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Rivers as catalysts for environmental mobilisation: a test in the eastern Lombard plain

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ABSTRACT

Rivers as catalysts for environmental mobilisation: a test in the eastern Lombard plain

The paper concerns a case of environmental mobilisation in the Chiese basin, a medium-length river that flows between Trentino and Lombardy. The case seems to contradict the idea that ecological mobilisation is almost absent in semi-rural areas due to cultural and territorial factors. To verify this hypothesis, the socio-environmental mobilisation along the Chiese is compared with that of the neighbouring river basins. We found more long-term and inclusive mobilisation along the Chiese river, and this is due not only to the local identity strength of the river, but also the occurrence of catalytic events that have threatened the sense of dignity and territorial justice of the inhabitants of the Chiese valley. After reviewing the specific literature on environmental mobilisation, we adopted a model of 'baseline conditions-events catalysts-collective action' and applied it to the specific case. The history of the mobilisation serves as empirical material on which to test the hypothesis.

KEYWORDS

Environmental associations
Utilities
Social movements
Rivers
Valley communities

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Rivers as catalysts for environmental mobilisation: a test in the eastern Lombard plain[2]

The environmental problem and the research hypothesis

The south-eastern plain of Lombardy has distinctly rural characteristics, despite its location within a highly industrialised region whose capital (Milan) aspires to be the first global city in Italy. It is a very fertile area, rather rich and equipped with public services. It is not a marginal area, but certainly fragile from an environmental point of view. It is in fact located downstream of a dense urban-industrial conglomerate with a high risk of leaching polluting substances (Admin, 2019). The low population density makes it an easy destination for landfills of various kinds. Competition over water use is also high due to climate change (reduction of summer flow rates of rivers). Agricultural land thus hardly maintains its fertility due to intensive use and shedding of imported fertilizers. The essential question is whether local communities are aware of this fragility and are working to reduce it.

The *casus belli* is represented by the basin of the Chiese, a river that originates in Trentino on the southern slopes of the Adamello Massif, streams largely in the province of Brescia, and flows into the Oglio in the province of Mantua. This river is little known to the Lombards themselves because of its weak socio-geographical evidence, unlike the nearby Lake Garda; yet it presents a microcosm of the wonderful landscapes and distortions produced by the development in the last 100 years throughout the Lombard plain. The fragmentation of the institutions responsible for the protection of the river environment contributes to keeping the visibility of the basin low.

Along the Chiese are landscapes of poignant beauty, from the remnants of the perennial Adamello glacier, to the natural lake of Idro, the recesses in the narrow valley, the historic villages, and finally the outlet in the plains, first flanked by the morainic residues of Garda and then flowing placidly into the slightly inclined countryside of Brescia and Mantua. On the other hand, there are enormous environmental pressures: the massive withdrawals for irrigation use, the concentration in the middle part at Montichiari of landfills and high-impact infrastructures (last one is high speed railway), and the explosion in September 2018 of many cases of legionella pneumonia that developed in open environments; finally, there is the project, very controversial, to bring the sewage of the Brescia part of Garda to two treatment plants of Gavardo and Montichiari, localities of the Chiese watershed.

The paper develops the case of the Chiese basin by comparing it with other contiguous river basins. The aim is to identify the socio-environmental traits that can explain an unusual local mobilisation, which began in 2004 in response to water withdrawals for irrigation use in Lake Idro, the nerve centre of the entire basin.[3] It is

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[3] http://www.salviamoillagodidro.it/iniziative2004.html, access 17 January 2022.

assumed that the symbolic investment in the river and lake are catalysts for protest. After examining some approaches used for the study of environmental mobilisation (Section 2), we arrive at a model based on the concept of *catalyst events* (Section 3). The south-eastern plain of Lombardy, which is crossed by four rivers including the Chiese, is taken as the research area. Using a qualitative and case study methodology, we investigated environmental mobilisation phenomena along the four rivers, identifying some crucial events (Section 4). In a final section we discuss these results in the light of the initial hypothesis that rural-agricultural areas can only mobilise if special events occur that cause health concern and indignation about territorial injustice (Section 5).

The literature on environmental mobilisation

Rivers are certainly among the spatial areas that have attracted great attention from populations and public authorities. This is due not only to their primary vital and economic functions, but also to their symbolic and religious importance (Anderson et al. 2019). It is therefore not surprising that there have been protests in the face of unfair uses of their waters since the dawn of industrialisation (Charles-François, 2012), then in the 60s of the last century (Santos, Bittencourt, 2017), even in very oppressive political contexts (Carmin, Fagan, 2010; Baranyai 2019) or emerging countries (Baghel, 2014; Wilks et al. 2018). The most frequent cases of mobilisation capable of reaching world public opinion were the protests against the great dams (Guedes, Azzolin, 2020). Hydroelectric infrastructure, large or small, still seems to be a strong coagulation factor for protests (Magnani, 2020), while the issues of treatment of sewage waters, although present in the agendas of environmental associations, more rarely arouse mobilisation (Carrosio, 2013). In addition to the placement of the disputed infrastructure and the symbolic aspects, the way in which the case is presented to public opinion is also important in the case of mobilization over rivers (Papageorgiou, Mylonas, 2020). The social sciences provide many ideas for building models to analyse the *agency of rivers* to mobilize people and resources (Argent, 2009; Osti, 2020).

There is an 'ecological' explanation of the mobilisation, namely that it depends both on the levels of pressure on environmental factors and on the cohesion of the local community. Populations that have cultural and organisational resources react promptly to the environmental threat, creating what is called the *self-denying prophecy* (Davico, 2004). The ability to read the situation and the sense of community ensure that populations grasp the environmental threat well in advance and push authorities and companies to change the rules and behaviours. In the literature on social movements, this is also called *the theory of tension* and is referred back to Neil Smelser (1962). This approach has been criticised for being too rigid and mechanical, fixed as it is in stages of mobilisation (Morris, Herring, 1987; Daher, 2002). However, in point of fact both the DPSIR-type models (Determined, Pressures, State, Impact, Responses) developed by the European Environment Agency and adopted by Italian environmental authorities (Ispra, 2011) and the analyses based on the resources of the movements (cf. Pilati, 2018) continue this approach.

