

The experiences of Consortiums and Networks as a tool for the development of healthy urban planning

La experiencia de Consorcios y Redes como herramienta para la planificación de ciudades saludables

Ana Maria Girotti Sperandio¹ and Jeannie Shoveller²

¹ Universidade Estadual de Campinas; ² University of British Columbia
amgspera@uol.com.br, jeannie.shoveller@ubc.ca

Abstract. Involving different sectors and institutions in the planning and management of common interests is a central premise of governance approaches, especially when those interests relate to the development of healthy urban environments. The main objective is to describe examples of Brazilian and Canadian that illustrate how strengthening the collective capacity can subsidize healthy urban planning. Describes the training through socio-technical networks and social participation in development of public policies for urban communities. Techniques for the development of networks and consortiums are compared by identifying strengths and limitations. The results demonstrate the importance of adapting participation opportunities considering the local context and the needs of healthy urban planning, showing the importance of participation in decision making. Networks and governance tools such as social participation, empowerment and intersectoral community collaborated in the development and expansion of inclusive spaces and healthy urban planning.

Resumen. La implicación de diferentes sectores e instituciones en la planificación y gestión de los intereses comunes es una de las premisas centrales de las aproximaciones de la gobernanza, especialmente cuando estos intereses están relacionados con el desarrollo de ambientes urbanos saludables. Nuestro principal objetivo es describir ejemplos de Brasil y Canadá, que ilustran cómo el fortalecimiento de las capacidades colectivas puede ayudar a la planificación de ambientes saludables. Describimos la formación a través de redes sociotécnicas y de la participación social en el desarrollo de políticas públicas para comunidades urbanas. Comparamos diferentes técnicas para el desarrollo de redes y consorcios, identificando sus fortalezas y limitaciones. Los resultados demuestran la importancia de adaptar las oportunidades de participación considerando el contexto local y las necesidades de la planificación, señalando la importancia de la participación en la toma de decisiones. Las redes y herramientas de gobernanza tales como la participación social, el fortalecimiento y la comunidad intersectorial, colaboran en el desarrollo y la expansión de espacios inclusivos y planes de ambientes saludables.

Palabras clave. Urban planning; healthy; network; governance.

Keywords. Planificación urbana; salud; red; gobernanza.

Introduction

The process of developing healthy urban planning should consider city's characteristics, the successes and difficulties of the people who live there, using strategies such as the collective elaboration of healthy public policies, intersectoral action, the formation of human capital, participation and social networking movement, emphasizing values such as solidarity neighborhood, the community, governance, cooperation, affection for achieving improved quality of life and the 'welfare' of its residents (Ana Maria Girotti Sperandio, 2012).

Governance may be defined as the process of decision-making and the process by which decisions are implemented (or not implemented). Governance is understood as a dynamic process and structure that is changing over time and is embedded within context (Françoise Barten, Marco Akerman, Daniel Becker, et al., 2011). Social participation, partnerships, and community empowerment are critical elements of good governance for addressing the social and environmental determinants of urban health inequities, and are a central concern of the Ottawa Charter for Health Promotion, which provides the value base for the Healthy Cities

Movement (Sperandio, 2012). Governance of a city often engages multiple sectors and pertains to the development of healthy urban settings. Within such spaces, there is a need for effective community participation and the pursuit of intersectoral cooperation.

Sperandio (2012) reinforces that social participation, the intersectorality and community empowerment are important features for the development of healthy urban planning.

Brazil and Canada, through various initiatives, have developed some effective and sustainable interventions that employ a variety of governance techniques to promote urban health. The current paper describes the process of developing collective capacity for health promotion via socio-technical networks and consortium, considering them as basics strategies to facilitate social participation in the process of developing public policies for healthy urban communities.

There are different settings for network, in this paper is a flexible network capable of allowing the exchange of knowledge and causes, participation in different social spaces, cooperation among the participants, identifying common interests providing reliable relationship building and strengthening local capacity, which allows the approximation of local government, with the university and communities, thus contributing to the decision-making (Sperandio, 2010).

The Consortium is dedicated specifically to the issue of social equity, represents a new legal and institutional framework for the articulation and development of public policy at the metropolitan level. The work of the consortium is outlined in two program lines. The first relates to the prevention, through educational campaigns and non-sexist, building database on domestic violence in the metropolitan level and community actions with young people and women. The second axis focuses on the care of women in situations of domestic violence, through the *Regional Shelter and Casa de Passagem* (SPM, 2010).

