



8th
World Water
Forum

Brasília-Brazil
2018

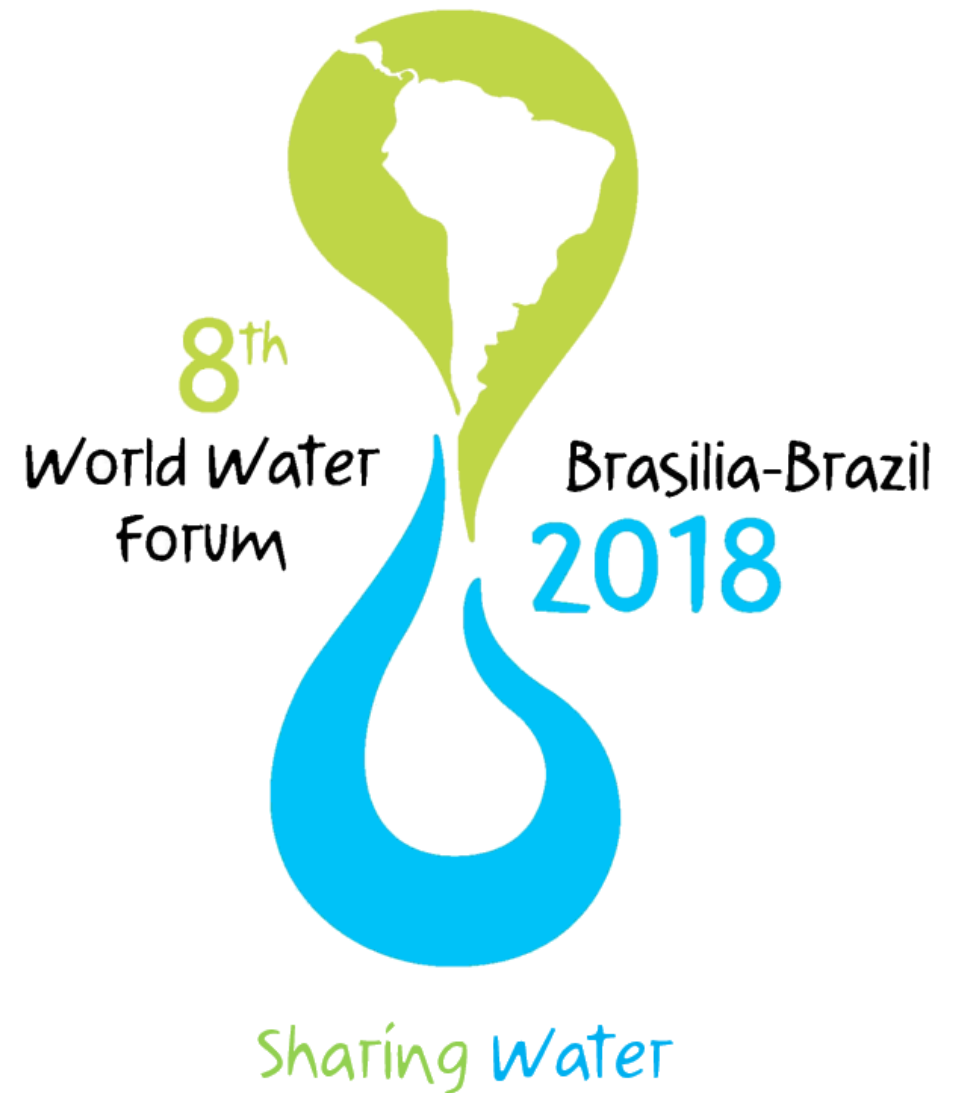


CHARGING FOR WATER RESOURCES IN THE STATE
OF SÃO PAULO: OPPORTUNITIES AND CHALLENGES
FOR THE INDUSTRIAL SECTOR

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The **WATER
RESOURCES
CHARGING** is based in
the principles of

“polluter-payer”

&

“user-payer”



The inexistence of implanted economic instruments prevents the **costs** of pollution and water use from being **internalized by users**, generating the ***SOCIAL BURDEN***, where the whole society pays the costs of degradation, pollution, and so on.