Nevertheless, the major currents of the social sciences prefer other models to explain the mobilisations. One of the most used is referred to as *political ecology*, which was born as a branch of *agrarian political economy* but has become largely autonomous (Watts 2015). The main traits are summarized as follows by McCarthy, Perreault and Bridge (2015, p. 620 et seq.):

1) political ecology is deeply shaped by the encounter between Marxism and contemporary environmental questions [...]; 2) political ecology is a form of critique, which is to say it is explicitly normative, and in that context is committed specifically to siding with the marginalized and less powerful [...]; 3) feminist theory and politics have become part of the core of political ecology; 4) political ecology remains committed to and characterized by largely qualitative and interpretive methods and methodologies ... [in the sense that] studying marginalized people, political ecologists realize that official records tell only a partial story [....]; 5) political ecology is likewise attentive to historical and social context.

The search for the remote causes of environmental degradation make political ecology a model applicable on every spatial and administrative scale. The transition of scale — upscaling or downscaling — are seen as opposing tendencies aimed, respectively, at exaggerating the conflict, making it visible to a wider audience, or at diminishing it, showing it as a localist reaction, the so-called NIMBY syndrome (Magnani 2020). In reality, the mechanisms by which a certain mobilisation is successful in bringing an ecological cause into the decision-making arenas are not adequately illustrated by political ecology; thus there is a risk of falling into monochrome explanations excessively dependent on economic factors, i.e. processes of expropriation of value by capitalist forces. That is why some scholars turn to other languages to explain the specific phase of mobilisation (cf. Carrosio, Scotti, 2020).
This is the case of the Actor-Network Theory (ANT) and more generally of the *culturalist* models, in which mobilisation is seen as a marked ability to read the signals of the environmental crisis as turning points. The precursor of this approach can be considered Klaus Eder (1990), who still believed in the 80s that environmentalism would be the new cleavage – of cultural origin – capable of realigning social interests and aggregations. The basic concept is that of the *master frame,* a meta-reading of reality capable of arousing a mobilisation first of consciences and then in the public spaces (Benford, 2013).
It is no coincidence that the ANT has flourished precisely through its emphasis on *alignment*, which adds an aspect neglected by purely cognitive approaches (Reckwitz, 2002): it is the dense web of relations between factors that often produces that *alignment* in a random or temporary way which leads a case to ignite. In particular, ANT has been used for phenomena of high technological complexity because it can show that even sophisticated scientific events essentially have a relational matrix, a special combination of things and actors (Eden *et al*. 2000).
The limit that emerges in approaches generally based on the *networks analogy* (to distinguish them from those in which the set of relationships is mathematised) is the risk of indeterminacy or the disappearance of any hierarchy of factors that can

be subjected to empirical verification (cf. Argent, 2009). The ANT approach does not provide ex ante explanations of why relational asymmetries are formed between actors, risking becoming an elegant ex post justification of what happened in a certain mobilisation (cf. Wessells, 2007). *Political ecology*, with its insistence on the domination of economic factors conditioning in turn the cultural ones, provided a strong key to understanding the genesis of mobilisation. The ANT approach offers a more detailed description of the sequence of processes without, however, risking an ex ante evaluation of the relative weight of each actor and *actant* (cf. Lave 2015).

In all the approaches mentioned, the forms of actions are not well specified. This deficiency can be compensated for by a more precise *stylisation* of mobilizing social action. In this what matters primarily are on the one hand the *strategies*, on the other the *repertoires of action*. The former belong to the tradition of studies on rational choice (Miller, 1992; Yu et al. 2019), according to which predicting the actions of others is fundamental to achieving success (not only economically). The latter have been studied in terms of the concepts of habitus and social practices (Bourdieu, 1977). The mobilisations take place according to precise clichés that are adopted both by those who protest and by those who control or oppose the claims. Scripts of mobilisation, for example tactics during a protest march, become the main interpretative keys.

However, all of these approaches present only rarefied schemes that do not give an account in detail of the many steps from structural permanent factors to temporary mobilisation. What links important economic, cognitive, and relational conditioning to particular repertoires of collective action? An interesting answer that is emerging in the literature has to do with *catalyst events* (Prokopy et al. 2014). These would be the missing link between social structures and social mobilisation *here and now*. However, before treating catalysts analytically, it is useful to achieve a synoptic picture of all the approaches discussed here (Table 1), which will serve both as a synthesis and as a compass to frame any combinations between factors. In fact, the table also shows a column with already specified catalysts that relate within each approach to particular prior conditions and subsequent outcomes. For the sake of completeness, the main weaknesses of each approach are also summarised.

Table 1 — *Table of the main approaches to the study of socio-environmental mobilisation with analytical characteristics and weaknesses*

Approach	Base element	Catalyst events	Collective action	Critique
Tension model	Socio-cultural resources of the community	Increased environmental pressure	Rapid, rational, choral, organised response	Mechanical representation, inequalities not considered
Political Ecology	Asymmetries of wealth, power and rank	Exasperation of extractions and spatial injustices	Local resistance with political motivations	Unclear shift from standing injustice to mobilisation
Cognitive models	Awareness of degradation and prospects of change	Catastrophic events, reports on the state of the environment	Marches, sit-ins, education, exhibitions, campaigns	Disconnection of consciousness and repertoires of environmental action
Relational models	Segmentations and inequalities in sociality	Formations of unprecedented coalitions with marginal people	Word of mouth, networking, participatory processes	The transition from mutuality to solidarity between networks is taken for granted

Source: Author elaboration

Field of investigation, model, and method

The field of investigation is the social aggregations and environmental mobilisations in the Lombard rural plain. The specific research area is bounded to the north by the foothill line, roughly represented by the former state road 11 'Padana superiore', to the south by the terminal stretch of the Oglio river and by the Po to its confluence with tributary river Mincio; then to the west again the Oglio and to the east by the Mincio (Fig. 1). In the central part the Mella and the Chiese flow. The basic characteristics of the four rivers are presented in Table 2.
The phenomenon to be explained is the collective environmental action that is found along the course of the Chiese, prompted by a federation of associations of the river and its lake Idro. This could be considered a spontaneous and limited NIMBY protest. Indeed, there are some original elements that led to the choice of this particular case of mobilisation:

- The name of the association, which became a federation at the beginning of 2020, is intriguing: "table of associations that love the Chiese river and its Lake Idro". The objectives of the federation are the preservation of the river-lake ecosystem, in particular the ecological flow, the fight against pollutants, not least odours, and preserving the landscape and improving recreational activities of all basin.

