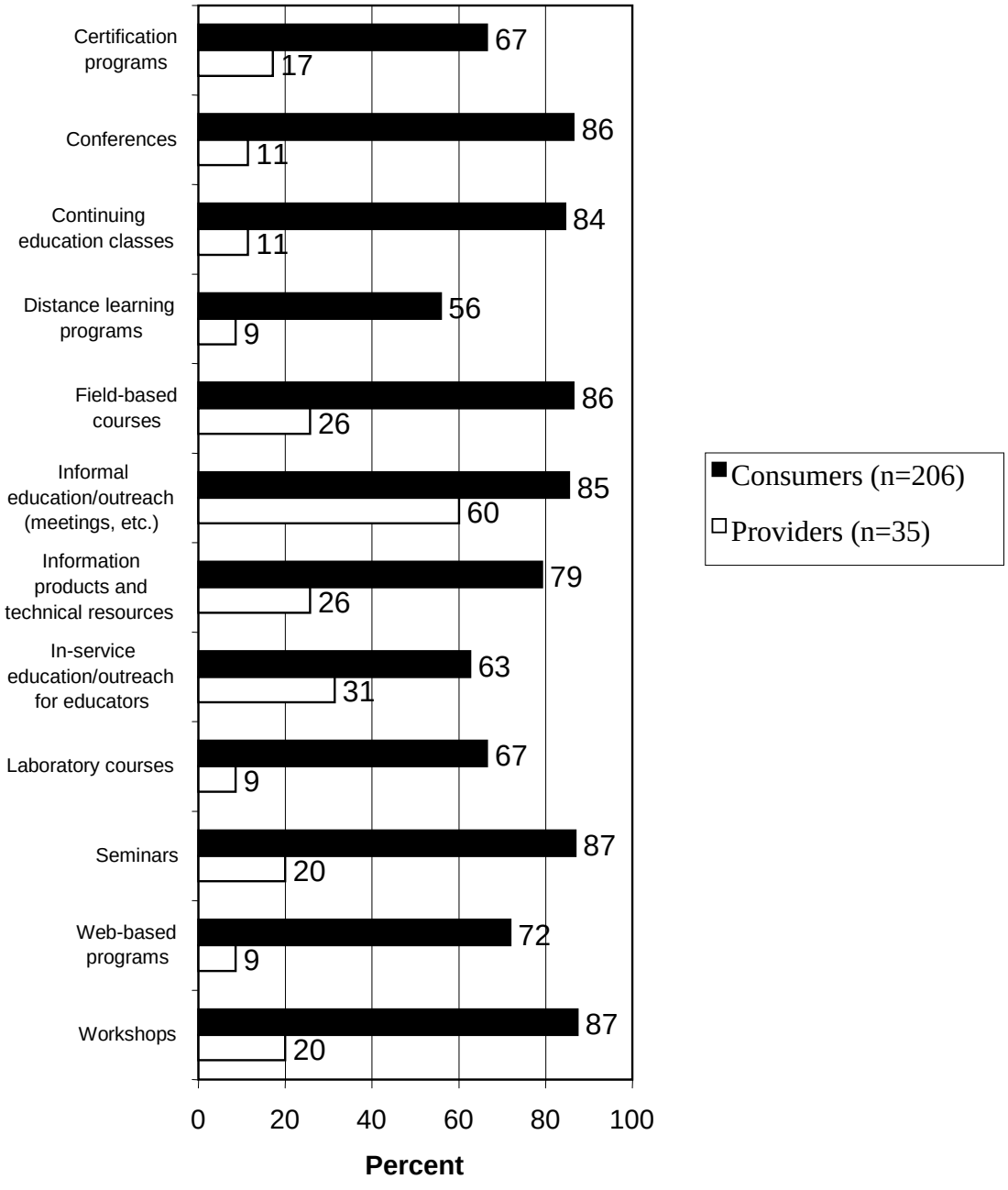
People for whom respondents felt there was a high need for coastal resource planning information and professional development.
Part 2



FORMATS FOR TRAINING

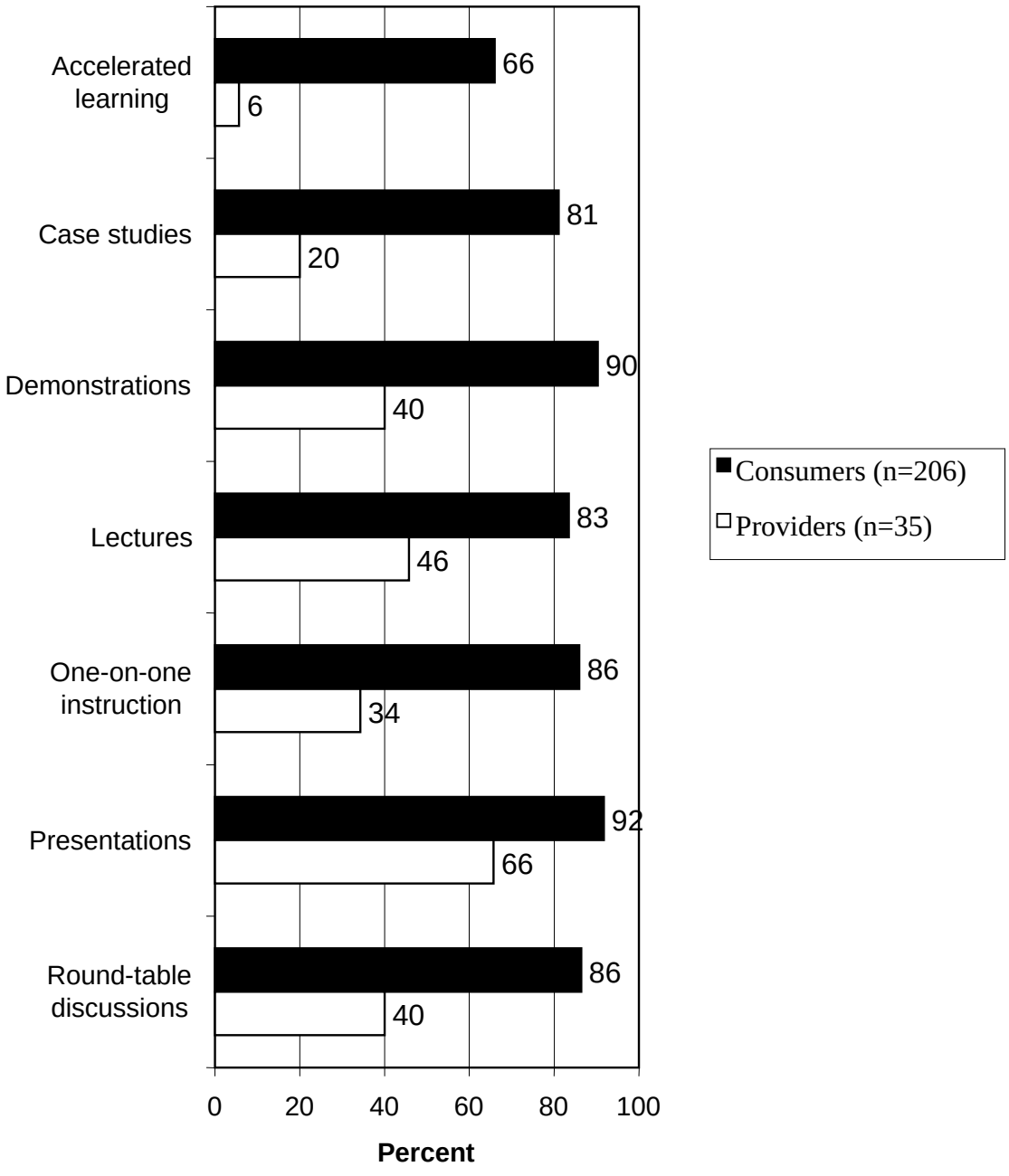
- The following graph shows the percentage of consumers who rated the training format as very or somewhat effective and the percentage of providers who offer the given format. Note that this gap does not always mean that not enough training of this format is being provided, since in some instances a limited number of providers may have the capacity to meet all the needs for that format and in other instances the particular format does not lend itself to the particular training being offered; rather, it simply points to formats that should be considered to ensure that training needs in that format are met.
  - The largest differences are for conferences (difference of 75 percentage points) and continuing education classes (73 point difference).
  - Other formats with large differences are seminars (67 point difference), workshops (67 point difference), and Web-based programs (63 point difference).