The charge for water use has as premises:

- assigning **economic value** to water
- stimulate the **rational and efficient use** of water
- ensure the **balanced supply** of water to all
- ensure future **prospects for economic growth**
- contributes to the **implementation** and / or **improvement** of other **management tools**

The charge for water use has as premises:

- generate **financial resources** for structural and non-structural investments in river basins:
 - o monitoring
 - o training courses
 - o framing of water bodies
 - o preparation of projects to raise funds from other sources
 - o works to recover water resources
 - o among others...

Who Pays?

- Abstractions and diversions in water bodies
- Accumulations of water volumes
- Releases of effluents into bodies of water

Who does not pays?

- Domestic use in properties or small population centers located in rural areas when independent from grant
- Extraction of groundwater <5 m³ / day
- Flows considered insignificant, as established by the respective CBH or by the grantor
- Micro and small farmers defined in light of the use of water resources, according to Basin Plans
- Electric Power Generation: Federal Legislation

CHALLENGER IN THE CHARGING IMPLEMENTATION

Technical Challenge:

- Proper and sufficient registration
- Adequate and sufficient Basin Plan
- Condition and limits by CRH



Political Challenge:

- Acceptance of Committees and CRH as instances of the Water Resources Management System
- Construction of regional pacts for values, form and periodicity

Law 12.183 of 29/12/2005

GOALS:

- Public good with economic value
- Promote rational use
- Apply financial resources to Water Resources Plans
- Management instrument (economic instrument)



GENERAL CHARGING CRITERIA:

- 13 parameters for collection / extraction / derivation and consumption
- 9 parameters for dilution / transport / assimilation (release and other uses that change quantity and quality)
- Calculation of charge: volume collected, consumed and load released

WHAT IS CHARGED?

1- Collection, extraction, derivation

Volume (m³)

2- Consume

Volume (m³)