- The adoption of the federative formula that brings together almost twenty associations belonging to three provinces and two regions, which represent the entire length of the river from its source to the entry into the Oglio
- The duration of the association-federation, which has existed formally for over three years and is able to maintain a protest sit-in for months in the centre of Brescia, involving other ecological networks throughout the province.

There are, in other words, elements of resilience in the team, able to resist to external pressures and member losses, which suggests a systematic and well-founded collective action. And in fact the range of actions of the federation is remarkable: marches, sit-ins, appeals to the administrative court, conferences, fundraising, production of *gadgets*, interviews, and articles in the local press and on social media.

This particular situation along the Chiese river allows us to formulate two more general research questions: 1) whether rural areas have a *deficit of socio-ecological mobilisation* due to their peripheral situation (city domination, lower incomes and levels of education, poorer services, Desmet et al. 1999) and typical community constraints (conservatism, social control; Deng, Yang, 2013). This is a hypothesis that starts from afar, which concerns both environmentalism (Osti, 1990) and rural associations (Osti, 2002). And 2) whether the *river can represent a catalyst for socio-environmental mobilisation* because of its physical and symbolic characteristics (Anderson et al. 2019). In fact, it transports vital elements over a large territory and it represents a landscape unit source of values capable of aggregating communities. This second hypothesis is more controversial and seems to clash with the growing invisibility of rivers for cities (Bocchi, 2011) and for nation-states (cf. Menga, Swyngedouw, 2018), the real engines of modernity. But precisely because of this divergence, the idea that the river is a social catalyst in low-mobilisation rural environments deserves verification. Identification with the river would make up for the traditional political inertia of rural communities.

To assess the two hypotheses, the case of the Chiese has been compared with three other river communities with similar characteristics from a physical, socio-territorial, and administrative point of view. It is, starting from the west of the Oglio, the Mella, the Chiese itself and the Mincio. All flow in the south-eastern part of the Lombardy region and all touch the province of Brescia in particular. The exception is the Mincio, which, however, is an emissary of Lake Garda, as already mentioned, quite involved in the events of the Chiese basin and a great touristic feature of the whole province of Brescia.[4]

This comparative research design carried out on sub-areas, substantially similar from the morphological and urban-industrial point of view, should allow us to understand if the environmental mobilisation along the Chiese is a common phenomenon or depends on specific events in the area[5]. It thus makes sense to introduce the idea

[4] The physical-morphological and socio-settlement homogeneity of the four rivers is high. They all descend from the Alps; they are quite stable due to the vast upstream basins and lakes that theoretically act as regulators — theoretically because in fact the level of the lakes is subjected to multiple and contrasting pressures. In addition, the Mella does not have a lake in its initial mountain stretch. They are populated by a dense network of small municipalities, each with its own industrial area. The plain side has many large pig and cattle 'factory' farms.

[5] The choice of the case studies proceeded in two phases: first the Chiese valley was identified in a completely

of the *catalyst* of socio-environmental protest in the face of stable socio-economic and cultural factors, which in the end are to be considered similar throughout the eastern Lombard plain.

Table 2 — Main administrative and physical characteristics of the four rivers

	Oglio	Mella	Chiese	Mincio
Provinces touched	Brescia, Bergamo, Cremona, Mantua	Brescia, Cremona	Trento, Brescia, Mantua	Verona, Mantua
Entities with environmental purposes	Oglio Nord and Oglio Sud Regional Parks, River Contracts	River Contract of the mountain part only (2006)		Mincio Regional Park, River Contract
Length (km)	280	96	160	75
Extension sq km	6359 2024 (after lake)	1018	1523	778 2200 (with Sarca and Lake Garda)

Sources:
https://pianoacque.adbpo.it/wp-content/uploads/2014/10/PdGPo_monografia_OGLIO_2010-02-08.pdf; https://pianoacque.adbpo.it/wp-content/uploads/2014/10/PdGPo_monografia_SARCA-MINCIO_2010-03-15.pdf