Percent of formats considered somewhat or very effective by consumers compared to the percent of providers offering the formats



- The following graph shows the percentage of consumers who rated the learning techniques as very or somewhat effective and the percentage of providers who offer the given learning technique.
  - The learning techniques with the largest gaps between the percentage of consumers who rated the technique as very or somewhat effective and the percentage of providers who offer the technique are case studies (61 percentage point difference), accelerated learning (60 point difference), and one-on-one instruction (52 point difference).

Percent of learning techniques considered somewhat or very effective by consumers compared to the percent of providers offering the technique

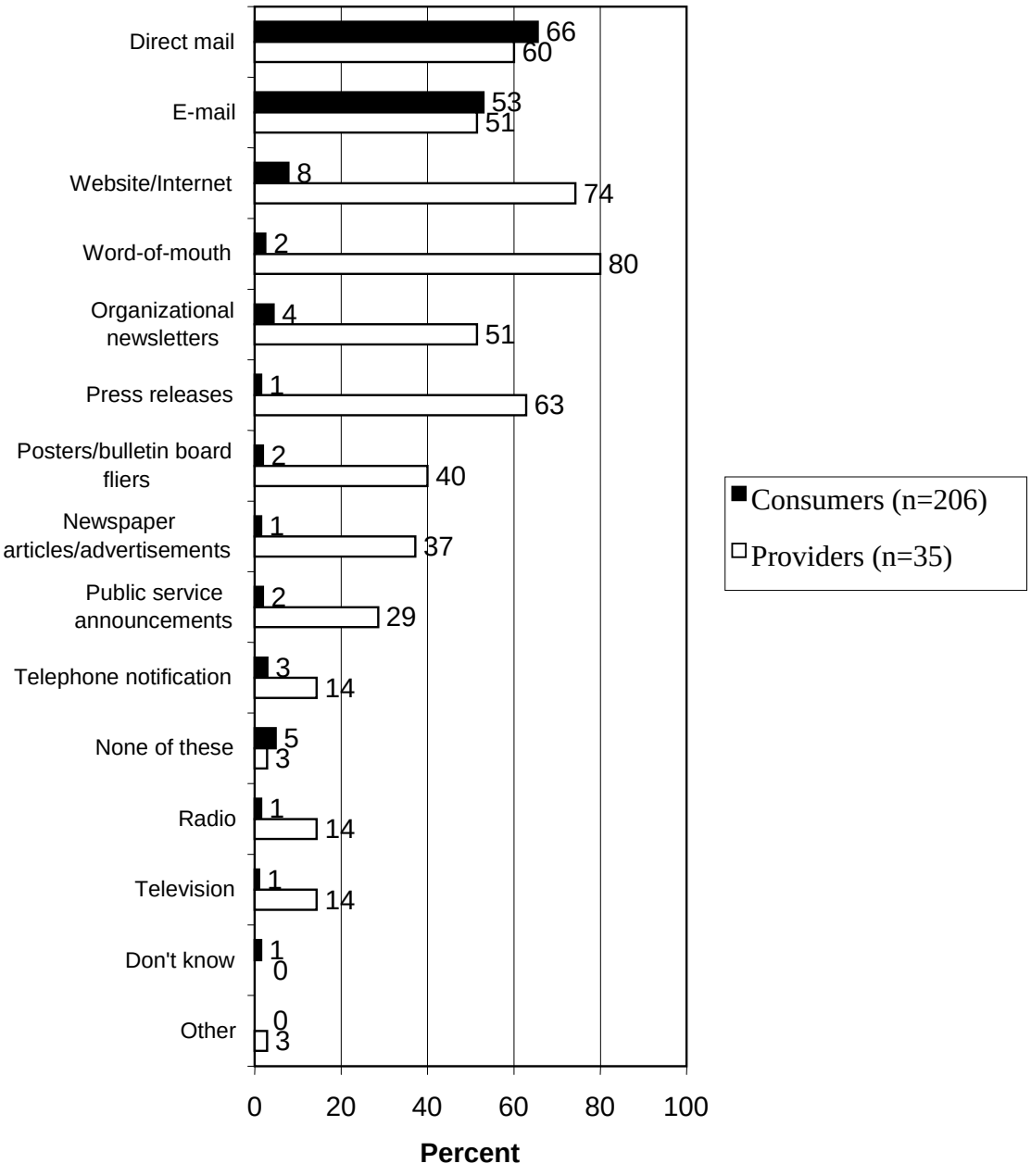


NOTIFICATION OF TRAINING AND INFORMATION DISSEMINATION METHODS

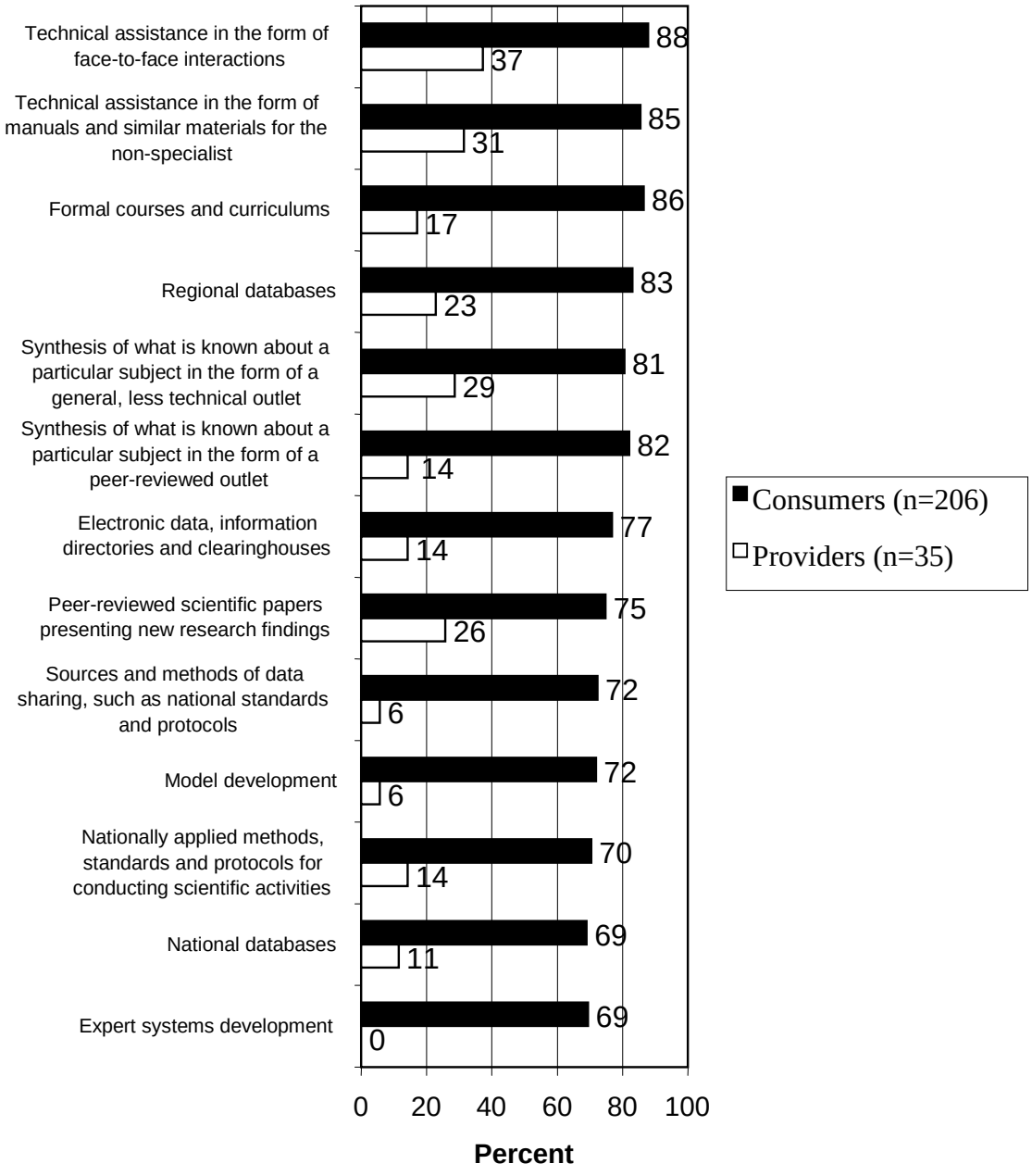
- The top preferred methods (direct mail and e-mail) for consumers to receive notification of coastal training closely match providers' delivery methods. However, other than those two methods, there are extremely large differences between ways that notification is provided and the ways that consumers would like to be notified. For all except the top two methods, the percent of providers using the given notification method exceeds the percent of consumers who prefer that notification method.
  - Direct mail is a preferred method for receiving notification by 66% of consumers and is used by 60% of providers; e-mail is a preferred method for receiving notification by 53% of consumers and is used by 51% of providers.
  - The Internet is preferred by 8% of consumers but used by 74% of providers; an organizational newsletter is preferred by 4% of consumers but used by 51% of providers; and a press release is preferred by 1% of consumers but used by 63% of providers.

