



## « THREE REDUCTIONS, THREE GAINS: A NEW APPROACH TO AGRICULTURE »

Mekong River Delta, Vietnam

*Period of implementation: 2003 (launch) | Study case written in 2010*

**A** participatory planning process was used to develop media campaigns called 'Three Reductions, Three Gains', to motivate rice farmers in the Mekong River Delta region to modify three resource management practices regarding the use of seed, fertilizer, and insecticide. The campaign focused on reducing use of these inputs, addressing farmers' general misperception that high inputs would raise their production. The policy aimed to alleviate the poverty level of rice farmers and the population in general of Mekong River Delta region through promoting the right dosage of seed, fertilizer, and pesticide. As suggested by this case, municipalities that want to adopt a similar policy through a media campaign must make the effort to simplify and structure the new research-based information into easy messages framed in a 'gain' format where the gains are easily demonstrated and articulated. A collaborative approach is essential.



The **Inclusive Cities Observatory** was launched in 2008 by the UCLG Committee on Social Inclusion, Participatory Democracy and Human Rights with the aim of creating a space for analysis and reflection on local social inclusion policies. The initiative was developed with the scientific support of Professor Yves Cabannes (University College of London) and the Centre for Social Studies (CES) from the University of Coimbra. At present, the Observatory contains more than sixty study cases mostly developed between 2008 and 2010. Even though many of these cases refer to policies that have already come to an end, they still have much to offer: from capitalizing on the learning acquired by other local authorities to discovering suggestive and alternative means to address social inclusion challenges from a local perspective.

## Context

### *City context*

The geographical context for this policy case is the southern area of Vietnam called the Mekong River Delta, one of several bio-geographical zones that compose the larger area of Mekong River region. The Mekong Delta is a triangular surface with large areas of fertile agricultural lowlands for rice cultivation, the main economic activity of the whole country. The population of the Mekong River Delta is largely rural and employed mostly in agriculture or related activities.

The Mekong River Delta contains 13 provinces: Long An, Tien Giang, Ben Tre, Dong Thap, Vinh Long, Tra Vinh, An Giang, Kien Giang, Hau Giang, Soc Trang, Bac Lieu, Ca Mau, and Can Tho. The 'three reductions, three gains' practice was first experimented in pilot areas of Can Tho and Tien Giang and was later applied to the remaining provinces.

### *Government and decentralization context*

Vietnam has adopted decentralization strategies within the context of strongly centralized political ruling systems. Its Constitution, adopted in 1992, approves the Democratic Centralism as the principle that governs the organization and operations of the National Assembly, the People's Councils, and all other State organs. The Department of Agriculture and Rural Development (at the provincial/city level) reports to both the Ministry of Agriculture and Rural Development (at the national level) and the Provincial-City People's Committee (at the municipal level).

The decentralization process in Vietnam occurred in parallel to the *Doi Moi* economic reforms of 1986, which marked the transition from central planning to a market economy with a socialist orientation, and the implementation of an open-door policy to facilitate Vietnam's active and gradual integration into regional and global communities. The opening of markets allowed Vietnam to export rice to Asia, Africa, the Middle East, the Americas, and Europe and rice growers began to adopt improved varieties of rice and management techniques.

One feature of the *Doi Moi* process was to encourage (UCLG 2008, p. 57) and legitimize citizen participation in local decision-making as well as to strengthen transparency and accountability mechanisms at the commune level. In this sense, the creation of decentralized structures and processes is a manifestation of a wider movement towards democratization in the region as it provides the enabling context for broader citizen participation in local governance.

Institutional level of policy development: Submunicipal, Municipal, District, and Provincial. The case encompasses different levels of the Vietnamese institutional architecture, ranging from villages to districts and provinces. The collaboration between the multiple institutional levels is explained in this report.

### *Social context*

Vietnam is a country with a total population of 88 million inhabitants (faostat 2009), with an agricultural population of about 12.6 million households in a total agriculture area of 10,000 million ha. (faostat 2007). Poverty is highly concentrated in rural areas where social exclusion, low education, and high exposure to risk are combined with relatively undeveloped physical and social infrastructures.

## Policy development

The '*3 Giam 3 Tang*' ('Three Reductions, Three Gains') initiative is a media campaign developed through a participatory planning process to motivate rice farmers in the Mekong River Delta region to modify three resource management practices – seed, fertilizer, and insecticide use – that are highly utilized in rice agriculture and cause environmental pollution and an increase in costs for the farmers. It promotes the reduction of the three inputs to bring three benefits: increased income, lower exposure and risk due to pesticides, and an improved environment with less pollution from farm chemicals. The campaign was piloted in the provinces of Can Tho, Tien Giang, and Vinh Long in 2003.