Methodology

The analysis presented in the current paper draws on the techniques and traditions associated with case study method to describe and explain the conditions under which various governance mechanisms can establish effective actions to healthy urban development. A case study approach facilitates the capacity to synthesize diverse types of evidence as documents and archival records, interviews, and observations, to seek explanations for how and why the two case studies function.

The central set of questions pursued in the analysis included: (1) how did each case example engage in the process of participation?; (2) how do conditions (local and distal) affect the capacity of various governance mechanisms to respond to complex health and social issues? It was relied on several data sources to examine this phenomenon, including documents and archival records, for example: meeting minutes and other records made available by the various partners, government reports. Through the collaborative-action

research approach, also was able to engage in participant observation as workshops with local stakeholders).

These findings are based on only two case examples and are the result of an interpretive analytical process that sometimes included rival understandings of the data, which may raise some objections regarding the generalizability of the findings. However, it draws the readers' attention to the capacity of case study approaches (even with a single case) to describe in detail the complexities of the relationships amongst actors and institutions, while providing the necessary understanding of the historical and unfolding contemporary socio-political contexts within which the case is situated. Drawing on cases studies within the Brazilian and Canadian contexts, an analysis is presented to describe the facilitators and barriers that affect implementation of particular governance strategies for example: community consultation versus community engagement. Here are used examples from experiences with community asset mapping to promote healthy urban development within the Potentially Healthy Municipalities Network (PHMN) as well as examples of socio-technical networks from the Consortium *Mulheres das Gerais* (CMdG).

Descriptions of the cases

Case 1. Consortium Mulheres das Gerais (MdG)

Participation in socio-technical networks (Morten Levin & Gaute Knutstad, 2003) has been used to address complex urban collaborative governance issues in Brazil. One example includes a socio-technical network that was developed by the Consortium MdG in Belo Horizonte (Brazil). The CMdG was developed to address gender equity and, in particular, the problem of violence against women. Socio-technical networks to develop consortia can be used in contexts where a problem crosses both political and geographic boundaries like across contiguous municipalities, as well as various sectors as health and security, along municipal, state and federal jurisdictions. Through active participation in planning, decision making and the enactment of new interventions to promote gender equity, the Consortium MdG approach provides an interesting case example for studying one mechanism for developing healthy urban environments.

In 2006, the Metropolitan Region of Belo Horizonte, including the cities of Belo Horizonte, Betim, Contagem and Sabará (spanning four cities and including about 3.2 million people), launched the Regional Consortium for the Promotion of Citizenry: *Mulheres das Gerais* (*Consórcio Regional de Promoção da Cidadania: Mulheres das Gerais*). The Consortium MdG was officially established in 2008. Members of the Consortium MdG collaborate in actions and programs to promote the social inclusion and emancipation of women, in a collaborative and sustainable approach, to prevent and fight all forms of violence against women, and to ensure the full enactment of the Law 11.340/06 – Law Maria da Penha¹.

¹ Brazil. Presidency of the Republic. Especial Secretariat of Policies for Women. Low Maria da Penha. Low n. 11.340. Retrains domestic and family violence against Women. Brasília. August, 7 2006. Available at: <http://www.sepm.gov.br/noticias/documentos/doc_maria_penha_law>. Access on: Feb. 18, 2013.

Participation in urban collaborative governance is a cornerstone of the techniques used in the Consortium MdG. High value is placed on the simultaneous reciprocal relationships between decision-making contexts and the 'technical' features alternatives kinds of relationships –what can be described as a type of socio-technical network (drawing on the theoretical foundations of socio-technical networks and the origins of actor-network theory of Bruno Latour & Michel Callon, 1981).

Socio-technical networks are formed using a combination of social relationships and shared technical inter-relationships. Participation is the key to successful socio-technical networks, which depend on the social relationships amongst individuals within the participating institutions in order to translate those relationships into the capacity to take action. Participation in a socio-technical network can occur in any or all of four non-linear and interactive processes (Louise Potvin, 2007), as regards Michel Callon, Pierre Lascoumes and Yannick Barthe (2007): (1) understanding and expanding the meaning of an issue; (2) developing a common interpretation about what the various actors want to achieve; (3) (re)defining and accepting roles in a coordinated pursuit of a common aim; and (4) mobilizing resources to advance the cause of the network.