- The final graph in this subchapter shows the percentage of consumers who think that the given dissemination method is very or somewhat effective and the percentage of providers that use the given method.

Q187/Q235. Preference for notification/method of promotion for professional development programs



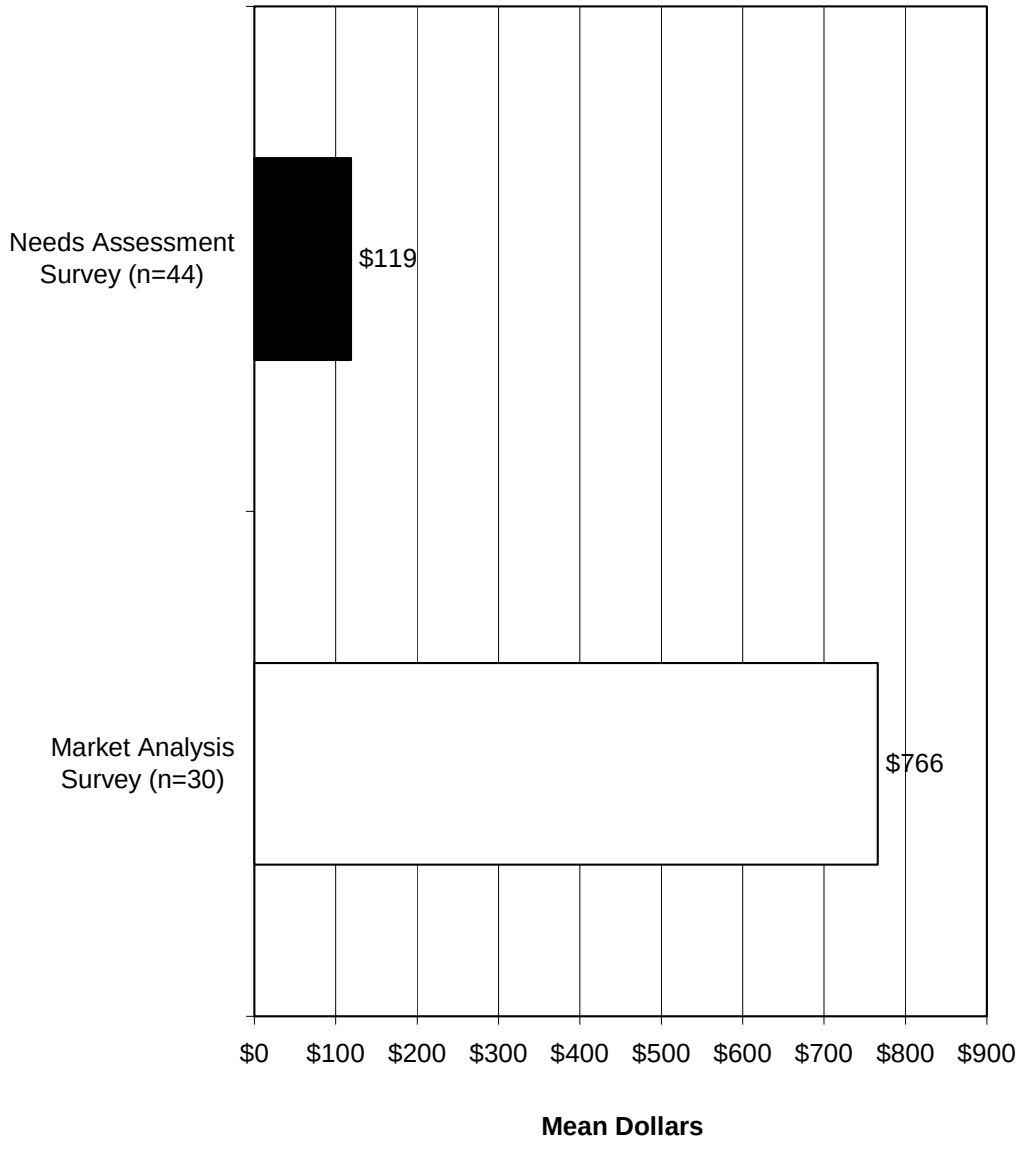
Q189-Q201/Q239. How effective are/Division uses the following methods for dissemination of information



FEES FOR COASTAL TRAINING SESSIONS

- The mean fee that consumers pay is considerably less than the mean fee that providers charge. This may be because consumers do not always pay the entire fee for coastal training.

Q26/Q38. Comparison of the average fee reported to attend a typical coastal resource training session vs. the reported average fee charged by coastal resource training providers.



RECOMMENDATIONS AND IMPLICATIONS

The results of these studies indicate that the community of coastal resource professional development providers in New Jersey appears small but is possibly quite sizeable. In the study, 140 individual potential providers were identified and surveyed, and 48 providers responded to the market inventory survey. Of the 48 providers who responded, 35 said that they conduct coastal resource professional development, and 13 said that they did not. Despite the small number of providers, a total of 95 formal coastal resource professional development programs were identified in New Jersey. This is likely a conservative number, as several organizations indicated that they provide formal coastal training programs but did not provide the names of their programs.

The coastal training providers in New Jersey (based on the respondents to this survey) are a diverse group, although most of the training was conducted by not-for-profit organizations and state agencies. Overall, agencies/organizations held their coastal training sessions with convenience in mind (for them or for their participants), either local to their agency/organization or local to the participant.

INCREASE TRAINING

Although current coastal resource training efforts are already reaching a relatively large audience (a mean of 5,813 people were reached by an agency's or organization's coastal training services) in New Jersey, coastal training agencies/organizations (providers) and coastal decision-makers agreed that there is a need for more coastal training and more coastal training providers in New Jersey. To increase the effectiveness of this effort, the Jacques Cousteau Reserve can focus on certain topics/skills as well as specific audiences.