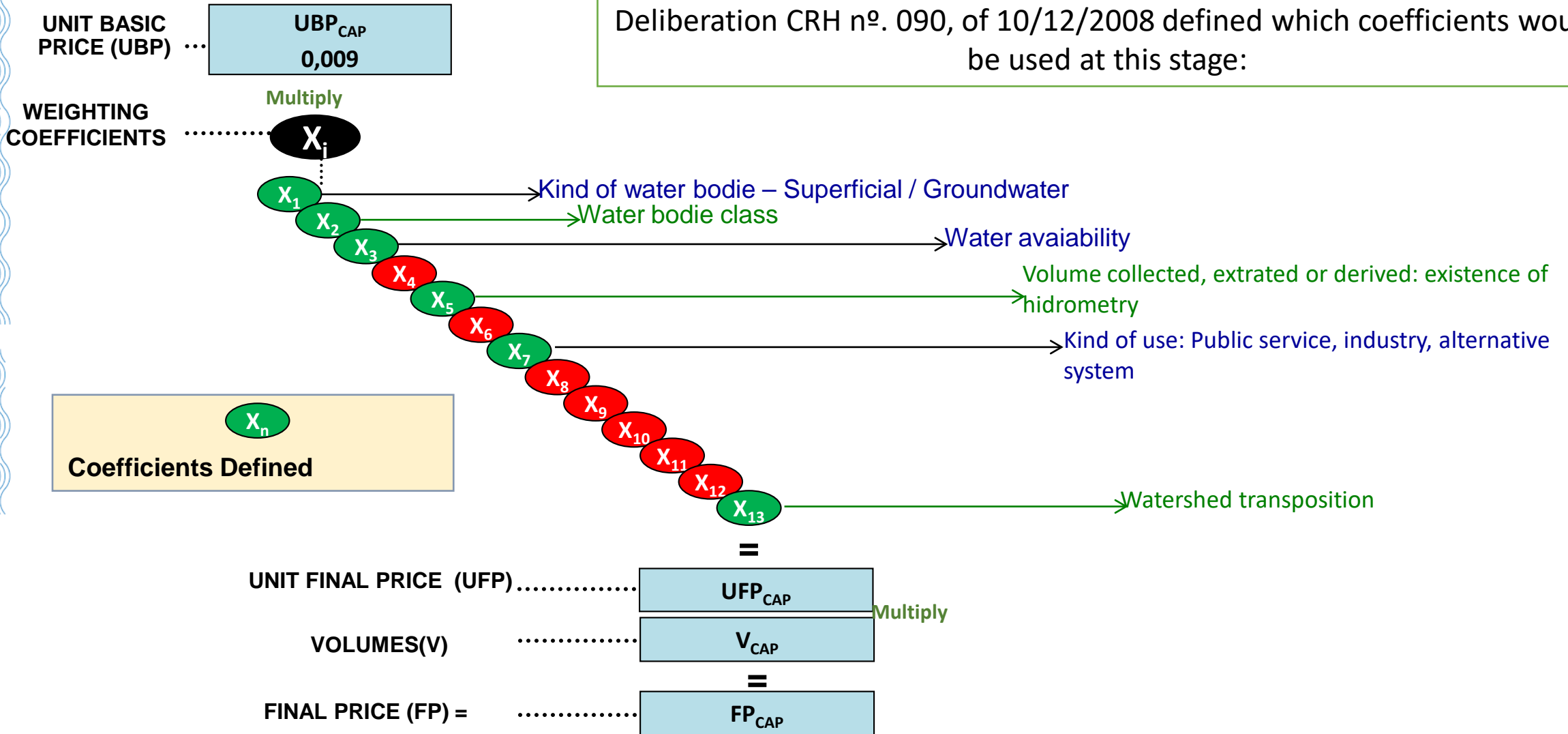
3- Release of effluents

Pollution load (Kg BOD_{5,20})