Case 2. Experiences of the Governance in the Potentially Healthy Municipalities Network (PHNM)

In Brazil, a very diverse country is impossible to work with compartmentalized solutions or isolated policies. Currently, is necessary to search for their integration and interaction through processes similar to a network moving in common directions where there are work guidelines, where the individual and collective life is the object of the work (Callon, Lascoumes & Barthe, 2001).

Since 2003, the Potentially Health Municipality Network (PHMN) is monitoring and developing projects with the objective of broadening the governance for the development of healthy public policies in the health, urbanism, work and income generation fields, as well as safety and social participation, traversing the master plan of cities involved in the network, being characterized as a social-technical network (Callon & Latour, 1981). This is a research project developed by the Urban Investigations Laboratory – LABINUR Engineering, Architecture and Urbanism Faculties from Campinas State University in São Paulo – Brazil. It has the technical support of the Pan-American Health Organization (PAHO/WHO), Basin Committee of the Regional Rivers and 56 Municipality members (network participants), distribution among six States (São Paulo, Paraná, Minas Gerais, Rio de Janeiro, Espírito Santo and Amazonas).

In order to understand the decision-making process, a brief explanation on the main characteristics will be made. The main objectives of this Network are: capacity building of the Municipal Administration to support the participatory construction of unified and integrated governmental plans; support managers, technicians, universities, non-governmental

organizations and communities to build healthy public policies that promote health and quality of life; facilitate the relations between the people in the community and government; and engage in specific projects for improving healthy and sustainable local development in urban settings in collaboration with universities, public managers and the community. The main methodologies of the PHMN are: intersectorial actions; strengthening of different social stakeholders; construction of practices establishing the values and wishes of social stakeholders concerning their territory; mapping individual and collective wishes aiming at building a common working agenda to converge in terms of solutions; disclosure of successful experiences in Municipalities, inside and outside the Network; involvement of Mayors, Secretariats, Coordinators and the population in inter-institutional partnerships and intersectorial committees. The individual has a voice in the collective.

One of the case studies of this Network being presented in this paper is the urban recovery project of a municipal region in the city of Americana - São Paulo. This project was developed from 2008 to 2010, by the PHMN, with the support of Brazil – Canada Convention through the National Public Health School, with the support of the Canadian Public Health Association (CPHA), Brazilian Public Health Association (ABRASCO) and Canadian International Development Agency (CIDA), together with the 6 experiences chosen for the development of the purposes of the convention. The main objectives of this Convention were to increase the capacity of each location to strengthen the health promoting strategies as a tool for local development; create a common conceptual landmark to guide the promotion of health and the intersectorial collaboration and apply strategies to disseminate the experiences and lessons learned for the promotion of health (Scotti Burris, Trevor Hancock, Vivian Lin & Andre Herzog, 2007).

One of the projects selected by ENSP in 2007 (Carlos Silva, Álvaro Hideyoshi Matida, Ana Maria Girotti Sperandio et al., 2010) was the one by PHMN and its coordination nominated the municipality of Americana-SP for the development of the project Intersectorial Actions for the Promotion of Health (*Ações Intersectoriais em Promoção da Saúde - AIPS*) proposed by the Brazil-Canada convention. The project built and developed in Americana-SP by PHMN through the convention was named *Promoting health and rediscovering citizenship in the area of Praia Azul, Americana-SP*.

The city of Americana-SP is part of PHMN since 2004, and has created the Permanent Forum for the Discussion of Healthy Public Policies in the city, where it had the participation of Municipal Secretariats from different sectors and also the community. For the development of the AIPS Project, the representatives of this Forum pointed the Praia Azul area as the primary area for intersectorial actions, social participation and governance, considering that several actions had already been executed in the work logic in PHMN, presenting qualitative results for the promotion of health.

The occupation reality of Praia Azul, with the growth of the city of Americana, has become a place with environmental problems, which led to social and economic degradation of residents even in the city of Americana. The water reservoir in Salto Grande was the object of complaints and accusations of environmental aggression, mainly due to its location in the

contribution sub-basin, that is, it is positioned in the lower course of the river, where there is a predominance of cumulative polluting processes. It has become an area for prostitution, poverty and violence, where the dwellers were ashamed of living at Praia Azul.