TOPICS/SKILLS AREAS

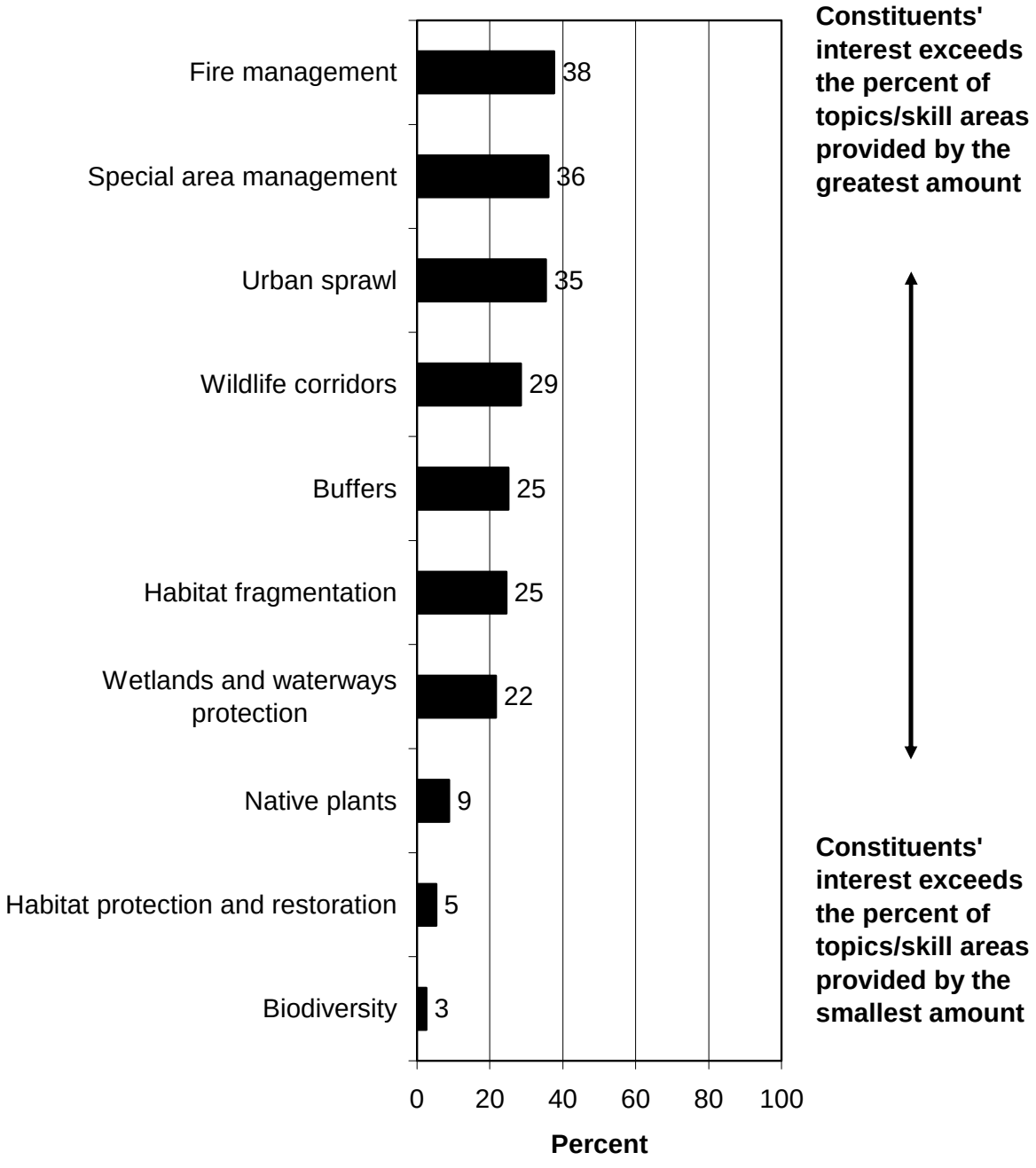
In the market inventory survey, providers were asked in which coastal resource topics/skills their agency or organization provides outreach/education, and in the needs assessment survey, coastal decision-makers were asked in which topics/skills areas were they most interested in learning more. Statistical analyses were then performed to determine the percentage point difference between coastal decision-makers' high or moderate interest in the given issue and the percentage

of providers who actually offer training in that area. It is important to note that this gap does not always mean that not enough training about that topic is being provided, since in some instances a limited number of providers may have the capacity to meet all the needs. However, this information does highlight issues that the Jacques Cousteau Reserve should monitor to ensure that training needs in that issue are met. The following list shows the topic areas that have the *largest* percentage point difference between the percentage of coastal decision-makers' who show an interest in the issue and the percentage of providers offering training on that issue, suggesting that the following topics may be important for future program development:

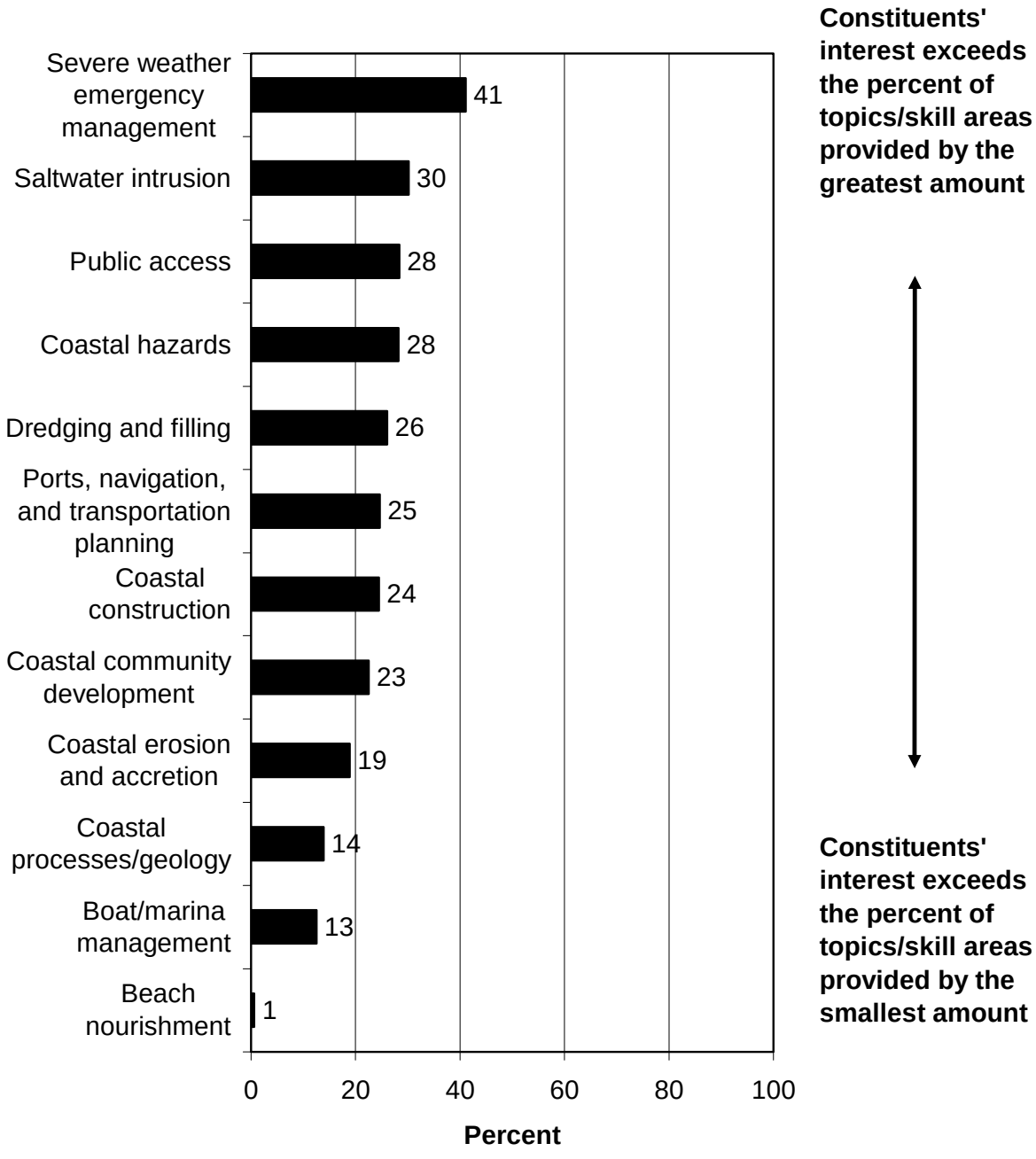
- **Habitat Issues:** Fire management, special area management, and urban sprawl.
- **Coastal Issues:** Severe weather emergency management, saltwater intrusion, public access, and coastal hazards.
- **Water Quality Issues:** Wastewater management, septic system issues, and storm water protection and cleanup.
- **Education, Planning and Regulation Issues:** Public safety, GIS education/outreach, organizational/management skills, and regulations.
- **Resource Management and Other Issues:** Environmental technologies, renewable energy, and land trusts and conservation acquisitions.
- **Ocean Sciences Topics:** Climate prediction.