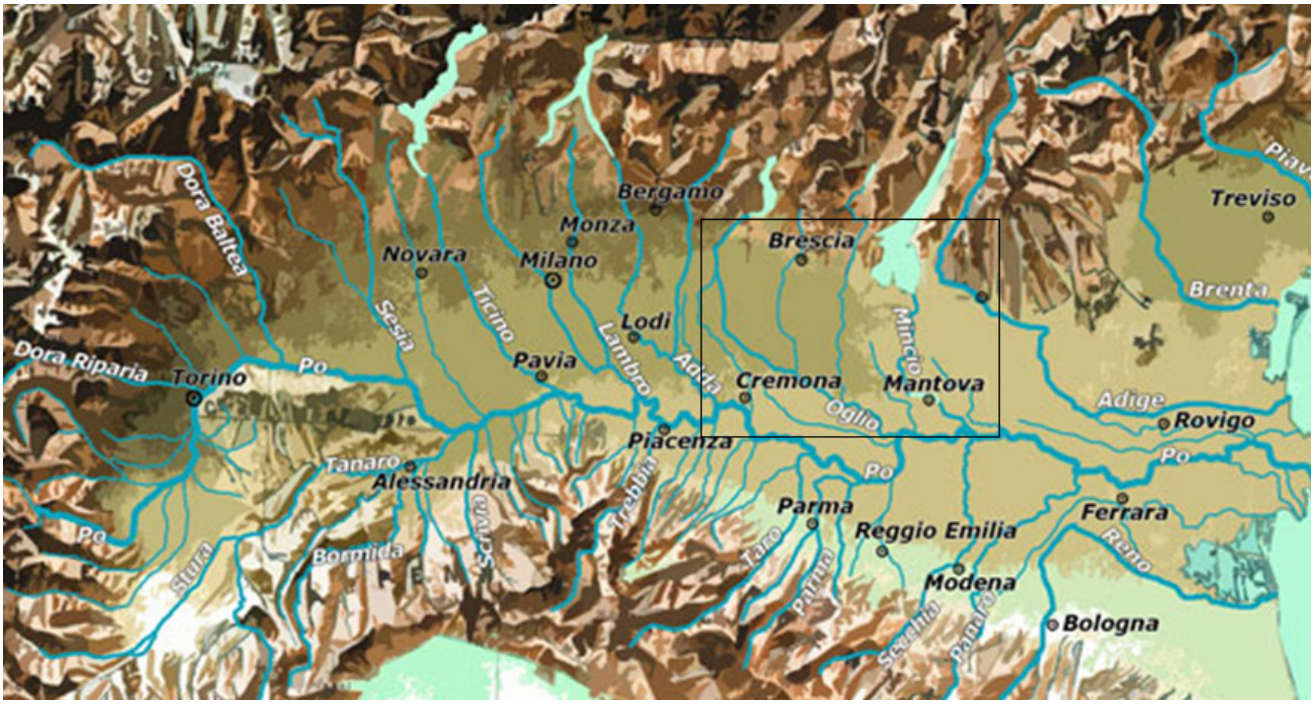

Fig. 1 — Lombard-Venetian plain which — starting from the west — contains the rivers Oglio, Mella, Chiese and Mincio (only the first and the last one are named) – source: author elaboration on https://www.viaggievacanze.com/pianura-padana-cartina-fisica-cartina-politica-13824.html, access 17 January 2022

idiosyncratic way by virtue of its broad and shared environmental mobilization. Then, to verify the exceptional nature of this mobilization, the three neighbouring areas, very similar from a socio-territorial point of view, were compared. The detection of the mobilization phenomena took place thanks to interviews with privileged witnesses and the systematic analysis of the local press. The research qualifies for its duration (from 2019 to 2022), a period that allowed permanent direct observation of the phenomena, thanks to visits to places and participation to local meetings; an important source of information as been the 'Carovana sul Chiese' (https://www.areefragili.it/storico-scuole-ricercazione/eco-carovana-sul-chiese/ access 8 June 2022).

An implicit framing of the idea of catalyst is found in studies of social psychology: they «find that place attachment 'implies that individuals with a strong attachment to an area probably will oppose environmental destruction' [..] but that they may not be fully conscious of their place attachment until a *major environmental disturbance*» (Mullendore et al. 2015, p. 68, italics added).
This argument, translated into our case study, leads us to say that the attachment to the river exists, has different intensities and forms within the population, but becomes a generator of social energy when it is subjected to a strong environmental threat. Environmental psychology has produced many studies on the sequence 'attachment to places-environmental sensitivity-pro-environment action' (Devine-Wright, Quinn, 2021), without however specifying whether there are special events triggering the virtuous sequence. Sociology, for its part, had identified a long time ago (Smelser, 1962) a specific stage of collective action in the 'precipitating factors', while political science talks about *focusing events* (Smith, 2008).
The dramaturgical approach comes to similar conclusions in emphasizing the existence of «'critical moments' as particular events that allow negotiation of meanings, formulation or reformulation of dominant discourses» (Yuana et al. 2020, p. 157). We are not far from the *punctuated equilibrium framework* (Huitema, Meijerink, 2010), in which sudden changes in policies are due to the random combination of several factors.
The idea of catalysts is also formulated in American-style environmental studies. It must be said that these have a 'collaborative' inclination; that is, they focus on possible catalysts for projects of enhancement and environmental protection rather than catalysts of protest or social conflict. The basic elements of the *catalyst event,* obtained from a paper by Prokopy et al. (2014), are:

– potentially or in fact produces harm or benefit to the population, property and the environment (tangible change)
– a specific temporal manifestation: appears suddenly and is rare
– high visibility both for intrinsic reasons and because of media emphasis
may occur concomitantly with others (combined effect)

The authors then build a typology of catalytic events specifically aimed at water reservoirs and related to management issues (watershed management). From five American scientific journals they finally select 27 articles that include some information about catalytic events. Their proposed classification of catalyst events is reported in Table 3. It should be noted that the categories for distinguishing events are the nature of the entity that triggers the process and whether this is intentional or not. The model has been refined in subsequent research (Church, Prokopy, 2017).
The authors proceed to honestly consider what is missing in their typology and find that *people*, understood as persons with particular leadership skills, are absent. Like other factors, *people* remains a rather generic category. Nevertheless, they are of considerable importance in thinking about how many environmental protests have had leaders with great communication and aggregative skills (Morris, Herring, 1987). Weber's concept of a charismatic leader could help to understand such events[6].

[6] From a quick online survey of the literature on environmental conflicts, it is noted that the charismatic leadership perspective is rarely adopted. There is probably a bias against explanations that are considered too focused on individuals.

Table 3 – Typology of catalyst events (source: Prokopy et al. 2014, p. 7)

Intentional events	Nonintentional events
Government action • Regulation (including threat of) • New data/information • Recommendation/mandate for creation of new group • Funding opportunities[a] *Nongovernment action* • Funding opportunities[a] • Group reorganization	*Incidental actions by either government or nongovernment* • Proposed (or actual) construction projects *Disasters* • Natural disasters • Industrial accidents and other major point source discharge events

[a]Funding opportunities can come from multiple sources, and so they are included in the typology twice.