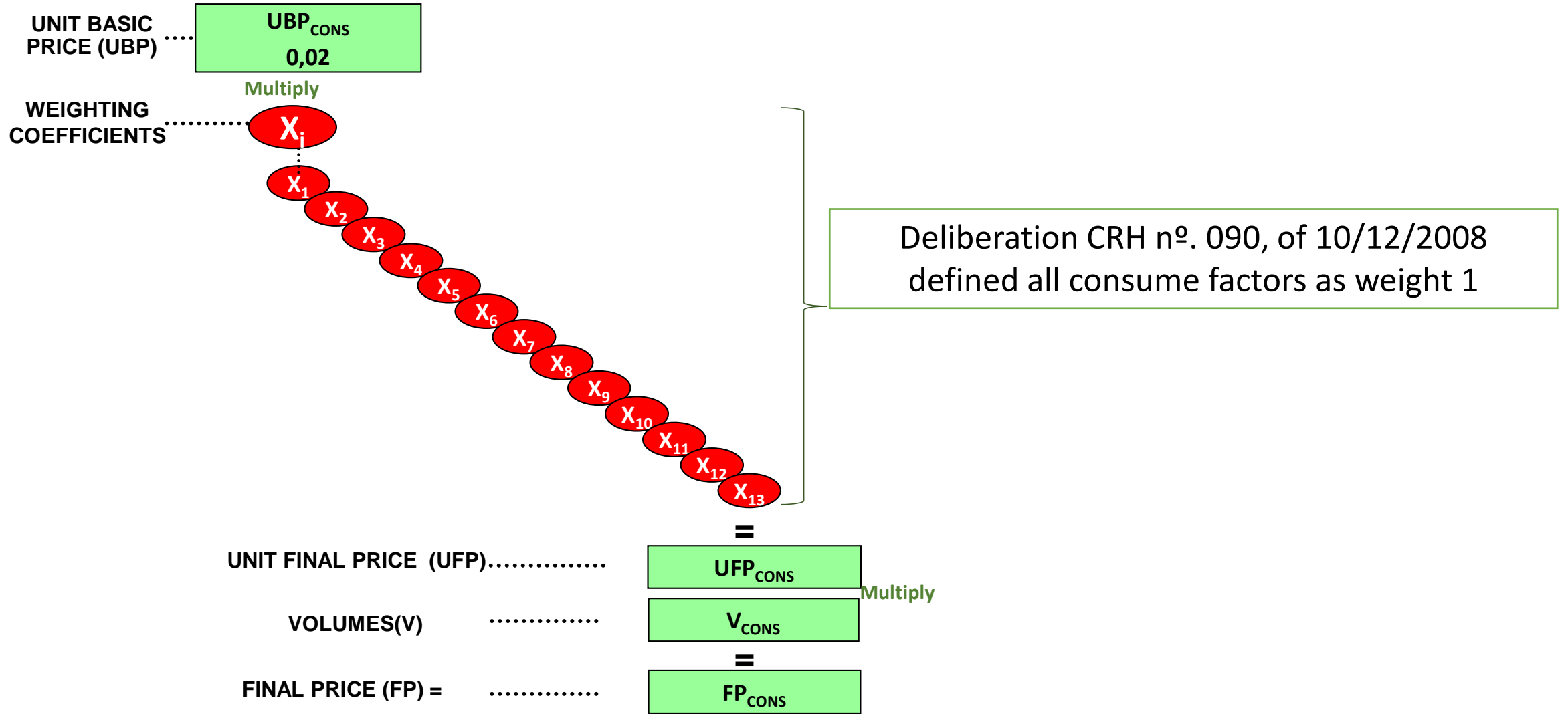


Collection, extraction, derivation

Deliberation CRH n°. 090, of 10/12/2008 defined which coefficients would be used at this stage:

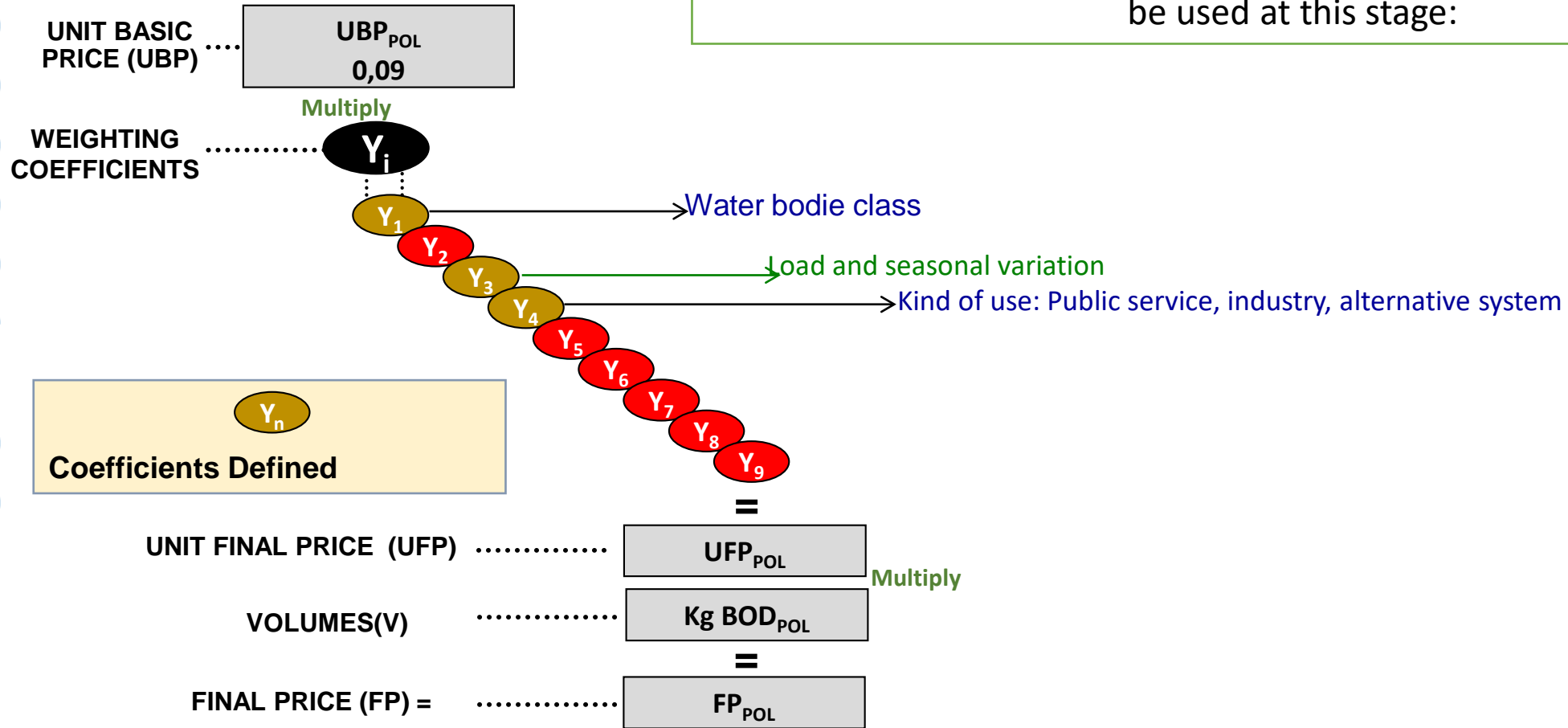


Consume

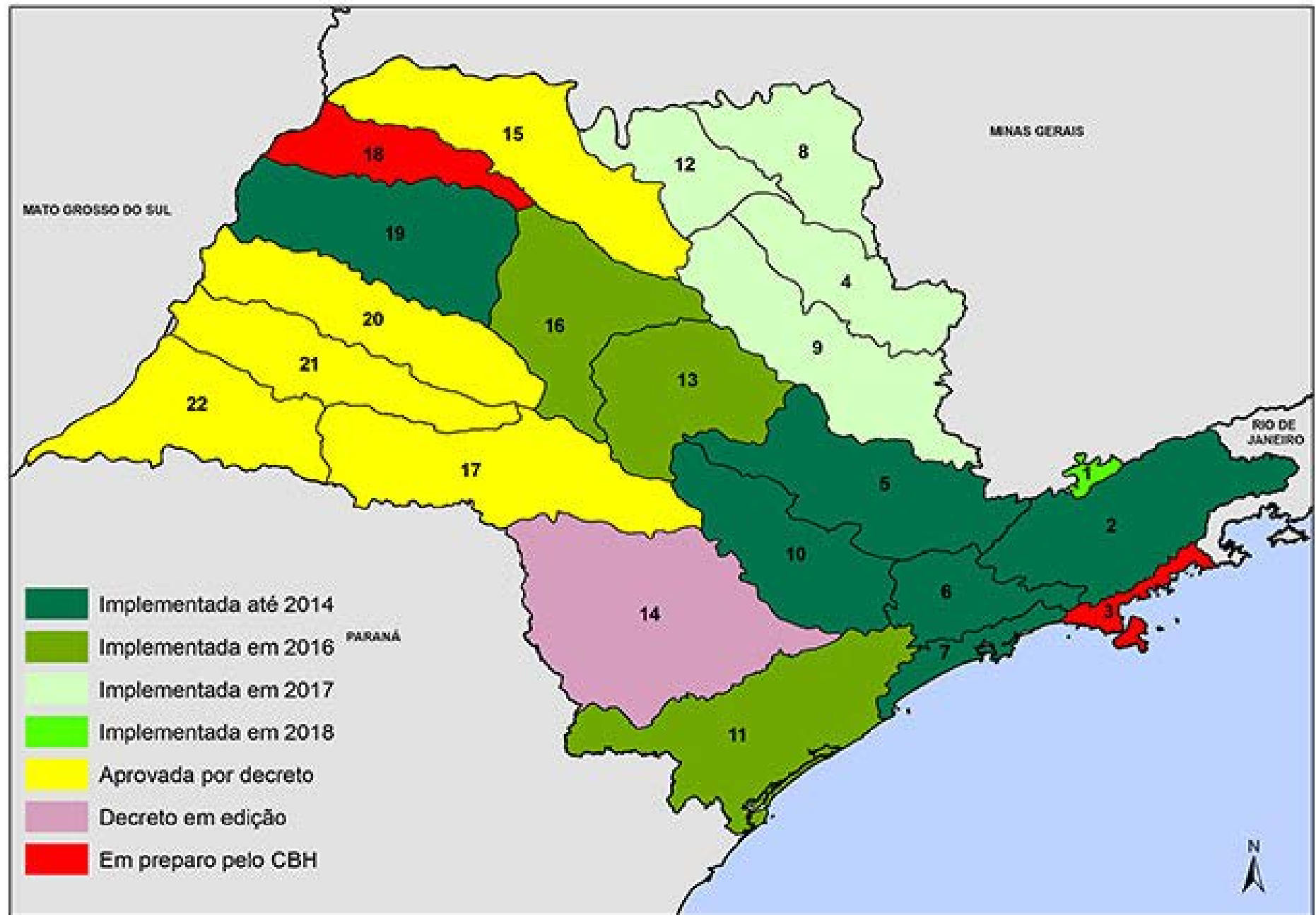


Release of effluents

Deliberation CRH nº. 090, of 10/12/2008 defined which coefficients would be used at this stage:



| CBH (River basin committee) | CBH Approval | CRH Approval/ Decree | Start | Unit Basic Prices (UBPs) | | |
|---------------------------------|-----------------|-------------------------|------------|----------------------------------|-------------------------------|--------------------|
| | | | | Collection R\$/m ³ | Consume R\$/m ³ | Release R\$/BOD |
| Piracicaba, Capivari e Jundiá | sep/06 | 2006 / 2006 | 2007 | 0.01 | 0.02 | 0.10 |
| Paraíba do Sul | oct/06 | 2006 / 2006 | 2007 | 0.01 | 0.02 | 0.07 |
| Sorocaba Médio Tietê | oct/08 | 2009 / 2009 | 2010 | 0.011 | 0.029 | 0.130 |
| Baixada Santista | sep/09 | 2009 / 2010 | 2012 | 0.01 | 0.02 | 0.10 |
| Alto Tietê | oct/09 | 2009 / 2010 | 2014 | 0.01 | 0.02 | 0.10 |
| Baixo Tietê | aug/09 | 2009 / 2010 | 2013 | 0.012 | 0.024 | 0.120 |
| Tietê Batalha | aug/09 | 2010 / 2010 | 2016 | 0.01 | 0.02 | 0.09 |
| Tietê Jacaré | jun/10 | 2009 / 2010 | 2016 | 0.011 | 0.021 | 0.110 |
| Baixo Pardo Grande | nov/10 | 2011 / 2013 | 2017 | 0.01 | 0.02 | 0.10 |
| Mogi-Guaçu | nov/10 | 2011 / 2014 | 2017 | 0.01 | 0.02 | 0.10 |
| Sapucaí Mirim Grande | dec/10 | 2011 / 2014 | 2017 | 0.01 | 0.02 | 0.10 |
| Pardo | dec/10 | 2011 / 2012 | 2017 | 0.01 | 0.02 | 0.10 |
| Ribeira do Iguape e Litoral Sul | dec/10 | 2011 / 2014 | 2016 | 0.01 | 0.02 | 0.11 |
| Serra da Mantiqueira | mar/11 | 2011 / 2013 | 2018 | 0.01 | 0.02 | 0.07 |
| Litoral Norte | oct/10 | In progress | Prev. 2019 | 0.011 | 0.025 | 0.077 |
| Turvo Grande | deb/12 | 20113 / 2015 | Prev. 2019 | 0.01 | 0.02 | 0.10 |
| Pontal do Paranapanema | jun/14 | 2015 / 2015 | Prev. 2019 | 0.01 | 0.02 | 0.09 |
| Alto Paranapanema | feb/17 | 2017 / X | Prev. 2019 | 0.009 | 0.02 | 0.09 |
| Médio Paranapanema | dec/12 | 2015 / 2015 | Prev. 2019 | 0.009 | 0.02 | 0.09 |
| Aguapeí e Peixe | dec/12 | 2015 / 2015 | Prev. 2019 | 0.01 | 0.02 | 0.10 |
| São José dos Dourados | apr/16 | In progress | Prev. 2019 | - | - | - |



Charging implementation - CBH MP

Plano de Bacias

(25ª Reunião Extraordinária do CBH-MP, 28/06/2006 - Echaporã)

Criação do GT-COBRAANÇA

(14ª Reunião Ordinária do CBH-MP - 20/04/2007 - Salto Grande)

Cadastro de Usuários para a Cobrança

T
I
M
E

Discussão e pactuação da
Proposta da Cobrança

Divulgação da Cobrança

Compatibilização
DAEE-CETESB

Aprovação da Proposta da Cobrança

Campanha de Divulgação do Ato Convocatório

Ato Convocatório
Emissão dos Boletos

Charging implementation - CBH MP

2011

(GT-COBrança)

Discussão e pactuação da Proposta da Cobrança - 15 Meetings:

- Coeficientes, Valores;
- Mecanismos e Procedimentos;
- Simulador da Cobrança.
- Fundamentação da Cobrança;
 - Histórico do processo de Implantação;
 - Simulações;
 - Comprovação da Qualificação da Plenária;
 - Ações do Plano de Bacias a serem financiadas com os recursos da Cobrança;
 - Plano de Investimentos da Cobrança.