This does not imply that the other topics/skills areas that providers currently offer are not important; rather, this information simply provides direction for the Jacques Cousteau Reserve in terms of planning future programs. This information can also be used when approaching new partners for the Coastal Training Program by helping to target organizations that may have a higher interest than others in providing coastal training or education/outreach services in these areas.

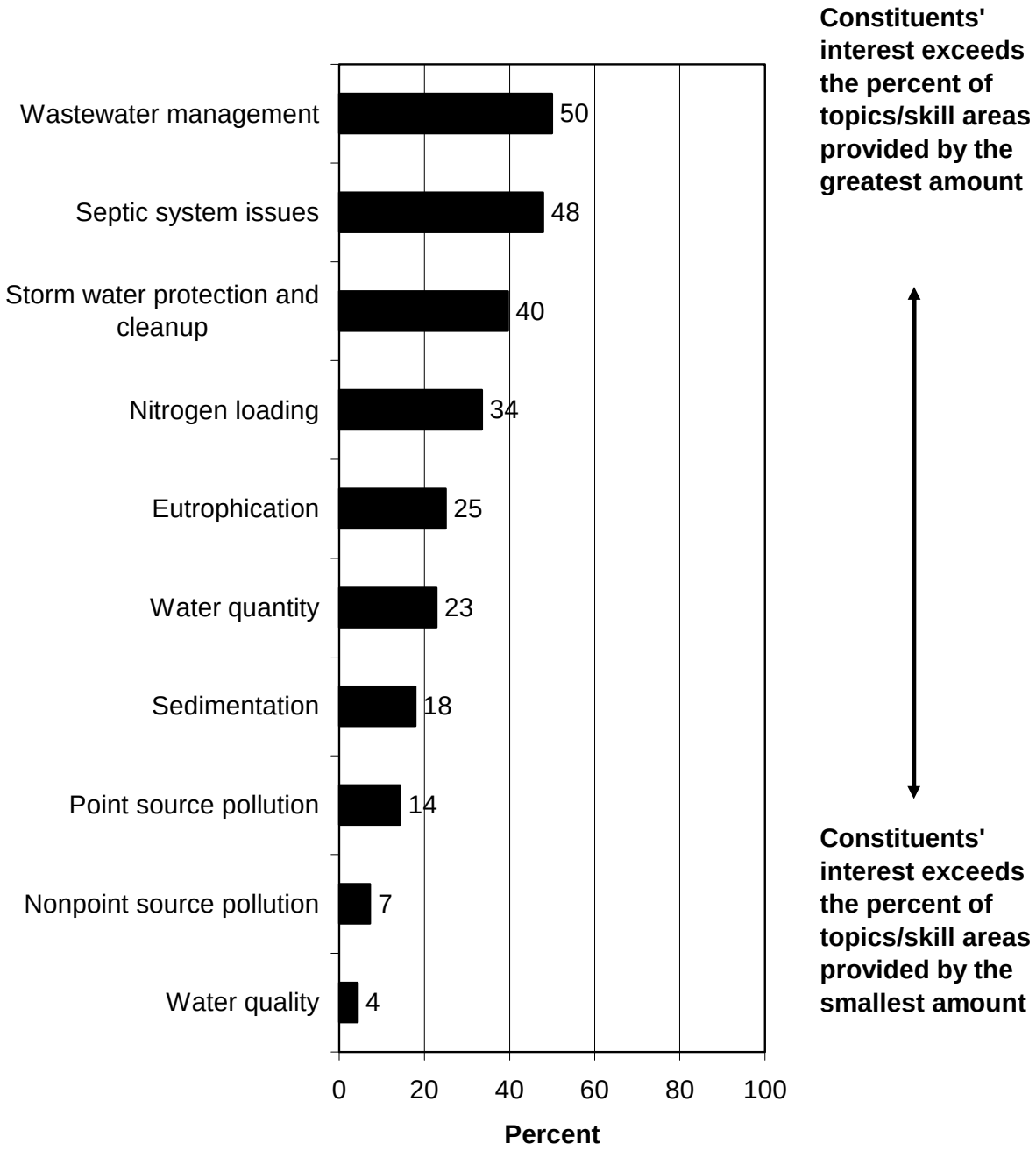
Percentage point differences in the percent of constituents' high and/or moderate interest in an issue and the percent of providers offering the service (habitat issues)



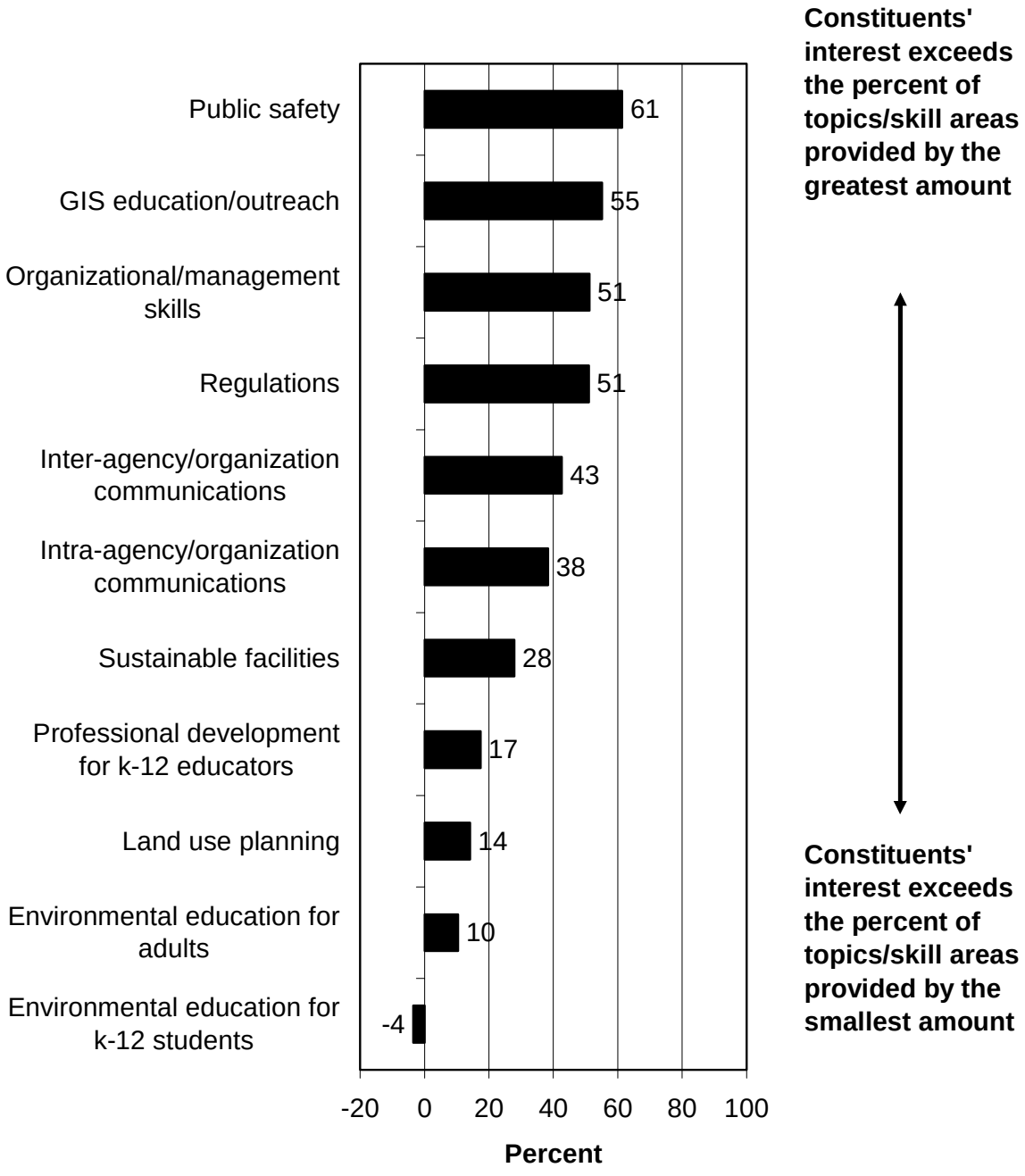
Percentage point differences in the percent of constituents' high and/or moderate interest in an issue and the percent of providers offering the service (coastal issues)