As a final product Prokopy et al. (2014) propose Figure 2, which allows us to understand the whole structure of their argument, in particular the median location of the catalyst events. Starting from this figure, a new formulation of the model is proposed (Fig. 3), which a) accentuates the phenomena of feed-back, b) specifies the typical characteristics of collective action: strategies, bridge relationships between networks, use of organisational resources and repertoires, and the so-called structure of political opportunities (Tarrow, 1996), and c) takes into account the analysis of the literature on environmental conflict summarised in Table 1. In fact, with the sole exception of the theory of tension, all refer to *baseline conditions*, whether these are the interests related to the exploitation of natural resources (political ecology), the actors' definition of the environmental situation (cognitive approaches), or, again, the bundle of institutionalised social relations (relational approaches). At this point all the ingredients are available to analyse the socio-environmental situation of the stretches of plain of the four Lombard rivers.

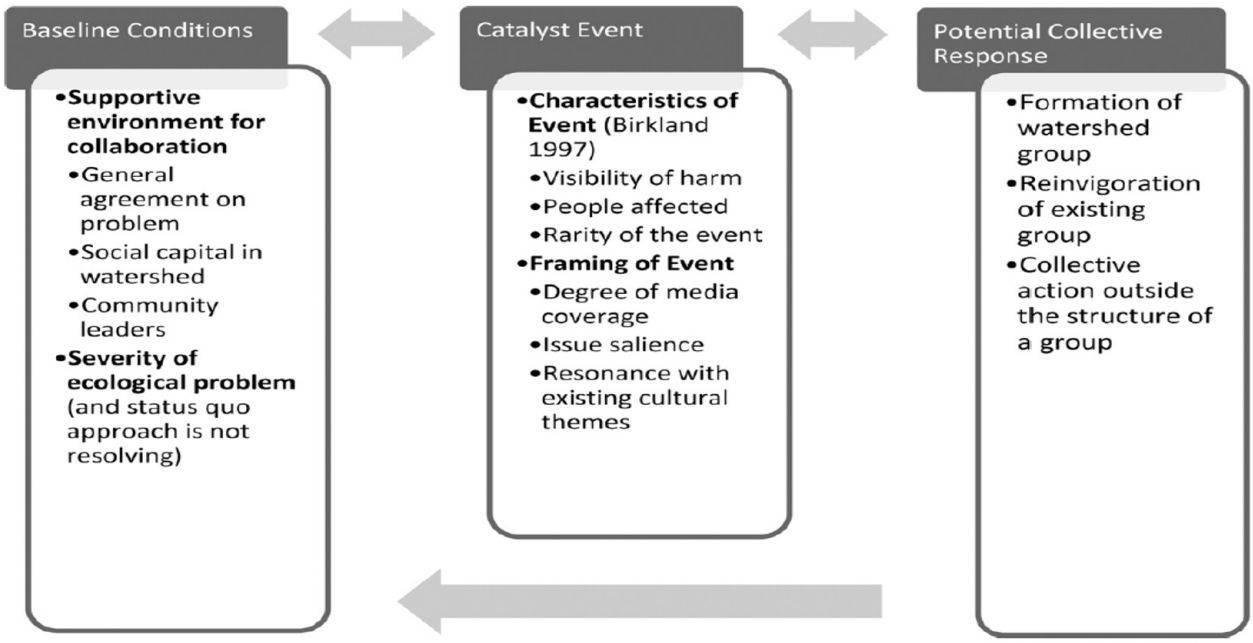

Fig. 2 – Relationship between basic conditions, catalytic events and potential collective action (source: Prokopy et al. 2014)

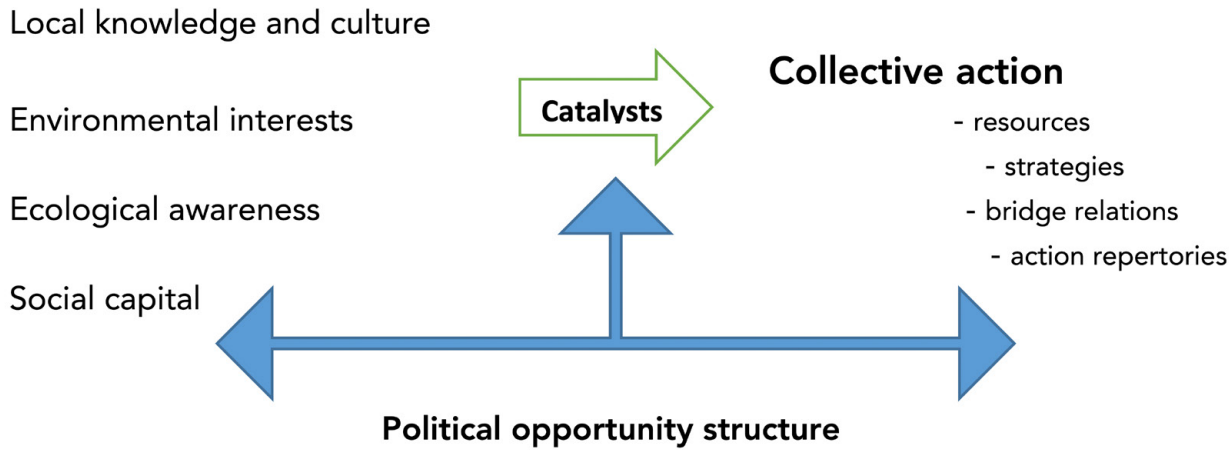

Fig. 3 – Framework obtained from Prokopy et al. 2014 and adapted to the Italian case study (source: Author's elaboration)

3. The analysis of the four cases

The analysis of the socio-environmental mobilisation in the four river communities is not easy, because it is a matter of surveying small groups and micro-actions. From the surveys made so far in the local press and on social media, corroborated by the opinion of privileged witnesses, there is no mobilisation along the lower course of Oglio, Mella, and Mincio *comparable* to that found on the Chiese. There are on-site associations and social aggregations that refer to the defence of the environment (Box 1), but they present a more geographically limited mobilisation. In fact, they are generally:

- historical associations such as Legambiente that have a municipal or supra-municipal range of action; certainly they have a very rich wealth of knowledge and experience, but the action is generally aligned with the so-called 'campaigns' (Osti, 2007); there is no a wide aggregation capable of gaining visibility beyond local borders.
- New experiences with young people limited to individual municipalities and focused on folk culture. Typical is the case of cleaning green areas and the river banks. These forms of aggregation are 'deliberately' de-politicized, using environmental sensitivity as a substitute for attachment to places.
- Long-standing local associations with links in social and cultural co-operation. These are aggregations with environmental roots, which over time have turned into the provision of services consistent with the ecological mission (e.g. recovery of seeds and breeds of native animals). These services are part of the enhancement of the local historical-artistic heritage.

This is a typology based on associative *profiles*. If we look primarily at promotional *actions* in which the river has played some role, we must mention the support for cycle paths and public green areas on the banks, leaving out for now the discussion of regional parks. In fact, these are either locally managed parks (in Lombardy there are Local Parks of Supra-Municipal Interest) or equipped areas similar to public gardens and playgrounds and therefore close to urban centres.

It is not possible to account for all the local associations that still exist and are also very varied in the four river communities. Even in the small towns far from the urban centres there is generally the *Pro Loco* (Fermani et al. 2013) and the civil protection volunteers, as well as the branches of the great social aggregations of the twentieth century such as the Auser (Association for active aging), the Avis (blood donors), and the Roman Catholic associations.

Box 1 – A case study for each river community
The *Fauno* is an association of Cigole, a small town located on the river Mella, roughly between Brescia and its outlet on the Oglio. It is a sort of cultural *hub* of the area as for some decades it has been coordinating local promotion projects (social cooperation, recovery of historic buildings and local varieties, revitalisation of green areas, creation of cycle paths). It also acts as a fundraiser and in partnerships with public and private bodies. Moreover, it also plays a role aggregating initiatives and associations of the small towns of the lower Mella.
Amici del Mincio is a branch of the Pro Loco of Rivalta sul Mincio, in turn a fraction of the municipality of Rodigo in the province of Mantua. It has two fundamental purposes: to organise canoe trips and other boats on the Mincio, and to maintain a high level of naturalness of the river and its surroundings, with a particular focus on the conservation of swamps. While the first function enjoys a certain consensus, the second has ended up positioning the Amici del Mincio differently than local stakeholders, not least the regional park. Therefore, they do not appear able to coagulate the energies of associations and groups located along the Mincio. Their legal status is also weak.
The *Circolo Legambiente Valle dell'Oglio* was born on 9 July 2019 in Orzinuovi, a medium-urban centre of the lower Brescia area. Considering the average age of the circles, that of Orzinuovi is really a baby. The main animator is a voluntary ecological guard committed for decades to protecting the environment. In the program it presents the systemic approach of Legambiente that touches on all the main environmental threats, in particular the attention to the problem of waste and the protection of green areas. It has excellent relations with other Legambiente circles and with other local associations, but it has no aggregative capacities at the moment.
Mamme del Chiese: 150 mothers of the Chiese were officially constituted in 'committee' on November 2, 2020; their basic objective is to defend the health and well-being of the communities in which they live and in particular to express their indignation about the treatment plant projects on Gavardo and Montichiari to collect the wastewater of Garda. They argue that the project is top-down, expensive, and burdens territories already subjected to severe environmental pressure. They participate in the presidium '9 August' in Brescia.[7] They are connected to the national network 'moms from north to south'.

In short, there is an associative network throughout the lower Lombardy. What is striking is the aggregative and reactive capacity of the associations of the Chiese, a sort of *advocacy coalition* for the river (Smith, 2008). In this sense, the framework

[7] https://www.gardapost.it/2020/11/09/le-mamme-del-chiese-si-costituiscono-ufficialmente-in-comitato/, access 14 January 2022.

adopted is useful: does the Chiese community has a distinct culture, economy and social capital that explains such a large mobilization or instead, as the model says, has it undergone a series of punctual events that have catalysed the protest?
On closer inspection, there are certain significant events close to the birth and growth of the federation (Box 2). Certainly the largest and most engaging *casus belli* is the project of Acque Bresciane[8] to build two pipelines that bring the waste water of the municipalities of the Brescia shore of Lake Garda to two plants located in Gavardo and Montichiari, both in the basin of the Chiese. The project and its legitimation procedures are very complicated; it might suffice to say that Acque Bresciane opted for the construction of two long pipelines outside the basin, instead of designing and building small wastewater treatment plants near the towns of Garda. In short, it is a case of dislocation of the environmental impact on other territories and of high costs of construction and management of the pipelines that moreover must 'cross the pass' in another hydrographic basin with the use of large pumps.
Alongside this conflict there is another, now historic conflict that concerns the use of the waters of Lake Idro for hydroelectric and irrigation purposes. It is precisely these withdrawals that birthed the initial nucleus of the protest, headed by a section of the Friends of the Earth, one of the historical environmental associations of the Italian and international scene. The Friends of the Earth section 'Lago d'Idro e Vallesabbia' is based in locality of Idro on the homonymous lake; therefore, the origin of the protest is in the mountain area of the basin. His coordinator is also coordinator of the Federation of the Table of Associations.
The mega-tunnel project that seemed to start work in 2017 has remained at a standstill; but it represented yet another occasion of conflict over the use of lake and river water. The dissent then spread to the flat stretch of the river. Especially in the summer the plain part undergoes extensive withdrawals for irrigation purposes, draining it almost completely. Another topic of the Federation is the maintenance of ecological flow. On this the conflict is more nuanced and the polemical target is widely represented by the reclamation consortia of the area, which also have the task of irrigation.