Faced with this scenario, the Project Promoting Health and Rediscovering Citizenship was collectively developed in the area of Praia Azul, Americana/SP, together with the community, government and university, through the Permanent Forum for the Discussion of Network Public Policies, 13 Municipal Secretariats worked in this project together with a local group, formed after the BRAZIL-CANADA convention.

The project at Praia Azul had the main objective of building a map of the relationships among the people in the community and checks how this could impact the healthy and sustainable local development, from the perspective of Health Promotion, strengthening and creating social participation bases, intersectoriality and governance for the collective transformation of the place. The development of actions in the project took place during three years, and had the participation of the stakeholders involved through face-to-face meetings in the area, using workshops, round tables and discussion forums with the objective of creating a space for identification of collective needs and for the people to value where they lived (Silva, Matida & Sperandio, 2010).

The most appropriate methodological perspective for the development of the project was the action-research, with direct communication among the researchers, the proponents and the research subjects. The project was collectively built and developed, involving the government, local workers, community and university with the objective of rescuing the feeling of wanting to live in Praia Azul and being involved in the improvement process they would choose. This composition was only possible from a work in the Network, which already existed, once the people were already aware of integrated work, in a process of respecting both private and collective wishes. The changes in the territory were in agreement with the increase in the feeling of belonging to the place, Praia Azul, and the new knowledge on this territory made the community feel the need of collaborating in a change process in its area. For monitoring and evaluating the development process of the project, the research used the speech from the individuals, the documents produced, the number of meeting through the filling out of a matrix and data such as the number of people participating in each meeting, expressions used, the words used in the meetings, expressions in photos and the application of a matrix developed by the project for monitoring the actions developed, as well as references for the promotion of health demonstrating the broadening of governance from social participation, intersectoriality and public policies.

The results obtained through the instruments used show the strengthening of people by means of participation, intersectoriality, aggregation and effective participation in new intense local public policies. Thus, the authors have managed to collectively produce something new for the location, pointing out the differences in its territory, both good ones and those that need to be worked on and modified (Ana Maria Girotti Sperandio, Larissa Cássia Gruchovski Veríssimo & Ana Rosa Oliveira Poletto Palácios, 2011).

The results of this project from the completion of this matrix and the evaluation of the other instruments are summarized below. They outlined and eased the understanding of governance as a result of a work process involving evidences in health promotion (Silva, Matida & Sperandio, 2010):

1. Appreciation of local history and socialization of knowledge on Health Promotion. A book was organized (through workshops), written and published recovering the history of Praia Azul, which had never been registered before; the book was adopted by the municipal schools to teach the students about the creation and development of the area with the community. In the workshops, a local group was created, as well as a discussion space, a space for Health Promotion studies.

2. Increased participation in the local government agenda, influencing several decisions for improvement in the Praia Azul territory, such as: a) refurbishing and building of the sports square; b) public commitment of the Mayor for improving the conditions of sewage system and asphalt in the neighborhood, most claims were met through the project and currently, the community participates in the debate forums for improvements they choose for their neighborhood (Callon & Latour, 1981).

3. Strengthening of the community agent group (Potvin, 2007). The Community Agents during the development process of the project reported feeling more confident in their work and their potentiality, supporting the creation of a discussion space for community issues (Barten et al., 2011).

4. Maturity of the political discussion within the community. It was mitigated through listening to the university (moderating), local management and community parties. The territory slowly was being modified, the environmental issue was being addressed; the plots had their price valued; the prostitutes have been managing to find other jobs and those who are still working in the area state that they feel more inclusion as professionals in the territory.

5. The triangulation of academia, government and community. The evidence in the speech of the participants in the project, whereas from the academia, government and community, highlighted the importance of conducting the work process respecting the knowledge and specificities in order to reach common objectives and transform the reality (Silva, Matida & Sperandio, 2010).

Discussion

The case examples presented here indicate that a variety of sectors and institutions can be effectively engaged in planning and managing common interests pertaining to the development of healthy urban settings. Although much progress also remains to be made, there also is much promise in governance mechanisms that reflect the integration of social participation in policy decision making and the use of socio-technical networks. As

mechanisms of good governance, these tools have been shown to improve coordination across federal-provincial/territorial-municipal jurisdictions and across sectors like health, urban planning, environment, labor and industry (Barten et al., 2011; Levin & Knutstad, 2003).