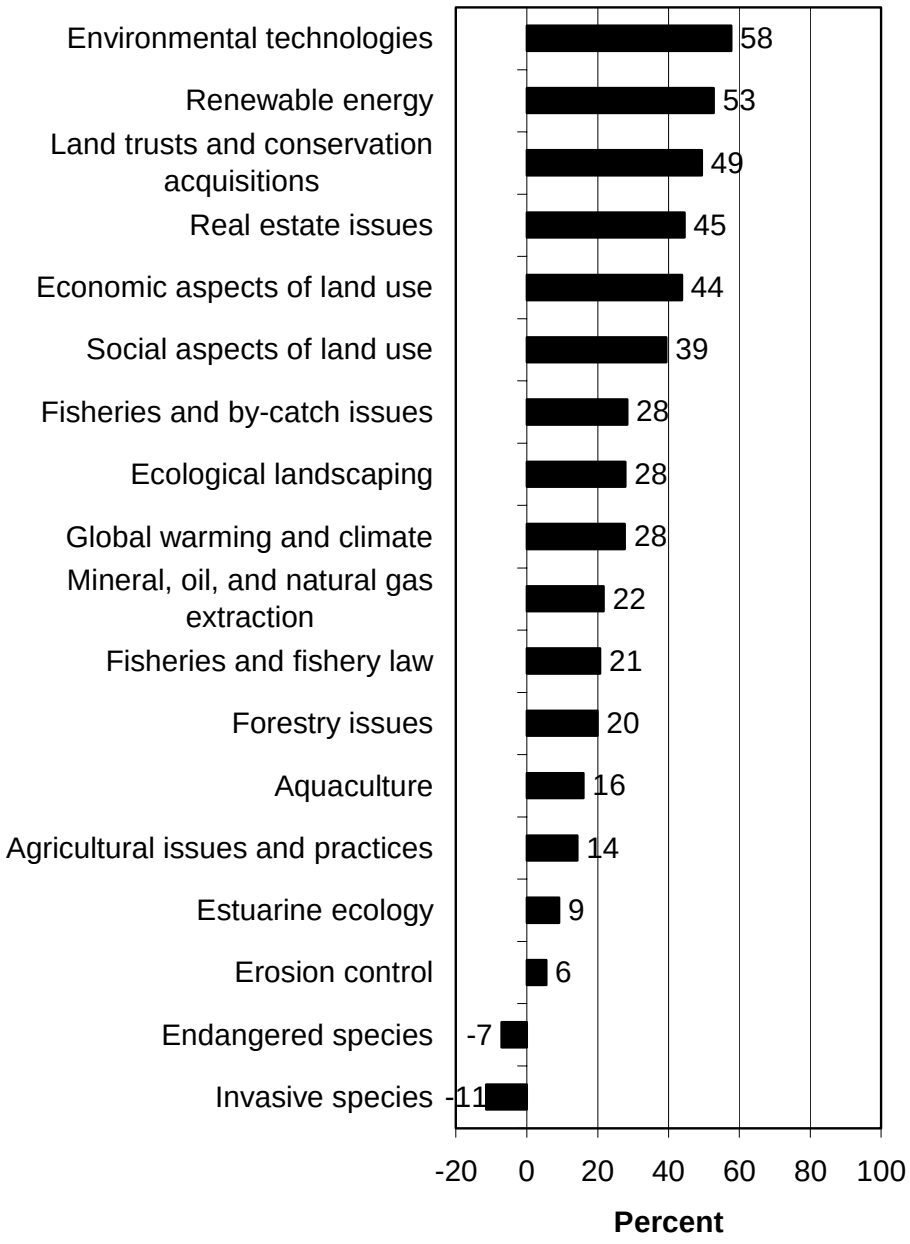
Percentage point differences in the percent of constituents' high and/or moderate interest in an issue and the percent of providers offering the service (water quality issues)



Percentage point differences in the percent of constituents' high and/or moderate interest in an issue and the percent of providers offering the service (regulation issues)



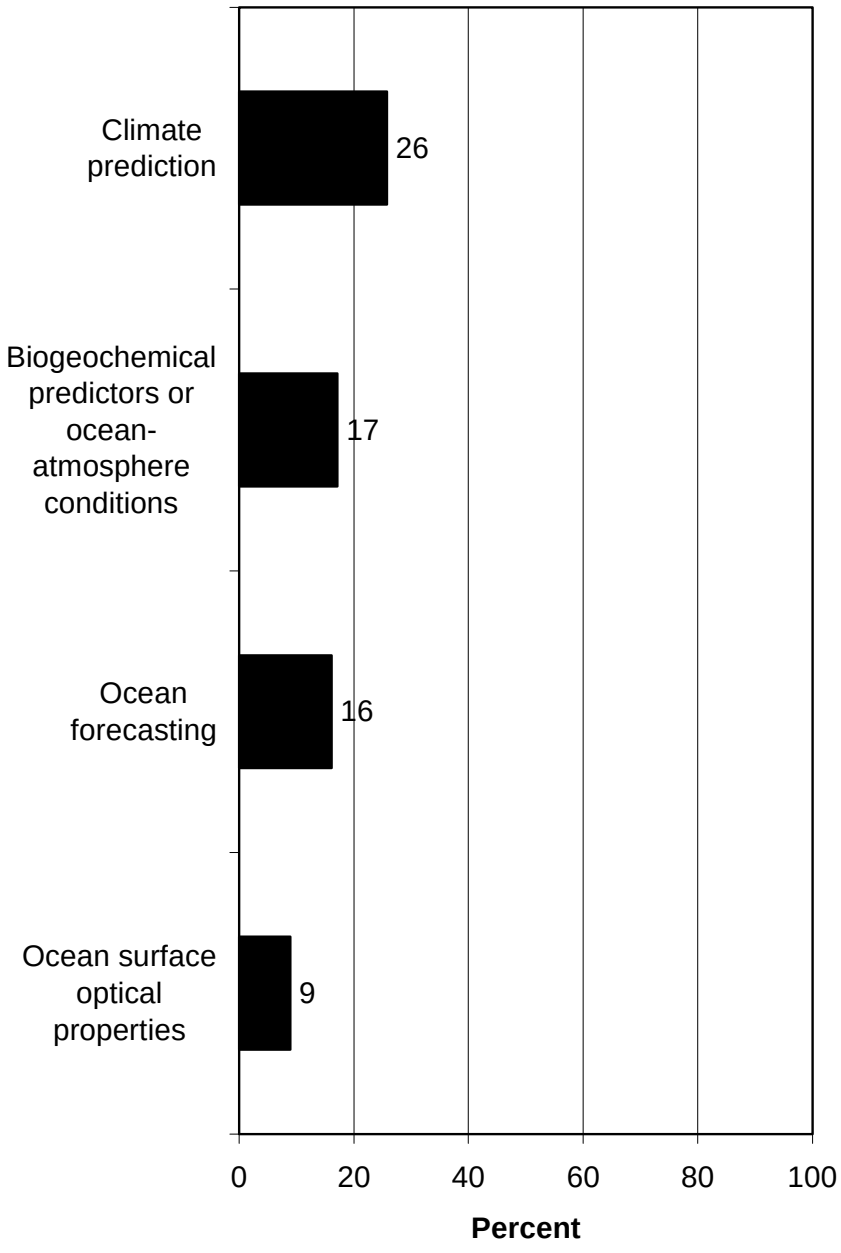
Percentage point differences in the percent of constituents' high and/or moderate interest in an issue and the percent of providers offering the service (resource management and other issues)