Box 2 – Recent environmental events of the Chiese river basin

- **December 12, 2017** the start of a mega-project of derivation of water from Lake Idro for hydraulic security purposes (flow rate 332 cubic meters per second) seems imminent; in reality according to opponents it is a pretext to enhance irrigation in the plain; https://www.bresciatoday.it/cronaca/tunnel-lago-idro.html (access 15 February 2022).
- **September 2018** an epidemic of legionella breaks out in the lower Chiese; it seems the first in the world to develop outdoors and because of the waters of a river.
- **October 12, 2018** the Table of Associations that Love the River and its Lake Idro is born. There are nine associations and they represent the three provinces. It establishes a statute, charter of intent, board and president.

[8] It is the 'in-house' company that manages the integrated water system of 95 municipalities in the province of Brescia, in particular all those on the corresponding side of Lake Garda and sporadically some of the Chiese basin.

- **November 2018** The Acque Bresciane company under the total control of the municipalities approves a plan to place the sludge plants of the upper and middle Garda (Brescia side) respectively in Gavardo and Montichiari, both in the basin of the Chiese; https://www.giornaledibrescia.it/rubriche/ambiente/di-cosa-parliamo-quando-parliamo-del-depuratore-del-garda-1.3425594.
- **4 – 8 June 2019**, a researcher from the University of Trieste organizes the *Eco-caravan of the Chiese* — an ascent by bicycle to understand and enjoy the river and its inhabitants from Canneto sull'Oglio (MN) to Daone (TN): www.areefragili.it/storico-scuole-ricercazione/eco-carovana-sul-chiese/. Subsequently, similar initiatives of others on foot or by bike were organised.
- **February 20, 2020** the Table is transformed into a Federation, formed by 19 associations from Daone (TN) to Canneto sull'Oglio (MN). As of December 2021, there are 25 member associations. It publishes an online magazine *Acqua del fiume Chiese che unisce* https://issuu.com/rivista-2021_/docs/acquadelfiumechiesecheunisce_03_4603733705ffba
- **August 9, 2021** begins a permanent sit-in, night and day, in Brescia to protest against the wastewater plants project; in addition to the Federation, the Basta Veleni! network, Mamme del Chiese, Public Water Referendum Committee, Environment Committee Territory Basso Garda (the only aggregation of Lake Garda) all take part in the sit-in.
- **30 November 2021** appeal to the TAR (Regional Administrative Tribunal) of Brescia by the Federation of the Table of Associations of the River Chiese, Friends of the Earth, Fishermen High Chiese and Legambiente Montichiari Circle against the results of the Conference of Services – a formal agreement amongst public administrations - convened by the Extraordinary Commissioner for the wastewater treatment of Lake Garda (in this case it was the Province of Brescia's Prefect) concluded on October 5, 2021 (Redazione, 2021).
- **20 January 2022** petition presented by Mamme del Chiese on 4 August 2022 is published on the website of the European Commission (Petition no. 0902/2021). This means that the Commission considered the arguments to be valid and that it is possible to support it. As of 27 January 2022, there were 206 signatures of support. www.pressenza.com/it/2022/01/la-petizione-europea-sul-depuratore-del-garda-diventa-pubblica/

A third source of mobilisation concerns in particular the middle band of the basin, the one close to the municipality of Montichiari, the most populous and industrialised in the area. It is home to important infrastructure: an airport, a hospital, a velodrome (under renovation), and some landfills. To the north of Montichiari there is the municipality of Calcinato, smaller but with a vast industrial area and above all located straddling the road and railway axis that connects Brescia, the southern side of Garda, and Verona, the three poles of the area.
In both cases, these are municipalities that have a mixed urban and rural conformation, with large agricultural spaces still under threat of new industrial or infrastructural settlements. In 2020, work began on the Brescia-Verona high-speed railway line. Interestingly, the municipality of Calcinato has been fighting for years

against odours from factories and landfills. The protest against smells presents itself as 'ethereal' and in fact, incomparable with other environmental threats; however, it is a source of widespread discontent that coagulates in spontaneous actions, even radical. The leaders of the fight against odours have merged into the federation, thus giving a stable representation to the issue.
A further event that can be counted among the catalysts is the outbreak of a local legionella epidemic.

> «In the area where the epidemic took place, 1,418 cases of bacterial pneumonia and legionella were ascertained between autumn 2018 and spring 2019 with 72 deaths related to the diseases. [….] Legionella pneumophila of serotypes 1-2-14 has developed mainly in 7 places, Montichiari, Carpenedolo, Calvisano, Visano, Isorella, Remedello and Acquafredda. The rate of diffusion and the overlap of strains — reads the report — are unprecedented in the world scientific literature» (Redazione 2020, author translation).

Two factors have collided with each other in the story: the first is that for several commentators local people were faced with the probably first case in the world of legionella that developed outdoors and not in closed places (Perini 2021), and this place was the surroundings of the river Chiese; the second is that the epidemic no longer occurred in the following years and shortly thereafter the Covid pandemic overshadowed all the other public health events of the area. Nevertheless, at the time of legionella contamination, a sense of social alarm had spread right in the heart of the Chiese basin, because it was hypothesised that the Chiese had been the vehicle of the disease. In the present case, spills into the river of hot water from local industries were the possible cause of the spread of the bacterium in open places.
This story of legionella, although later it became scaled down or dormant, was certainly a catalytic event in the terms proposed in the framework. The local population felt seriously threatened by a violent and deadly 'urban-industrial' development. As mentioned, the central area in particular has a very high concentration of industries and infrastructure; the idea of building a treatment plant for the sewage from other areas became an explosive ingredient. Nevertheless, the protest took a rational and stable turn, thanks to the actions of the Federation and other associative bodies.