Many previous efforts to enhance urban governance and planning for health promotion have been based on the assumption that by knowing more is possible to enhance the abilities to control social conditions. However, what this has tended to produce is an over-reliance on scientific and technical 'progress' that only recently has been called into question. The failures of rational and highly technical planning approaches (that tend to exclude meaningful participation by the very people who will experience the direct effects of planning results) have been exacerbated by perspectives that are overly deterministic concerning the role of structure on the urban condition. Despite some impressive technical achievements in the past, for example the establishment of sanitation systems, the effects of scaling up remains quite uneven across social strata and geography, producing some extremely challenging unintended consequences that have exacerbate health and social inequalities, rather than ameliorated them.

More conventional planning approaches have largely failed to address the new realities of many current and emergent urban health challenges, as the growing impact of the combination of environmental degradation and chronic diseases within LMICs.

The cases presented in the current article offer a set of alternatives to this approach, where the social and health inequities experienced by those at the bottom of the social hierarchy for example, the people living informal settlements, have real opportunities to participate in collaborative urban governance – often 'shaking up' the assumed logics of social actors within institutions to identify new ideas that better equip policy makers and the communities themselves to promote healthy urban environments (Sperandio, Veríssimo & Palácios, 2011).

The enactment of social participation and the use of socio-technical network approaches within existing urban collective governance models may be better suited to function within contexts that feature high levels of uncertainty and complex change dynamics. An ever-shifting milieu, where programs, policies and institutional infrastructures themselves contribute to uncertainty, presents many challenges to traditional forms of governance that tend to promote isolationist approaches, rather than cooperation, for example; competition for resources across government departments; success indicators that promote fragmented, department-specific achievements, rather than actions supporting interventions 'housed' in other departments. As Potvin (2007) has argued, the likelihood of coping effectively with uncertainty and complexity may be enhanced through the participation of a variety of relevant actors in the process of negotiating solutions, as was demonstrated in the Consortium MdG. In socio-spatial contexts, such as that in the Metropolitan Region of Belo Horizonte, where both geography and social structures pose challenges, social progress depends on the capacity to innovate and adapt, which consequently demands reflexive mechanisms and models of urban governance.

The need for enhanced collective capacity for effective social participation to address complex intra-urban and inter-urban health issues is obvious within the contemporary milieu of the expanding mega-cities (particularly in the Brazilian context). How effectively the kinds of mechanisms and governance approaches used by the PHMN can be expanded remains to be determined. However, based on the experiences of the PHMN, governance mechanisms promoting participation can open new spaces for action and may hold significant promise for effective whole-of-society actions for social progress within and across urban settings.

The movement in networks enables the communication and interaction between people for the development of governance, referring that *“the people must interact among themselves and with the environment where they live to discover and rediscover forms of reaching their individual and collective wishes, creating transmission channels”* (Sperandio, Veríssimo & Palácios, 2011; Sperandio, 2010).

Praia Azul was transformed through social participation, the feeling of belonging to the territory, access to information, intra- and inter-personal collaborative movements, values such as respect and aggregation, as well as the participation of local management and the university clearly expanded the collective capacity of the community to understand and seek solutions for the issues that misbalanced the urban life, regenerating them, promoting new and old governance arrangements with social justice,

The different aspects and experiences discussed above facilitate the development of urban planning in the healthy conception (Barten et al., 2011; Sperandio, Veríssimo & Palácios, 2011; Sperandio, 2010) with a focus on governance consolidated in social participation, intersectoral and community advocacy.

Conclusion

Both case studies described herein appointed the participation of the community as pivotal to promote healthy urban environments, but with a differentiated focus, using the consortium and socio-technical networks, which allowed the exercising of urban governance from the appreciation of local knowledge, personal experiences and wishes. These items must be guidelines for public decisions and thus, create spaces for the healthy urban planning, based on health promoting principals.

References

- Barten, Françoise; Akerman, Marco; Becker, Daniel; Friel, Sharon; Hancock, Trevor; Mwatsama, Modi; Rice, Marily; Sheuya, Shaaban, & Stern, Ruth (2011). Rights, knowledge, and governance for improved health equity in urban settings. *Journal of Urban Health*, 88(5), 896-905.
- Levin, Morten, & Knutstad, Gaute (2003). Construction of learning networks - Vanity fair or realistic opportunities? Systemic practice and action research. *Springer Netherlands*, 16(1), 3-19.