T
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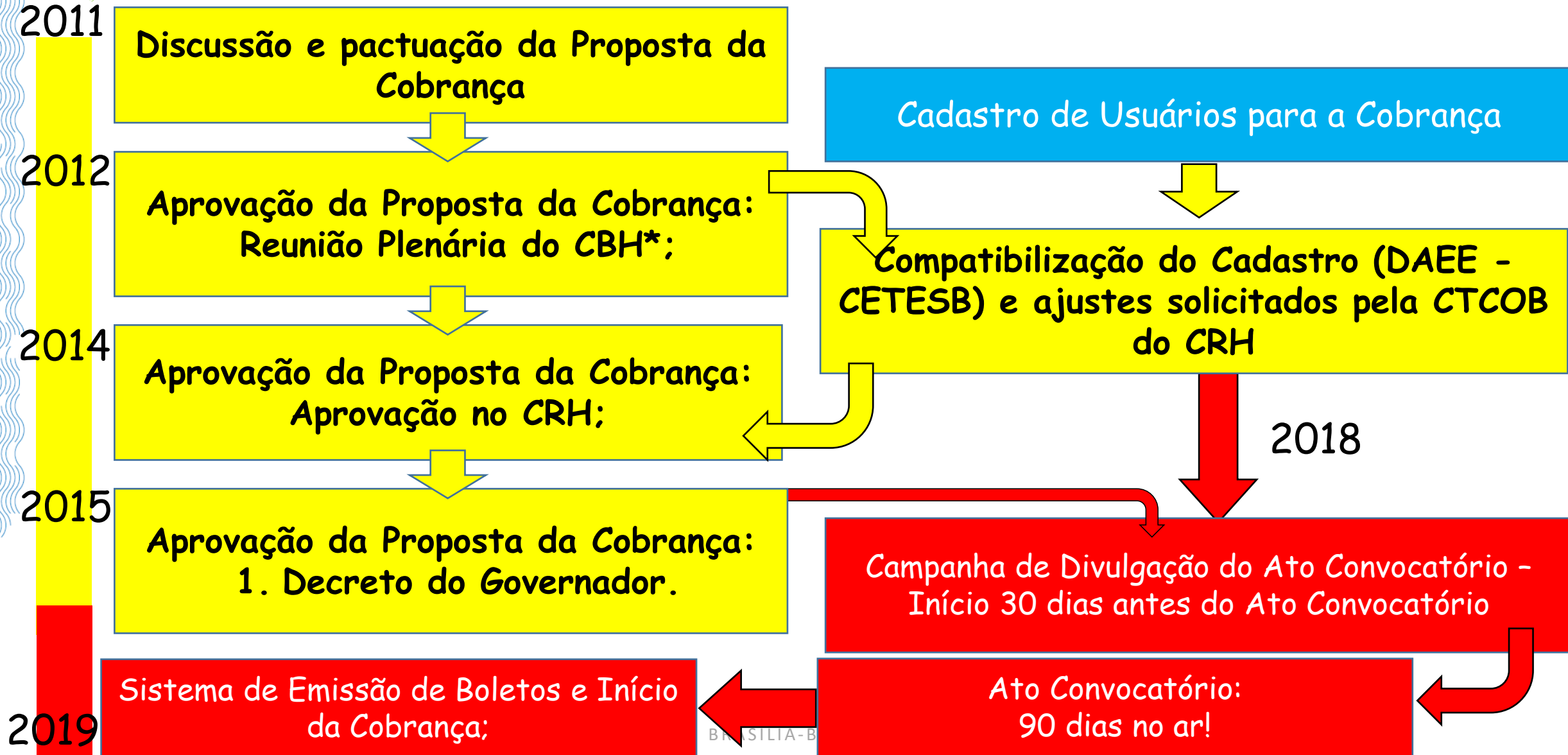
(CBH)

Divulgação da Cobrança:

- Palestras e seminários;
- Reuniões com os segmentos com o objetivo de transferir os fundamentos e colher os anseios de cada setor:
 1. Sociedade Civil;
 2. Municípios;
 3. Estado;
 4. Usuários.
- Reunião Pública.