Constituents' interest exceeds the percent of topics/skill areas provided by the greatest amount

Constituents' interest exceeds the percent of topics/skill areas provided by the smallest amount

Percentage point differences in the percent of constituents' high and/or moderate interest in an issue and the percent of providers offering the service (ocean sciences topics)



Constituents' interest exceeds the percent of topics/skill areas provided by the greatest amount

Constituents' interest exceeds the percent of topics/skill areas provided by the smallest amount

TARGET MARKETS

Statistical analyses were also performed to compare the differences between coastal decision-makers' perceptions and providers' perceptions of the types of people most in need of training. The top five groups that providers felt were in most need of more coastal resource planning information and professional development were:

- Property owners associations
- City/town engineers
- Planning commission members
- Building development associations
- Commercial property owners associations

The top five groups that coastal decision-makers felt were in most need of more coastal resource planning information and professional development were:

- Coastal planners
- Coastal regulators
- Environmental protection agency personnel
- Planning commission members
- City/town planners and marine resource agency personnel

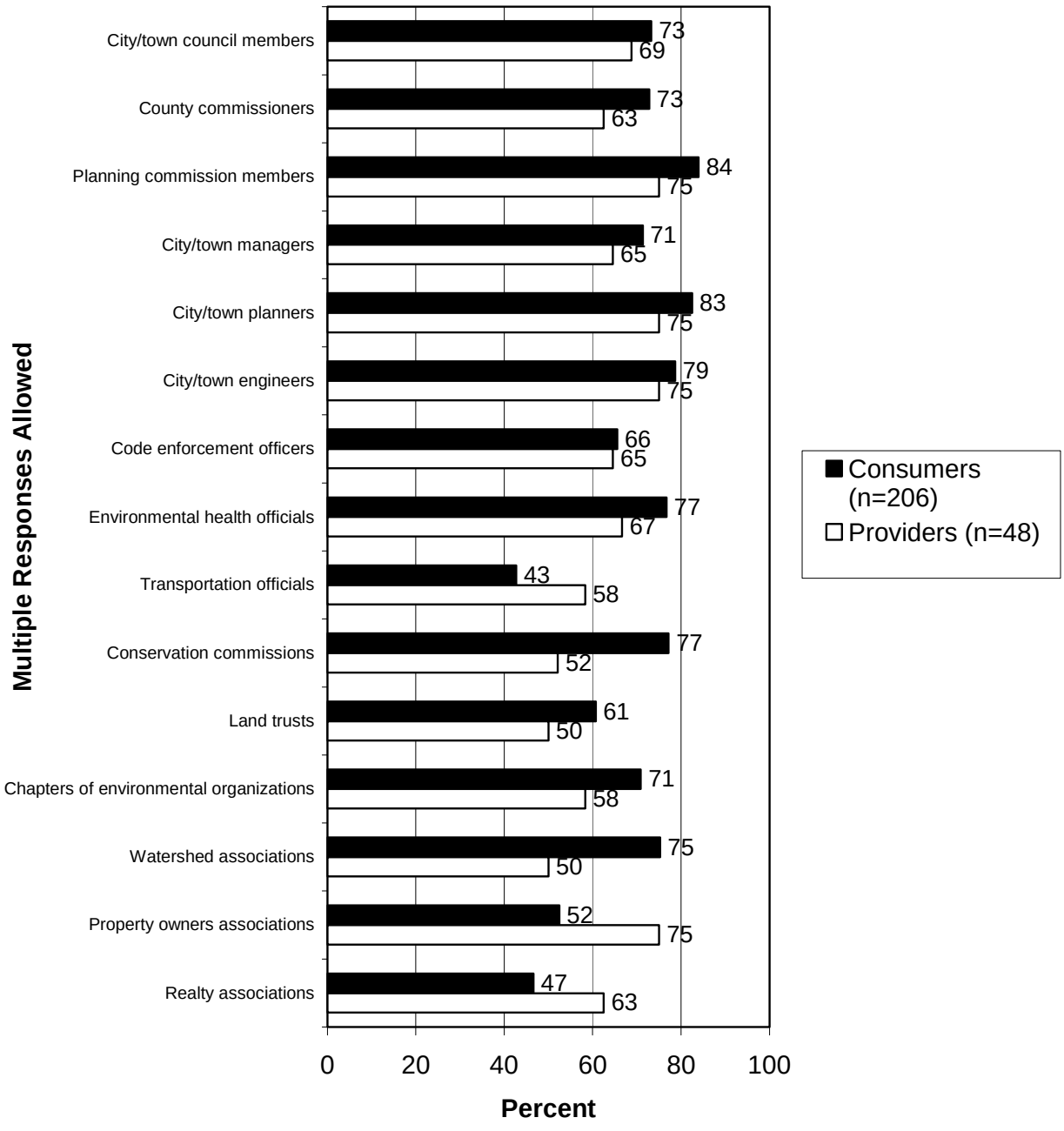
Although providers and coastal decision-makers differed slightly in their perceptions of groups that are in need of more coastal resource training, there were some similarities. For example, both groups felt that planning commission members were among the types of people in highest need of more coastal resource information and training. Providers seemed to think that people involved with planning or building had a higher need for more information. Coastal decision-makers also seemed to think that regional groups were in need of more training and education than were local groups. Both groups' perceive that the types of individuals they think need more training and information are involved with habitat issues, which coincides with their interest in habitat issues such as urban sprawl, as previously mentioned. Planners, regulators, and builders are often involved in urban planning and development, and as the state becomes more urbanized, it will become increasingly important for these types of decision-makers to be knowledgeable

about sustainable development and designing building projects that minimize impacts on the environment.