5. Discussion

The federation of the table of associations appears strongly focused on the story of sewage purifiers; these as concrete locations presenting marked territorial injustice (dislocation in another water basin or *outplace*, as the name of the Journal) are suited to keeping an environmental mobilization alive and constant that would otherwise be rhapsodic. It is confirmed that some polemical objects are more suited than others to arousing stable social reactions. This mobilisation has created a capital of *supralocal* relationships of high symbolic and practical value. It has allowed the valley of the Chiese, almost completely unknown to the Lombardy people, to rise to a more general question, receiving solidarity from some organisations and networks acting on a provincial and regional scale.

Another distinctive aspect of the Chiese case concerns the mountain-valley relationship. In that basin the mobilisation started from the mountain area, precisely from Lake Idro, and soon involved the lowland area. This has not happened in the other three areas, which remain marked by some environmental and administrative break between the mountain and the plain. This fracture has been reported by several witnesses. The Oglio, Mella, and Mincio rivers did not act as a glue between the upstream and the down stream areas.

One wonders if it is only because of the merger between the mountain and the plain (the Chiese case precisely) that it is possible to keep attention on the most widespread phenomena of degradation of the rural plain, namely nitrate pollution and the spreading in the soil of fertilizers deriving from sewage treatment and composting. The Federation of Chiese Associations has paid some attention to the ecological flow, but the spreading of soil fertilizers presents a certain difficulty in focusing and identifying the issue and the polemical targets, which in theory are agricultural organisations, biogas plants, and companies that work on behalf of the utilities of the integrated water system.

It is possible that this 'deficiency' in the specific case of fertilisers will be filled with alliances with other groups more attentive to monitoring the quality of agricultural soils. There are important indications on this. For example, the network 'Basta veleni!' gathers almost all the environmental organisations in the province of Brescia (Saleri, 2017); it participates in the permanent sit-in of the Federation and is aware of the strong impact of intensive farming in the lower Brescia area. Nevertheless, there remains the feeling that pollution of agricultural soil is one of the most difficult topics to deal with.[9] Thus, a sort of ranking of the visibility of the impacts and the related mobilisations arises: at the top, as mentioned, there are the *individual plants* with punctual locations; then there is the water monitoring, also facilitated by the linear location of the river; there is in addition the air monitoring, that makes use of a network of control units, although almost all located in urban and peri-urban areas; finally there is the shedding and leaching in rural areas that present the greatest difficulties in monitoring and mobilisation.

Finally, there is an institutional factor to comment on and from which to draw some lessons. The four river basins, in particular the southern flat part, are affected to varying degrees by public environmental institutions. On the Oglio and Mincio rivers there are three regional parks, while on Mella and Chiese there are none. A suggestive hypothesis that needs further study concerns the role of these public bodies with regard to social mobilisation (Cialdea, Pompei, 2021). It is possible that the protected areas *absorb the protest*, as they are seen as official delegates to defend the environment. For this reasoning to be consistent with the results of the research, there should also be a regional park on the Mella. Then the environmental protest on the Chiese would be explained as the absence of institutional channels for the protection of nature — a classic hypothesis in the interpretation of the rise of social movements (Tarrow, 1996). It is also true that we cannot think of such mechanical relations between civil society and institutions.

The role of parks must be specified in historical terms. If they were born under

[9] https://www.pressenza.com/it/2021/02/brescia-considerata-la-pattumiera-ditalia-intervista-al-tavolo-basta-veleni/, access 15 January 2022.

a popular impulse and still animated by a strong fighting spirit in defence of the environment, it is easy to think that mobilisation is channelled through them; if, on the other hand, they are the result of centralised bureaucratic processes, it is easy for them to mortify the local environment mobilisation.[10] But there is a further path that can be taken by park organisations with vast territorial tasks: the capture of the entity by local interests, as the Tennessee Valley Authority story teaches (Selznick 1974) and as seems to happen for important developmental policies of Italian Inner Areas (Barca, Carrosio 2020).
Among the processes that can channel environmental mobilisation are river contracts (Scaduto, 2016; Cialdea, Pompei, 2021). Both on the Oglio and on the Mincio these forms of participation have been initiated (Tab. 2). Also in this case we must be content with simply identifying the presence or absence of the participatory scheme. A river contract had also been initiated in the mountain part of the Mella basin. Of the four rivers, therefore, only the Chiese did not have a river contract; this reinforces the idea that the mobilisation of the federation is an alternative to or a compensation for more institutional participatory channels.

6. Conclusions

The research followed an iterative process (Srivastava, Hopwood, 2009): starting with an exploration of an atypical case of environmental mobilization in a rural river basin, it has gradually perfected its path, arriving at a comparative design and a model based on socio-cultural catalysts and opening up to new future insights related to the thaumaturgic abilities of rivers. The two hypotheses initially formulated received some feedbacks. The first of these implied a weaker and punctuated environmental mobilisation in agricultural-rural areas. This can be said to be generally confirmed with the exception of the mobilisation in the basin of the Chiese. This exceptionality has been traced back to the presence of catalyst events of various kinds (second hypothesis), substantially absent in the three near river basins taken as control sample. Thus, not only the symbolic and identity value of the river has acted, but also other contingent factors, in particular the presence and design of infrastructures of great emotional and sensory impact, such as landfills and wastewater treatment plants. The river therefore stimulates an acceleration of consciousness and environmental action, if accompanied by other phenomena, not least the feeling that the dignity of citizens is being undermined by a blatant environmental injustice. And precisely the perception of having been wronged is a factor that unites the microscopic story of the valley of the Chiese with tensions that are found in many parts of the world and that have to do with *recognition* (Honneth, 2002; Pesch et al. 2018). After all, the associations of the river Chiese ask to be recognised as communities of value equal to the most noble areas, in this case the cities of Brescia and Mantua and the tourist complex of Lake Garda.

[10] A further element of cultural identity and environmental mobilization should be remembered: publications. For the Oglio we should note Malavasi and Perlini (2009), for the Mincio De Vincenzi (2013), for the mountain and Brescia part of the Mella Prusicki (2007). For the Chiese there are no similar studies and research, except for the publications produced by the Federation of Associations.

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