2012

Charging implementation - CBH MP



Simulation of water resources charging at CBH MP

| | 1st year (50%) R\$ | 2nd year (75%) R\$ | 3rd year (100%) R\$ |
|-----------------------|-----------------------|-----------------------|------------------------|
| PUBLIC SERVICES | 628,131.27 | 942,196.90 | 1,256,262.53 |
| SERVICES AND COMMERCE | 5,716.82 | 8,575.22 | 11,433.63 |
| INDUSTRIAL SECTOR | 1,106,286.16 | 1,659,429.23 | 2,212,572.31 |
| TOTAL UGRHI 17 | 1,740,134.24 | 2,610,201.35 | 3,480,268.47 |

| | |
|-----------------------|---------------------|
| TOTAL UGRHI 17 | 3,480,268.47 |
|-----------------------|---------------------|

Simulation of water resources charging at CBH MP

Impacts evaluation in the industrial sector

- Industrial user 22
 - Production: 12,500 ton/yr (kasava)
 - Value (mean market price) : R\$ 70.00 / 50 kg bag
 - Annual profit (2010): R\$ 17,500,000.00
 - Water resources charging: R\$ 6,224.76
 - Impact: 0.035% over anual profit
 - Impact over product: R\$ 0.23 50 kg bag of kasava produced

Simulation of water resources charging at CBH MP

Impacts evaluation in the industrial sector

- Industrial user 41
 - Production: 1,188,000 50 kg sugar bags/yr | 95,310 m³ethanol /yr
 - Value (mean market price): R\$ 50.67 / 50 kg sugar bag | R\$ 1,200,00 / ethanol m³
 - Annual profit (2010): R\$ 174,567,960.00
 - Water resources charging: R\$ 135,464.84
 - Impact: 0.07% over annual profit
 - Impact over product: R\$ 0.35 / 50kg sugar bag | R\$ 0.008 / ethanol liter

Opportunity for industries

Modernization of equipment

Updating of effluent treatment systems

Certification

Aggregation of value to final product

Examples:

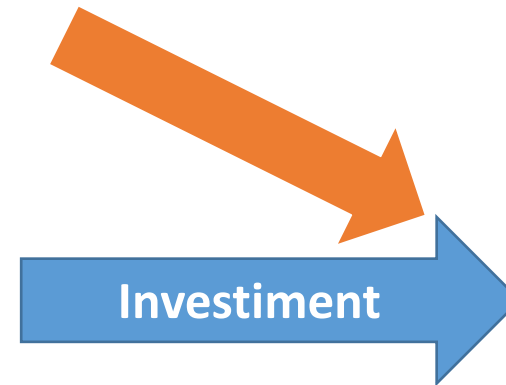
Efficiency in treatment ...

Gross load = 383,614 kg BOD/yr
Efficiency in treatment: 80%
1^o to 12^o month: R\$ 3,452.54/yr
12^o to 24^o month: R\$ 5,178.80/yr
From 24^o month R\$ 6,905.07/yr

Gross load = 383,615 kg BOD/yr
Efficiency in treatment: 90%
1^o to 12^o month: R\$ 1,553.64/yr
12^o to 24^o month: R\$ 2,330.46/yr
From 24^o month: R\$ 3,107.28/yr



Gross load = 383,615 kg BOD/yr
Efficiency in treatment : 90%
1^o to 12^o month: R\$ 1,553.64/yr
12^o to 24^o month: R\$ 2,330.46/yr
From 24^o month R\$ 3,107.28/yr



Gross load = 383,615 kg BOD/ano
Efficiency in treatment: 95%
1^o to 12^o month: R\$ 690.51/yr
12^o to 24^o month: R\$ 1,035.76/yr
From 24^o month R\$ 1,381.01/yr

80 % of reduction in the final value

Opportunity for river basin

Pact for investments in the region

Ensuring the commitment of the population to water resources

Funding for municipalities

Application strictly linked to the goals established in the Basin Plan

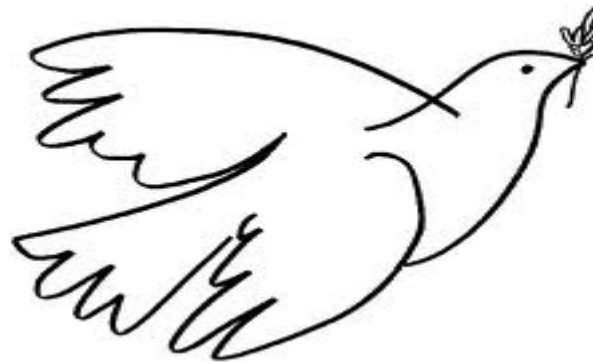
Thank you for your attention

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<http://cbhmp.org>





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Sharing Water

Organization



MINISTRY OF THE
ENVIRONMENT



Support