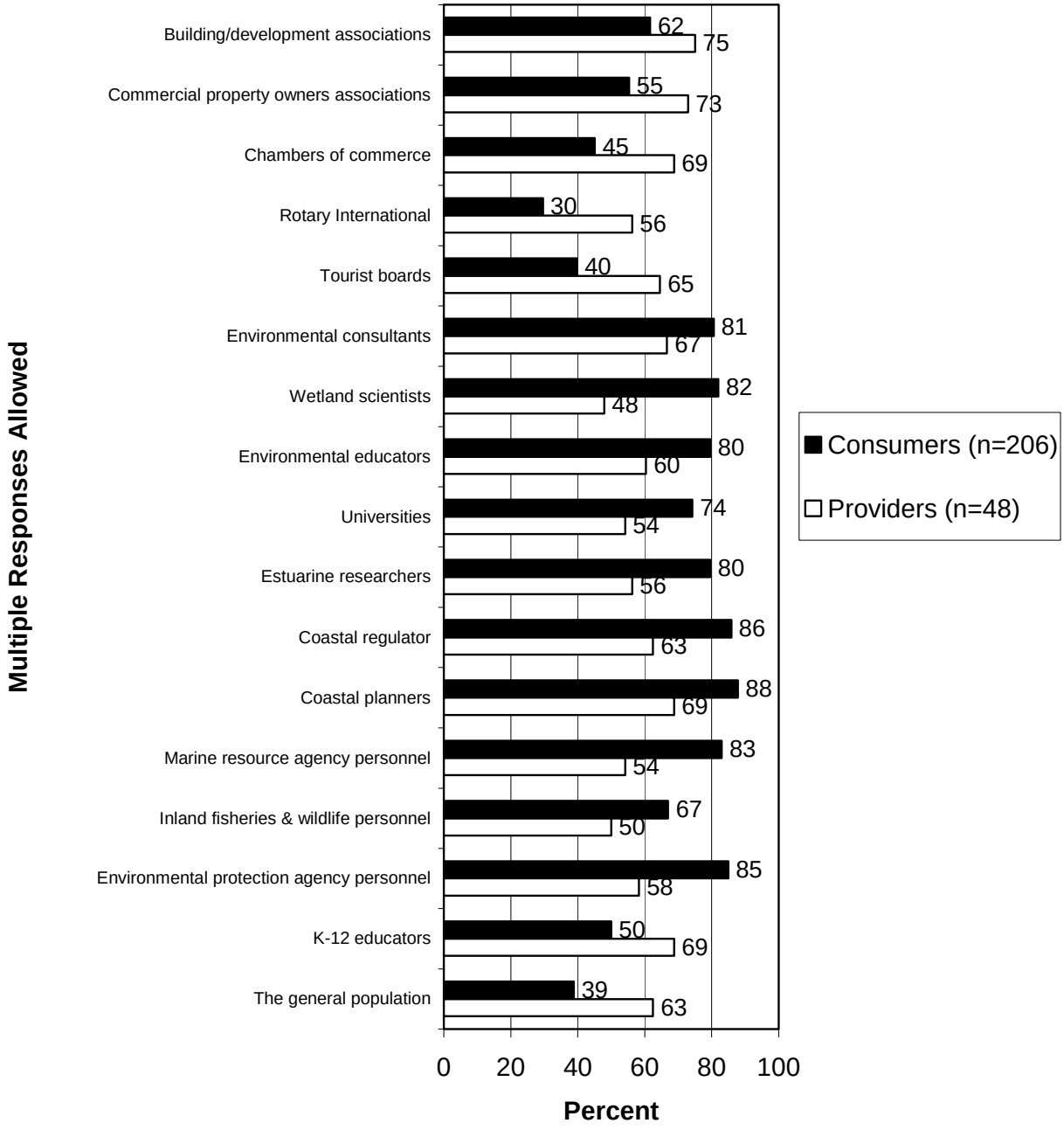
The groups of people for which coastal decision-makers' perceptions of needs greatly exceeds (more than 20 percentage points) providers' perceptions of needs are wetland scientists, marine resource agency personnel, environmental protection agency personnel, conservation commissions, watershed associations, estuarine researchers, and coastal regulators. On the other hand, the groups of people for which providers' perceptions of needs greatly exceeds (more than 20 percentage points) coastal decision-makers' perceptions of needs are K-12 educators, Rotary International, tourist boards, chambers of commerce, the general population, and property owners associations.

Although there is not a clear pattern to these differences, the Jacques Cousteau Reserve should keep these differences in mind when developing new programs for specific audiences. Providers seem to think that the "expert" audience (researchers, agency personnel) is in greater need of more education and information, while the coastal decision-makers seem to place more emphasis on the "general" audience (general population, chambers of commerce). This could simply be because providers are the agencies and organizations providing the service and, therefore, feel that they need more information to become better educators.

People for whom respondents felt there was a high need for coastal resource planning information and professional development.
Part 1



People for whom respondents felt there was a high need for coastal resource planning information and professional development.
Part 2



PARTNERSHIPS

All of the agencies/organizations that were contacted for this study should be viewed as potential partners for the Jacques Cousteau Reserve in its Coastal Training Program efforts. However, some agencies/organizations may be better suited to provide coastal training than others. For example, the respondent representing the Great Swamp Outdoor Education Center said that the Center does not become involved in coastal training issues, but the mission statement indicates that, "through the use of trail guides, wildlife surveys and interpretive hikes, we encourage a wise and responsible relationship with nature" (see profiles of each organization). This organization also indicated an interest in future partnerships to conduct education on coastal resources. It seems possible that this organization, through its existing facilities, could add a coastal resources component with something as simple as using interpretive signs to explain the importance of wetlands on water quality. In contrast, the respondent from the Department of Environmental Science and Geography at William Paterson University indicated that the Department was not interested in forming a partnership; however, this organization could still potentially serve as an important source of information on scientific research on issues relating to coastal resources.

COASTAL TRAINING ADMINISTRATION

Most of the coastal resource professional development that is administered by the agencies/ organizations that responded to the survey is accomplished through informal education/outreach, special events, and in-service education/outreach for educators. By far, field-based courses were the most-provided type of coastal training (the highest actual number of available programs). Although coastal decision-makers varied in their preferences for delivery formats, the formats that were at or near the top of the list for all groups were field-based programs/field trips (at the top of the list for all groups except business organization representatives), continuing education courses, and workshops. Therefore, it appears that the need is being met regarding programs with a field component.

Coastal training providers should consider offering additional continuing education courses and workshops. With 28 university contacts identified for the market inventory, this group could become an important and viable addition to the Coastal Training Program efforts in New Jersey.

Almost all universities have biology or environmental science departments, sometimes with a marine science component. Continuing education programs (with a coastal resource component) could be an added benefit to universities as a source of revenue and to coastal decision makers as a source of information and education. Also, universities are located throughout the state, which would make it more convenient for coastal decision-makers to attend the programs.

Coastal training providers in New Jersey should consider offering programs during the week, in the morning, and with sessions that do not run longer than one day. Overall, coastal decision makers did not indicate a strong preference for any particular season; however, spring was the least desired season among all groups except for local government officials. It appears that coastal training providers are meeting the needs of coastal decision-makers regarding the average length of program sessions. The market inventory results showed that a majority of providers are offering coastal resource training sessions that on average last less than one day.

Coastal training providers in New Jersey should consider using conferences, continuing education classes, seminars, workshops, and Web-based programs to deliver coastal training. In addition, when the percentage of coastal decision-makers who rated learning techniques as very or somewhat effective and the percentage of providers who offer the given learning technique were compared, the largest percentage point differences (indicating the possibility of an unmet need) occurred with case studies, accelerated learning techniques, and one-on-one instruction.

INFORMATION DISSEMINATION

The Jacques Cousteau Reserve should consider developing methods to improve communication and information dissemination among the coastal management community in New Jersey, including those that provide coastal resource professional development as well as those that participate in training. Although the community of coastal training providers in New Jersey appears to be small, there is ample latitude for expanding the current network of identified coastal resource professional development providers and their partners. One of the most important and influential things the Jacques Cousteau Reserve can do is to improve the general awareness levels of current coastal training services in New Jersey, the agencies/organizations that are currently offering these services, and the methods that an agency/organization can use to

tap into the network of coastal resource management professionals. Many of the individuals who were contacted for these studies expressed interest in being made aware of coastal resource professional development programs offered in New Jersey, as well as being made aware of how they could become involved in the Coastal Training Program. The Jacques Cousteau Reserve could improve general awareness levels by creating a formal schedule of coastal resource professional development services that are currently offered and distributing this schedule to coastal resource management professionals.

The top preferred methods (direct mail and e-mail) for coastal decision-makers to receive notification of coastal training closely matched providers' delivery methods. However, other than those two methods, there are extremely large differences between ways that notification is provided and the ways that coastal decision-makers would like to be notified. Interestingly, the Internet was preferred by only 8% of coastal decision-makers but was used by 74% of providers; an organizational newsletter was preferred by only 4% of consumers but was used by 51% of providers; and a press release was preferred by only 1% of consumers but was used by 63% of providers. It appears that coastal decision-makers wish to be informed about information and education opportunities in a very direct manner (direct mail, e-mail). This is actually very convenient for providers, since the largest barriers to offering coastal resources education and outreach were funding and time. Direct mail and e-mail announcements can be sent quickly and generally with little costs.

[See Volume 2 for the survey instrument and additional graphs.]