The name given to the campaign aims to express and effectively communicate three good principles in pest management to improve the environment and livelihood of millions of rice farmers in Vietnam. The initiative integrates ecological, agricultural, and social sciences (particularly communication and decision sciences) in a trans-disciplinary manner. To persuasively communicate changed practices, it was necessary to understand the farmers' perspective on the production inputs, to develop simple messages through participatory workshops, and to design an environmental soap opera to communicate the benefits of these new principles. The environmental soap opera, named '*Chuyen Que Minh*' ('Homeland Story'), was developed for the farmers through a process involving a drama design workshop and the participation of local governments, academia, NGO, and civil society, and is broadcast by Voice of Ho Chi Minh Radio.

### *Background*

Following up from a previously successful 'No Early Spray' campaign that aimed to prevent the improper use of insecticides by farmers during the first 40 days of cultivation, the policy was extended and redefined with additional objectives to reduce the input components in rice production in the Mekong Delta region. The 'Three Reductions, Three Gains' campaign aims to help farmers optimize their use of seed and fertilizer. Research institutions had found that many farmers applied too much seed and fertilizer, creating field conditions favorable to rice disease, escalating input costs, and causing environmentally damaging fertilizer runoff. The credibility built from the earlier 'No Early Spray' campaign meant farmers adopted the 'Three Reductions, Three Gains' practices more quickly.

### *Policy objectives*

The policy aims to influence and change the cultivation process and practices, and related beliefs, of farmers from a high use of inputs towards a more sustainable way of production respectful of the environment. More specifically, the policy's objectives are to diffuse and promote the right dosage of seeds, fertilizers (reduce by 10%), and pesticides (reduce by 50%) through motivational campaigns and the radio soap opera in the pilot areas of the provinces of Can Tho and Tien Giang.

### *Chronological development and implementation*

In December 2002, the 'message design workshop' was held with stakeholders to develop the content of the radio soap opera (e.g., the story, characters, etc.) for a series of motivational materials, posters, leaflets, billboards, the radio drama, and television advertising. In 2003, the campaigns were launched in the provinces of Vinh Long (situated about 150 km south of Ho Chi Minh City), Can Tho, and Tien Giang. After the initial pilots, several provinces and cities adopted the campaign and the Government allocated U.S.\$430,000 for its implementation in January 2006. In the subsequent years, farmers became more concerned with the quality of seed, good soil, and water conditions, and the practice was promoted by the farmers themselves as 'learning

by discovering'. In 2008, the An Giang provincial government extended this idea by adding two more 'reductions' – reduce water use and post harvest losses – and coining the 'Five Reductions and One Must Do' program, which included the 'Three Reductions, Three Gains' practices.

### *Stakeholders, beneficiaries and participatory methodologies*

#### **Agents involved**

A partnership was established between local research institutions, academic extension departments, mass media, local government, NGOs, and other implementing agencies. The policy implementation also included the Peoples' Committees of Tieng Giang, Can Tho, and An Giang.

#### **Beneficiaries**

The beneficiaries of this policy case are the rice farmers located in Mekong River Delta and, indirectly, the whole population of this region.

#### **Participation processes implemented**

The participation of the communities and other organizations of civil society, together with the involvement of local authorities and universities, is a characterizing element of the multi-stakeholder planning process carried out through a series of workshops to establish shared objectives and to identify the problems.

The results of the workshops, meetings, and focus group interviews were then used in a 'message design workshop' involving all stakeholders, where they participated in creating the slogan, messages, media materials, and campaign plans. This type of framework facilitated communication between technical specialists and creative artists, enabling technical information to be simplified and incorporated into a drama format, the environmental soap opera, which linked entertainment and education and served as filter to distill scientific information into fictional conversations.

The multi-stakeholder partnership that was built was essential in the scaling-up process. Group decision-making processes, supportive relationships based on mutual trust and respect, and the use of a participatory style of leadership promoted high morale, satisfaction, local ownership, and commitment of communities.

Another important element was farmers' participatory research, which involved 951 volunteer farmers in 11 provinces. The farmers self-evaluated the effects of three reduction practices on their yields and incomes. Extension workers met with these groups weekly to obtain their feedback, discover their needs, and share their experiences. Local authorities, involved in each phase, also verified how farmers' beliefs were 'locked' in traditional practices, actively debated with the communities about their problems, and explored interventions.