- Callon, Michel, & Latour, Bruno (1981). Unscrewing the big leviathan: how actors macro-structure reality and how sociologists help them to do so. In Karin Knorr-Cetina & Aaron Cicourel (eds.), *Advances in social theory and methodology: Toward an integration of micro and macro-sociologies* (pp 277–303). Boston: Routledge & Kegan Paul.
- Potvin, Louise (2007). Managing uncertainty through participation. In David V. McQueen, Ilona Kickbush, Louise Potvin et al. (eds.), *Health & Modernity: The role of theory in health promotion* (pp. 103-128). New York: Springer.
- Callon, Michel; Lascoumes, Pierre, & Barthe, Yannick. (2001). *Agir dans un monde incertain. Essai sur la démocratie technique*. Paris: Seuil.
- Burris, Scotti; Hancock, Trevor; Lin, Vivian, & Herzog, Andre. (2007). Emerging Strategies for Healthy Urban Governance. *Journal of Urban Health*, 84(1), 154–163.
- Bodstein, Regina; Sperandio, Ana Maria Girotti; Moysés, Simoni Tetu; Rocha, Dais Gonçalves; Lima, Jacqueline; Sá, Ronice Franco (coords) & Dias, Fernando Antonio Cavalcante (org) (2010). *Intersectoral actions in health promotion* (pp 19–22). Paper presented to the: ESPN, ABRASCO, Rio de Janeiro. Available at:
<http://www.abrasco.org.br/publicacoes/arquivos/20100708201024.pdf>
- Silva, Carlos dos Santos; Matida Álvaro Hideyoshi; Sperandio, Ana Maria Girotti, et al. (2010). *Intersectoral Actions in Health Promotion*. Rio de Janeiro: ESPN, ABRASCO, 2010. 1: 19–22. Available at: <http://www.abrasco.org.br/publicacoes/arquivos/20100708201024.pdf>.
- Sperandio, Ana Maria Girotti (2010). A promoção da saúde construída em Rede. In Ana Maria Girotti Sperandio, Diego Gonzalez Machin y Maria Alice Barbosa Fortunato (orgs), *Políticas Integradas em Rede e a Construção de Espaços Saudáveis: boas práticas para a Iniciativa do Rostos, Vozes e Lugares* (pp. 19-21). Brasília: Organização Pan-Americana da Saúde.
- Sperandio, Ana Maria Girotti; Veríssimo, Larissa Cássia Gruchovski, & Palácios, Ana Rosa Oliveira Poletto (2011). The process of development of healthy public policy in integrated network: the experience of Maringá-PR. *Intellectus*, 15, 10–28. Available at:
<http://www.seufuturonapratca.com.br/intellectus/>
- Sperandio, Ana Maria Girotti (2012). Editorial. *Intellectus*, 22, 3. Available at:
<http://www.seufuturonapratca.com.br/intellectus/>
- SPM - Secretariat of Policies for Women (2010). *Regional Consortium for the Promotion of Citizenship: Mulheres das Gerais is awarded with the ODM prize*. Available at:
http://www.sepm.gov.br/noticias/ultimas_noticias/2010/03/not_mg_odm/?searchterm=consórcio

Historia editorial

Recibido: 20/02/2013
Aceptado: 28/10/2013
Publicado: 13/11/2013

Formato de citación

Sperandio, Ana Maria Girotti; and Shoveller, Jeannie (2013). The experiences of Consortiums and Networks as a tool for the development of healthy urban planning. *URBS. Revista de Estudios Urbanos y Ciencias Sociales*, 3(2), 27-37. Disponible en
http://nevada.ual.es:81/urbs/index.php/urbs/article/view/girotti_shoveller



Los textos publicados en esta revista están sujetos –si no se indica lo contrario– a una licencia de [Reconocimiento 3.0](http://creativecommons.org/licenses/by/3.0/es/deed.es) España de *Creative Commons*. Puede copiarlos, distribuirlos, comunicarlos públicamente, hacer obras derivadas y usos comerciales siempre que reconozca los créditos de las obras (autoría, nombre de la revista, institución editora) de la manera especificada por los autores o por la revista. La licencia completa se puede consultar en <http://creativecommons.org/licenses/by/3.0/es/deed.es>.

Es responsabilidad de los autores obtener los permisos necesarios de las imágenes que estén sujetas a *copyright*.

Para usos de los contenidos no previstos en estas normas de publicación, es necesario contactar directamente con el editor de la revista.