A monitoring survey was carried out to assess the campaign effectiveness and to make corrections as needed. A planning and post-test survey was developed by a team among the stakeholders and conducted by employing students as interviewers.

### *Institutionalizing and financing*

#### **Institutionalization processes**

To encourage all provincial governments to implement the 'Three Reductions, Three Gains' program, the Ministry of Agriculture and Rural Development adopted it in 2004 and extended it

to fruit crops, fisheries, and aquaculture, thus becoming one of the State's mainstreamed programmes for Vietnam.

## Financing

The policy was financed by the International Rice Research Institute, local governments, provinces, international organizations, and media. In particular, provinces and municipalities allocated a total budget estimated at 3 billion Vietnam Dong annually to finance many activities related to '3 giảm 3 tăng' practices, such as bettering seed quality, fertilizers' pesticide, and soil preparation. Traders and businessmen related to agro-production have been also asked to join and support the program.

Partner	2003	2004	2005	2006	2007
International Rice Research	30%	10%	5%	5%	5%
Plant Protection Department	15%	50%	25%	70%	50%
Visayas State University	0	0	10%	5%	5%
Voice of Ho Chi Minh	5%	10%	10%	5%	10%
Cantho provincial extension	50%	75%	50%	15%	30%
Total Budget (U.S.\$)	30,000	165,000	154,000	500,000	300,000

## Outcomes and reflections

### *Key results and achievements*

The 'Three Reductions, Three Gains' practice produced three relevant results for about 2 million farmers who received and understood the campaign messages: increased profits, improved human health, and a better environmental quality. The campaign had significant achievements:

- *Changed attitudes and misperceptions in agriculture activities* – The farmers' beliefs had stemmed from overestimating potential losses, which heavily influenced their decisions. To change this, campaign messages motivated the farmers towards adopting new principles and educated them with ideas linked to pest management.
- *Environmental benefits* – In both the provinces of Can Tho and Tien Giang, farmers' use of seeds, nitrogen fertilizers, and pesticides changed significantly as their perception of yield loss changed, enhancing environmental quality and reducing pesticide hazards and pollution.
- *Economy* – The 'Three Reductions, Three Gains' model brought higher economic efficiency to the farmers and their families, thus increasing their profits and indirectly reducing labour and risks of pesticide hazards.

- *Community organization* – The participatory methods and approaches of the initiative together with the commitment, education, and employment of rice farmers and their families generated some changes in the capacity to organize within the Vietnamese social fabric.
- *Education-Entertainment* – This form of experimentation, using media as creative tools to educate and entertain, had positive impacts in effectively transferring scientific knowledge to the target groups and addressing misperceptions.

### Overall assessment and replicability or adaptation elsewhere

#### Main obstacles

The initial problem encountered in implementing the policy was related to the strong convictions diffused among the farmers that high inputs in agriculture would result in higher profits for them. Thus, reducing the agricultural inputs was believed to lead to potential losses. These beliefs, grounded in the local social praxis, negatively affected rice cultivation, damaging the rice production and the environment, and were at the base of resistances to accept and apply the new guidelines of the program. A second challenge concerned the communication of scientific content to low educated groups.

#### Replicability or adaptation of the policy elsewhere

As suggested by this case, the use of a media campaign and environmental soap opera appears to be a creative and effective means to disseminate applied scientific information and to fill the gap between the worlds of research and rural farmers. In this manner, new information deriving from research may be disseminated through simple messages by using a mass media approach to scaling up. This approach and similar media campaigns have been used in other areas, for instance, to motivate people to adopt methods to prevent AIDS, or to promote messages relating to health, anti-smoking, seat belt usage, and anti-drugs.

The multi-stakeholder participatory process was appropriately framed around the farmers' perspective for comprehensive reception. The collaboration between academic institutions and local governments produced a useful insight on the significant degree to which farmers were 'locked' into persistent beliefs to arrive at a common understanding of farmers' needs. Thus, this collaborative approach was essential for developing a comprehensive and knowledgeable understanding of the issues, as well as to engage multiple stakeholders during implementation processes.

Lastly, the policy is based on a mutual learning process between the institutions and local communities that jointly implemented the '*3 giang 3 tang*' program, which proved very effective in supporting the change process. Furthermore, these pilot experiments are now mainstreamed and organized into a coherent network, expanding the benefits through program repetition at a larger scale.

### Further information

This case was researched and written by Manuela Gervasi under the supervision of Dr. Giovanni Allegretti at the Centre for Social Studies, University of Coimbra, Portugal, in 2010. We thank Mr. Pham Van Quynh of the Provincial Extension of Can Tho Province, Vietnam, for his assistance.

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